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**MASTER THESIS**

**PRIOR SELF-DISCLOSURE EXPERIENCE'S IMPACT ON WILLINGNESS TO  
SHARE PERSONAL DATA IN E-COMMERCE**

**BUVUSIOS DUOMENŲ ATSKLEIDIMO PATIRTIES ĮTAKA NORUI DALINTIS  
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## INTRODUCTION

Online purchasing and the continuous growth of internet commerce had a huge impact on people's shopping habits as well as personal information safety. Any action in e-commerce is usually followed by the need to disclose personal data – name and surname, address, financial details and so on. In other words, personal information disclosure nowadays is an important part of online shopping experience (Kolotylo-Kulkarni, Xia and Dhillon, 2021). Businesses and retailers in digital age have a lot of ways to collect and process customers personal data, which could be used as an advantage in market and help reach one's objectives (Mazurek and Malagocka, 2019; Grosso, Castaldo, Li and Lariviere, 2020) in return providing customers with personalized services, products (J. I. Pallant, J. L. Pallant, Sands, Ferraro and Afifi, 2021). However, more possibilities go hand-in-hand with higher risks. There have already been privacy scandals and leakage of consumers personal data to public. As a result, peoples caution, the interest on how and for what purposes their data is used, has increased (Grosso et al, 2020). What factors influence people's willingness to share personal information and carry out valuable exchange in B2C area has become an important question between scholars and online retailers. It is proven that from managerial point of view that e-commerce users tend to choose vendors by particular attributes and factors, so such research are also useful and necessary for internet commerce business owners (McKnight, Choudhury and Kacmar, 2002).

There are some previous research on customers willingness to disclose personal data in e-commerce. Most of them are examining retailing (Pallant et al., 2021; Grosso et al., 2020; Aiello et al., 2020; Olivero and Lunt, 2004; Pavur, Abdullah and Murad, 2016) as well as governmental transactions (Beldad, Geest, Jong and Steehouder, 2012). Some of the research are focusing on privacy paradox and how the customers intensions and behavior differs (Norberg, D. R. Horne and D. A. Horne, 2007), the others use social exchange theory (SET) as a background for such researches (Urbonavicius, Degutis, Zimaitis, Kaduskeviciute and Skare, 2021; Pallant et al., 2021; Premazzi et al., 2010; Luo, 2002; Hsu, Yin and Huang, 2017). The topics vary from investigating two countries (Gupta, Iyer and Weisskirch, 2010) to choosing a specific segments and defining specific characteristics of the consumers, then describing the differences of those segments and their willingness to share data in internet commerce (Schudy and Utikal, 2017; Pallant et al., 2021). Concluding the findings of the previous research shows that there are many factors that affect such

situation. After examining scientific literature, it becomes clear that one of the most important factors taken into consideration by scholars is trust (Grosso et al., 2020; Urbonavicius et al., 2021; Olivero and Lunt, 2004; McKnight et al., 2002; Pavur et al., 2016; Thompson, Tuzovic and Braun, 2019; Belanger, Hiller and Smith, 2002). The others depend on situation and research field: there are articles about when is the best time to offer customers to disclose personal data during the purchase journey (Aiello et al., 2020), how in-site recommendations motivate consumers to provide data (M. S. Kim and S. Kim, 2018), the others examine social networking and personal data disclosure in e-commerce (Urbonavicius et al., 2021; Zhao, Lapierre, Rains and Segrin, 2021). Related to social exchange theory scholars analyze perceived risks, value and customer satisfaction (Leppaniemi, Karjaluoto and Saarijarvi, 2017; Liao, Chen and Yen, 2007). There are some scientific articles specifying the attitude of consumers towards personal data and its disclosure (Hsu et al., 2017; Robinson, 2018). Others have tried to combine and develop models including several of those factors – transparency, type of data and trust (Mazurek and Malagocka, 2019).

Overall, only a few articles were found about such factor as prior experience and its effect on personal data disclosure, especially in e-commerce, mostly examining negative prior experience (Yang, 2012; Yang and Liu, 2014). Scholars have found that previous experience affects trust, which is, as already stated, one of the most important factors influencing customers willingness to disclose personal data in e-commerce (McKnight et al., 2002; Leppaniemi et al., 2016; Shiau and Luo, 2012). It can be called process-based trust which highlights satisfaction regarding “previous interactions and buying experience” (Luo, 2001) and states that positive prior experience has a positive impact on further cooperation, interaction and personal data disclosure (Luo, 2001). Complementary research to the latter has found that it is also not enough to have experience in personal information disclosure – it should be positive and enjoyable, since the positive experience has an impact on intension to disclose their data again and build trust (Beldad et al., 2012). Some researchers described positive prior online shopping experience as customer satisfaction (Liao et al., 2007; Shiau and Luo, 2012; Leppaniemi et al., 2016). There is a positive relationship between satisfaction and loyalty (repurchase probability) or tendency to recommend particular e-commerce site (Leppaniemi et al., 2016), which proves that customers, who are satisfied with previous self-disclosure, are willing to purchase again or at least recommend to others. That is why it is important to talk about such factor in e-commerce and personal information disclosure. Customers tend to take into account previous personal data disclosure experiences when deciding to share or not to share data and prior experience of personal data sharing is a significant factor for building relationships with customers (Leppaniemi et al., 2016).



A few articles were written by Yang and Liu about negative prior experience and its impact on how youth is willing to disclose their personal data after such experiences. It has been found that negative prior personal data disclosure experience increased privacy concerns, heightened risk perception, harmed trust in e-commerce vendors and even made them falsify their data (Yang, 2012; Yang and Liu, 2014).

Concluding literature review, it is clear that there are not enough research regarding prior experiences effect on personal data disclosure in e-commerce, especially positive ones. There is a need of further and deeper research regarding this topic. For example, it is not known how positive previous experience affects privacy concerns and risk perception. Trust as a variable could be analyzed with perceived risks and benefits, cleared out how they interact with each other in e-commerce context and what is those variables significance in prior experience and willingness to disclose contexts.

**The problem of the paper:** how prior personal data self-disclosure perceived experience impacts willingness to share it in e-commerce.

**The aim of the paper:** to determine how prior personal data sharing perceived experience affects customers willingness to share it in e-commerce.

**Tasks:**

- To analyze scientific literature and describe the concept of willingness to share personal data online;
- To analyze theories, used in previous research and choose the most suitable one;
- To identify factors, which influence consumers' willingness to share personal data in e-commerce;
- To analyze how different factors (positive prior experience, perceived benefits, perceived risks, trust) influence willingness to share personal data in e-commerce;
- To create a research model, which would analyze how different variables, including prior experience, would affect customers' willingness to disclose in e-commerce;
- To conduct the methodology of the research based on research model;
- To execute a research in order to examine the impact of different variables, including prior experience, on willingness to disclose personal data in e-commerce;
- To provide results of the research and recommendations for future studies.

**Methods:** chosen methods, applied in this paper, include scientific literature analysis. For data collection, in order to check hypothesis, survey was chosen. Previous research of prior experiences' impact on willingness to disclose personal data online shows that online survey or questionnaire is mostly suitable and the most usually chosen research method in such field (Pallant et al., 2021; Kim and Son, 2009; Chou and Hsu, 2016; Fernandes and Pereira, 2021; M. S. Kim and S. Kim, 2018; Zhao et al., 2021; Akroush and Al-Debei, 2015; Beldad et al., 2012; Thompson et al., 2019; Pavur et al., 2016; Hsu et al., 2017; Shiau and Luo, 2012). Later statistical data analysis was performed using IBM SPSS Statistics 29.0 software and conclusions were derived.

**Structure of the paper:** The research paper consists of six main chapters. The 1-3 chapters cover scientific literature analysis. Various research literature and its' findings, related to this topic, are analyzed, compared and summarized. The first chapter gives an overview of the definition and understanding of overall personal data, then willingness to share personal data in e-commerce phenomena is explained. Second chapter discusses social exchange theory (SET), its definition and core variables, analyses prior studies which used it, defines its applicability in studies and compares it to other possible theories in such research. The third chapter analyses prior studies which examined prior experiences impact on willingness to disclose personal data in e-commerce and identifies the most usually examined variables, as well as identifies the most relevant and suitable for SET framework in such research. In the 4<sup>th</sup> chapter research methodology is presented. Based on SET conceptual model is created, 9 hypotheses are raised. Later data collection methods and instruments are presented. Survey as a data collection method is applied. Questionnaire constructs are adapted from previous research, sample size is calculated. The 5<sup>th</sup> part is dedicated to empirical data analysis, research results, summary of chosen variables effect on willingness to share personal data in e-commerce, as well as reliability of collected data is checked using Cronbach's a scale, demographical data of respondents is presented. Later hypotheses are checked – collected data was analyzed using IBM SPSS software, Linear regression was applied for all the relations' testing. In addition, in the 6<sup>th</sup> chapter, findings summary, recommendations and liabilities are provided for future research. To write this paper, 83 literature sources were used, 15 tables and 2 figures were included.

# 1. PERSONAL DATA AND E-COMMERCE

## 1.1. Definition and usage of personal data

Personal data nowadays is a concept that seems quite understandable. It is usually described as any information that can identify an individual, or any other data that could be linked to a specific individual (Milne, Pettinico, Hajjat and Markos, 2017). That means that information can be considered as personal even if it is not very straightforward, but somehow linked to a specific person. Also it is identified as an asset (Limba, Driaunys, Kiskis and Sidlauskas, 2020; Spiekermann, Acquisti, Bohme and Hui, 2015), “complex ecosystem of entities collecting, analyzing and trading personal information” (Spiekermann et al., 2015, p. 161). Others classify it into groups as follows: communications (emails, phone calls), financial (credit card information, other financial property), family (photos, family members health information), individual (personal information such as activity and location tracing, calendar), online social networks (social media – Facebook, Instagram) (Haddadi et al., 2015). Also, there is distinction between structured (basic data as name, gender, address) and unstructured (likes, tweet, links) data (Akter and Wamba, 2016). Other scholars identify it as general (directly and non-directly identifying data) and sensitive personal data (political opinions, race, religion, genetic information, sexual orientation and so on) (Limba et al., 2020; Bhaimia, 2018; Cabanas, A. Cuevas, R. Cuevas, 2018).

Personal data is not something that only the individual owners themselves are using anymore. Every organization nowadays collect and manage various types of personal data. For businesses it is valuable since it helps to achieve the best revenue (Haddadi et al., 2015), increase sales and customer loyalty (Grosso et al., 2020) as well as because of its additional value for consumers (Spiekermann et al., 2015). There are many scenarios and ways of using personal information: for better targeting of advertisements, personalizing offers and products for customers, product development and so on (Spiekermann et al., 2015). Personal data nowadays is even described as the new “currency of the digital world” (Spiekermann et al., 2015, p. 161) because of its worth and importance.

With personal data and it’s growing usage privacy issues appear. It includes information on how authorized parties handle that data, who they share it with and what they use it for. First of all, if not maintained properly, personal data, its collection processes can become a headache for the

organizations (Spiekermann et al., 2015). With increasing amount of such data, more privacy regulations appear, which are “among the least globally harmonized fields of law” (Spiekermann et al., 2015, p. 161). It could cause various risks, such as cybercrime and leakage of sensitive information. High-profile privacy scandals (Grosso et al., 2020), which are often very hurtful both for the organization and for their customers, nowadays increase privacy concerns even more. To avoid that companies have to implement various risk reducing technologies, organizational processes, but there is still no guaranteed safety from data breaches (Spiekermann et al., 2015). One author draw attention on unclear personal data definition, which makes it even harder to regulate legally (Milne et al., 2017). Issues, related to personal data, are usually very harmful and widespread not for a good purpose.

Second of all, personal information is becoming an important topic also for customers. Personal data, especially sensitive type of it, is the most important identifier of a particular person and its’ significance is huge. Therefore, customers are becoming more and more concerned about their privacy and safety, fear of possible identity thefts are increasing (Castaneda, Montoso and Luque, 2007; Maseeh et al., 2021; Niranjnamurthy and Chahar, 2013). Furthermore, the amount of personal data, that has to be protected and secured, is also unstopably growing (Haddadi et al., 2015). Those concerns vary in different situations and variables that are taken into consideration (Haddadi et al., 2015). Customers usually are not aware of the role of third parties and their usage of one’s personal data (Spiekermann et al., 2015) which causes even more frustrated customers towards the organization. Satisfied customers are one of the most important factors for organizational growth and success, so safe customers’ data is of a key importance.

It was stated before that there is no clear and simple definition of personal data and the legal regulation of this phenomenon is quite difficult (Milne et al., 2017; Spiekermann et al., 2015). However, there is a legal background for personal data and its usage – GDPR (The General Data Protection Regulation). It is a main and one of the most important law regulations, applied since 25 May 2018, that is applicable in European Union and European Economic Area regarding collection and processing of personal data. The main outcome is that GDPR “gives control of personal data back to the owners by appointing higher requirements and obligations on service providers who manage and process personal data” (Truong and Lee, 2020, p. 1746). There are six main principles of GDPR (Table 1), which highlight the essence of the law (Limba et al., 2020; IT Governance, 2019, p. 40 - 61). However, it is hard to measure the appropriate usage and operation of those legal instructions because of the “general non-clarity and ambiguity” (Cvik, Pelikanova and Maly, 2018), wide

opportunities for interpretation. That makes personal data usage a sensitive and questionable topic for customers and a serious concern for organizations on how to make their customers happy and their data safe. This is a problem worth considering in human behavior as well as in managerial implications point of view.

**Table 1.**

*Six key GDPR principles*

Principles	Definition
1. Lawfulness, fairness and transparency	Transparency, fairness, and lawfulness in the handling and use of personal data. You will need to be clear with individuals about how you are using personal data and will also need a “lawful basis” to process that data.
2. Purpose limitations	Limiting the processing of personal data to specified, explicit, and legitimate purposes. You will not be able to re-use or disclose personal data for purposes that are not “compatible” with the purposes for which the data was originally collected.
3. Data minimization	Minimizing the collection and storage of personal data to that which is adequate and relevant for the intended purpose.
4. Accuracy	Ensuring the accuracy of personal data and enabling it to be erased or rectified. You will need to take steps to ensure that the personal data you hold is accurate and can be corrected if errors occur.
5. Storage limitations	Limiting the storage of personal data. You will need to ensure that you retain personal data only for as long as necessary to achieve the purposes for which the data was collected.
6. Integrity and confidentiality	Ensuring the security, integrity and confidentiality of personal data. Your organization must take steps to keep personal data secure through technical and organizational security measures.

Source: Limba, T., Driaunys, K., Kiskis, M., Sidlauskas, A. (2020)

Another important concept has to be defined – self-disclosure. It is a process of a person revealing information about himself to others (Mutimukwe, Kolkowska and Gronlund, 2019). There

might be different parties in this process – between individuals (friendships, romantic relationships), within groups or between a person and an organization (Joinson and Paine, 2009). The latter interests this paper the most. Self-disclosure with an organization serves authentication purpose, also marketing purposes, research purposes and so on.

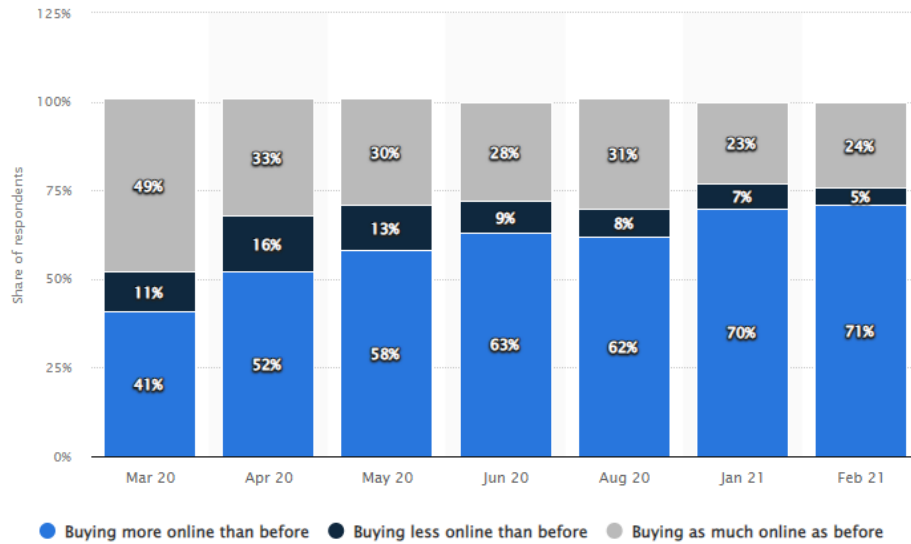
## **1.2. Usage of personal data in e-commerce**

E-commerce, as a concept, is constantly changing and developing because of the new technologies (Babenko et al., 2019). The definition evolves as well. The basic formation of it is electronic commerce, which refers to Internet. In a broad way it could be described as “any form of business relationship where interaction between actors occurs through the use of Internet technologies” (Babenko et al., 2019, p. 2) or simply electronic sales (Falk and Hagsten, 2015).

Looking back a few years ago, personal data’s security online was less of an importance. That happened not without a reason. It happened so that the world before COVID epidemics and after is quite different. The popularity of e-commerce has increased significantly during pandemics (Pantano, Pizzi, Scarpi and Dennis, 2020). Human behavior, habits have changed. Statistics show that in UK, between March 2020 and February 2021, online shopping habits have increased while offline ones – decreased (Figure 1). In March only 41% of customers stated to buy more online than before, while in February of next year over 70% of them said so. During the pandemics people learned to shop online and appreciate its advantages.

**Figure 1.**

*Change in online purchasing habits during COVID-19 pandemic in UK*



Source: statista.com

However, with increasing usage of e-commerce, the personal data issues increase, too. The 21<sup>st</sup> century is the century of Internet and technology related to it. Online activities, storage clouds resulted in much more easily reachable services, easier and quicker purchasing and definitely much more higher privacy concerns (Maseeh, 2021). E-commerce includes mobile payments, online shopping, online marketing and so on (Maseeh, 2021). Nowadays there is almost no ability to make a purchase without disclosing some sort of private details online (Castaneda et al., 2007; Kolotylo-Kulkarni et al., 2021). Personal data, which is most usually being disclosed in e-commerce, includes general type of it – name and surname, living address, credit card information and so on. Such type of data online becomes more sensitive because of the wider accessibility to it and dependency on the data processors. Organizations, once they have got the data, become responsible for it and those who disclosed it become a little bit dependent from that organization on how their data will be used. That causes online customers of e-commerce sites to perceive internet environment less trustful and reliable.

## **2. SOCIAL EXCHANGE THEORY AND ITS' RELEVANCE**

### **2.1. The core elements of SET**

Social exchange theory (there and later in this paper - SET) was developed in 1950s and first applied by such scholars as George C. Homans, Phillip Blau and Richard Emerson (Shiau and Luo, 2012; Urbonavicius et al., 2021). This theory is based on economics (in particular – microeconomics) theory principals, sociology and psychology (Hsu et al., 2017). It analyzes human or social behavior and relationships (Redmond, 2015; Shiau and Luo, 2012; Urbonavicius et al., 2021). First it was created for individuals and their interrelations, but later it was started to apply for organizational research (Shiau and Luo, 2012) and continues to be useful in various fields of research.

The main and basic idea of social exchange theory is that individuals and organizations pursue relationships willing to maximize their reward and minimize the cost (Shiau and Luo, 2012). Social interactions are seen as exchange when both parties are willing to process long-term mutual gains (Luo, 2002; Kim and Son, 2009). They have a goal to profit or benefit more from such relationships than they sacrifice, or the size of their cost is (Redmond, 2015). Cost and benefit could be material and tangible like money, things, but this theory concentrates on intangible assets such as time, skills, energy (Redmond, 2015) or personal affection, gratitude, trust (Hsu et al., 2017) and various other types of social rewards gained through social interaction, since it is the core research point of SET.

Social interactions, psychology and human behavior are not so simple and basic. Interestingly, those assets and their value vary: different people would have different approach and perception of value of a particular asset. In SET this phenomenon is called value of reward (Redmond, 2015), meaning of the size of reward gained through social exchange. Another theoretical element of SET is cost. Naturally, it refers to something that is given to another exchange party. Cost also varies in their value (Redmond, 2015) – if a person is busy, time is more precious, if not – less. Benefits and costs together describe value of reward in every specific and individual situation.

One more important element of SET, applied from economics, – profit. A party gets profit when reward is bigger than the cost. In social context this formula is much more complex, but the idea remains the same – satisfaction in relationships is achieved when reward exceeds the cost



(Redmond, 2015). Another element worth mentioning is equity or justice referencing to fairness where both parties feel equally rewarded for their costs. One parties' perceived benefits could be bigger than the other ones' and the equity would not exist, since the latter party would be disappointed, angry and dissatisfied. Overall, SET and its principles are very flexible and could be adapted in any social context. Those assets alone could be interpreted by scholars in the way that is convenient or necessary, as long as the core of theory is present.

One of the ways on how scholars interpret SET is based on type of commitment. Some scholars develop their research using the idea of dedication and constraint mechanism based on SET (Chou and Hsu, 2015; Kim and Son, 2009). This approach focuses on two types of commitments: dedication refers to "perceived benefits gained from online shopping, while constraint mechanisms reflect customers' investment on the relationship with the retailer that makes them difficult to switch to a new retailer" (Chou and Hsu, 2015). Or dedication could be explained as voluntary commitment, appreciation of relationships whereas constraint as locked-in various investments (Kim and Son, 2009). It is clear, that such differentiation is defined beforehand the actual exchange and it definitely has an impact on the relations between chosen variables, such as willingness to disclose personal data.

Other researches are drawn upon differentiation and distinction between negotiated and reciprocal exchanges (Urbonavicius et al., 2021; Molm, 2010; Redmond, 2015). The latter exchange includes expectations and trust-based relationships, where no actual equality or fairness is provided in advance, exchanges happen voluntarily. Differently, negotiated refers to strict norms and actual benefits and costs that they will receive or sacrifice. Personal information disclosure would be assigned to negotiated exchange (Urbonavicius et al., 2021) since the framework is well known for both parties – retailers collect data while customers enjoy personalized services. This approach focuses on type of relationships. A similarity with dedication and constraint mechanisms could be seen – constraint mechanism is similar approach to negotiated exchange, a stricter one, while dedication reminds the idea of reciprocal exchange.

There are a few main variables or topics in SET. One of them - the core of SET – is trust (Luo, 2002; Urbonavicius et al., 2021; Tanskanen, 2014). It is important in social exchanges since through trust parties could achieve balanced, close and long-lasting relationships (Redmond, 2015). Trust is seen as a reciprocal benefit and refers to immediate confidence between parties ignoring possible disadvantages (Hsu et al., 2017). Chou and Hsu (2015) investigate trust as a part of already discussed constraint mechanism while exploring customers repurchase intentions. Other scholars use SET as a

background and suggest to build trust in order to reduce privacy concerns in e-commerce (Luo, 2002; Pallant et al., 2021; Premazzi et al., 2010; Hsu et al., 2017). Others used SET and trust as a key variable in online group buying processes (Shiau and Luo, 2012). A few consider not only trust but also distrust as a variable in online buying and social networking (Urbonavicius et al., 2021). After all, trust as a variable seems to be of a high importance and worth considering.

Another important explanatory variable of SET, closely related to trust, is reciprocity. It means mutual positive actions (Tanskanen, 2014) or the obligation between parties to return a favor, preferably the one of the same value (Hsu et al., 2017; Redmond, 2015). It could be identified as a level which defines people's willingness to exchange and get mutual perceived benefits (Shiau and Luo, 2012), without sacrificing too much or being over-rewarded. Earlier negotiated and reciprocal types of exchange were discussed - the latter extensively focuses on reciprocity and trust. Many scholars who incorporate trust as a variable in personal data and e-commerce related research, hand-in-hand talk about reciprocity as well (Tanskanen, 2014; Hsu et al., 2017; Urbonavicius et al., 2021; Shiau and Luo, 2012). The idea and principle of SET and reciprocity is best shortly described by those two variables – costs and benefits.

## **2.2. Fields of research and other theories comparison**

Some say that SET is a theory about egoism (Shiau and Luo, 2012), while others define it as a theory of power (Redmond, 2015), but it is used in a various field of research (Annex 1). Previously it was applied to such business areas as organizational management, sales performance, consumer buying decisions, business commitment, social networking research and more personal social situations and topics as adoption decision, romantic relationships (Shiau and Luo, 2012; Redmond, 2015). Furthermore, as discussed earlier, social exchange theory has been used in the research of trust and privacy concerns and it could be complementary to apply it in consumer behavior with internet retailers regarding personal data disclosure (Pallant et al., 2021).

Dedication-constraint mechanisms, negotiated and reciprocal exchanges based on SET were used for such type of research because trust, reciprocity, equal exchange in e-commerce, customer behavior plays an important role when analyzing private data as an asset of exchange. Also, “the duality of consumers' commitments are empirically demonstrating that loyalty and switching costs

can represent such commitments in the online B2C domain” (Kim and Son, 2009, p. 64). Finally, SET highlights the ability of exchange parties to learn from previous experiences and adapt their actions in the future (Tanskanen, 2014). Thus, this paper focuses on the background of SET and B2C kind of relationships, involving customers with their prior experience in private data disclosure and e-commerce sites that collect and manage it.

For better overall context and understanding it is useful to widen the approach and discuss a few similar or most usually used theories in willingness to disclose personal data research. Scholars in marketing and B2C internet commerce has used many different social-psychological theories such as Theory of planned behaviour (TPB), IS continuance theory (Chou and Hsu, 2015), Theory of reasoned action (TRA) (Hsu et al., 2017) and so on.

The first one, quite often used is Theory of planned behavior (here and later in this paper – TPB). TPB analyzes motivation of customers and why they tend to interact with a retailer (Chou and Hsu, 2015), intentions and behavior, but later focuses on moderating role of involvement (Hegner, Fenko and Teravest, 2017) which is not very important for examining of willingness to disclose personal data. TPB is more about how consumers perceive risks and benefits and what influences such perception. In other words, theory of planned behavior deepens the understanding of variables, which have effect on cost and benefit, such as attitude, subjective norms and awareness (Parker and Flowerday, 2021).

Another two theories combined together are used in such fields of research. IS continuance theory focuses on continuous use of some IS (information technology) products and consumer satisfaction (Li, Liu, Xu, Heikkila and Heijden, 2015), while Theory of Reasoned Action (here and later in this paper – TRA) talks about the connection between social behaviors and individual attitudes “and is specifically designed to predict information systems use” (Hsu et al., 2017, p. 151). Therefore, it is not very compatible for this case since instead of focusing on personal perceptions this paper focuses on social exchange, reciprocity and trust. However, TRA mostly incorporates and emphasizes buying intentions rather than attitudes (like in TPB), which influence actual behavior. Actually, attitudes are believed and proved to positively influence intentions (Amaro and Duarte, 2015). This, as well as Theory of Planned Behavior, could be used in research about personal data disclosure, but in this case, the main focus is reciprocity in exchanges, not only intentions and attitudes towards disclosing.

One more very common and appreciated model in privacy related research is dual calculus model. It explains that willingness to disclose personal data is a consequence of privacy calculus and risk calculus, which focuses on perceived benefits, risks, threats and so on (Zhang et al., 2018). Privacy calculus refers to relation between perceived benefits and risks, while risk calculus focuses on risks and “expected coping effectiveness” (M. S. Kim and S. Kim, 2018, p. 145). However, this model does not consider trust, which has a major influence in sensitive data disclosure in physical stores as well as in e-commerce. SET allows to focus the research on reciprocity in exchange and investigate those benefits, analyze profits and risks from that perspective. To sum up, SET is quite new approach for e-commerce that helps to consider equal social exchange, reciprocity and trust for such research and has prospects for future findings and elaborations.

### **3. VARIABLES AFFECTING WILLINGNESS TO SHARE PERSONAL DATA AND THEIR RELATIONS**

#### **3.1. Various variables affecting WTD**

Customer's willingness to share data is influenced by many different factors, including situational and dispositional ones. There are many scopes and a variety of ranges of how scholars tend to research this topic and which variables they choose. For example, some examine perceived benefits, convenience, vulnerability, perceived severity (M. S. Kim and S. Kim, 2018); transparency, type of data and trust (Mazureka and Malagocka, 2019); risk awareness, trust and control (Olivero and Lunt, 2004). Others tend to incorporate such factors as the amount of personal data that is asked to disclose and social distance of the research recipients (Schudy and Utikal, 2017). However, the combination of chosen variables can be very different, but the relations between them is the thing that matters.

Kolotylo-Kulkarni, Xia and Dhillon (2021) have made a comprehensive research on information disclosure in e-commerce. They summarized 62 suitable papers and singled out four types of personal data disclosure determinants: consumer, information, online platform and context. All these four include different types of variables that affect willingness to disclose personal data (here and later in this paper - WTD).

The most usually used type of variables were customer type. Those could vary from customers age, gender to personal characteristics such as extroversion, neuroticism and interpersonal culture. This category also includes variables as purchase experience, time spent online, frequency of Internet use and outcomes (emotional and non-emotional) of previous interactions with e-vendors (Kolotylo-Kulkarni et al., 2021). Other scholars include habits (Fernandes and Pereira, 2021), which customers develop. It was found that customers' routine and repeated irrational behavior is one of the most important factors influencing WTD. Such finding suggests one more research scope – rational or irrational customers' behavior and choices.

Other type of determinants are related to organization – online platforms. E-vendors webpages features, their approach to customer relations, customers privacy and their obligation towards informing customers about their privacy policy and so on (Kolotylo-Kulkarni et al., 2021). This type

of variables are dependent on vendor and affect the relation with WTD through organizational point of view, their reputation and chosen managerial provisions.

The third and fourth types of WTD affecting predictors are less examined and more situational ones (Kolotylo-Kulkarni et al., 2021). The third is information. That refers to the type of data that is asked to disclose, sensitivity level of it, nature of information, perceived relevance of the asked information and so on. The fourth refers to the context of transaction, for example, is it governmental institution or not. The other researched variable of this type is the stimulus or cues for the customer such as reminders.

Furthermore, such Kolotylo-Kulkarni, Xia and Dhillon (2021) research has shown that there are many moderating variables when analyzing what influences WTD. Variables from three types of previously discussed determinants were examined and proved by scholars to moderate the relation, but no context related ones were studied.

What concerns this paper are the connections and associations between mostly dispositional variables. The following part of literature analysis discusses the previous scholarly work and their findings regarding e-commerce and willingness to share data there. As stated before, every research and every scholar have their own approach and the chosen variables differ, but the further literature analysis combines and sums up the relations between five of the chosen ones for this particular research.

Regarding previously explained SET and its main principles, four main dispositional variables were distinguished – prior experience, perceived benefits, perceived privacy risks and willingness to share personal data. The fifth variable was chosen situational one – store trust. The definition of trust could be various, depending on whether it is rational or emotional (Chou and Hsu, 2016), is it trustfulness as a character trait or trust in a specific retailer. The latter was chosen. Prior experience in personal data disclosure also has two types of it – positive and negative. In this research positive prior experience is examined as there was found less prior research about it comparing with negative. Perceived benefits and perceived risks are variables that cannot exist without each other and come from economic landscape. What do customers have to sacrifice and what do they get in return? Is the advantage bigger than the cost? Or vice versa? SET talks about reciprocity, trust in various spheres of life and those variables effect on WTD is worth examining.

### **3.2. Positive prior experience**

Prior experience is a consumer related variable (Kolotylo-Kulkarni et al., 2021) and could also be interpreted as reciprocal variable. Satisfied customers tend to disclose their personal data more favorably, while negatively affected people could decide to trust only physical stores. Organizations, concerned about their client's sensitive information, would ensure that data is managed properly, safely and in return they will expand their databases, which, as discussed before, are very important for marketing, accessibility and all online activities.

However, does the experience factor have a direct influence on WTD? Happy customer, who had a pleasant purchase journey, excluded any other factors, could rely only on this experience and decide that it is safe to disclose sensitive data again. A few research examined this relation. One scholar stated that prior experience had no direct impact in willingness of data disclosure (Beldad et al., 2012). Meaning that satisfaction alone, without mediating variables, could not improve customers intention to disclose or negative disclosure history alone could not lower the WTD. However, another found that satisfaction or positive previous experience has a direct impact on WTD (Leppaniemi et al., 2017). The differences of the research could be defined rather by different variables taken into consideration or the methodology of empirical research itself. One thing is clear – customers with previous experience are much more familiar with online purchasing environment and thus more willing to disclose their data rather than unexperienced ones (Beldad et al., 2012), whose perception of risks should be much higher.

Satisfaction is a synonymous word for positive previous experience. Such experience could increase customers trust and trustfulness in online purchasing sites overall. This idea was proved by Beldad and his colleagues (2012). His research resulted in conclusion that prior experience has impact on trust, more specifically positive transaction experience, and that it increases trust. Furthermore, the same research revealed negative linkage between positive prior experience and risk perceptions. Meaning that satisfaction not only builds up trust, but also decreases risk perception for customers. Talking about benefits, Beldad (2012) proved that satisfaction or positive prior experience affects perceived benefits. People, who had a pleasant purchase journey with their data disclosure included, tend to be more satisfied and enjoy those benefits such as personalized newsletters, goods and so on.

That means that perceived benefits and organizations promises are not for luring customers to buy and disclose their data, but as an additional value for successful negotiated exchange. In this context organizations should think how to improve the perceived warmth. One research shows that vendors should ask for personal data at the end of consumers purchase journey (Aiello et al., 2020), because that way privacy concerns are lowered and positive experience is built.

### **3.3. Trust**

Starting from the core of SET and mostly used variable in this type of research – trust, it would be useful to deepen the understanding of such concept. Scholars define and analyze three types of trust concerning e-commerce and privacy issues: characteristic - based, transaction process – based and institution - based (Luo, 2002). First one defines situational kind of trust, considering characteristics such as religion, culture. Process trust comes from previous experiences or future expectations, for example repeated purchases (Luo, 2002). And the last type of trust is based on institutional specifics, with which you interact and exchange, and formal structures.

Luo (2002) revealed that consumers privacy concerns are mostly influenced by institution – based trust and the other two reduce those concerns less, meaning that consumers value legal regulations and various certificates that e-vendors apply in order to increase the security of their customers data. This is extremely important in negotiated exchange and customers willingness to share their data, because it depends on retailer’s actions and attitudes towards data management and processing. It proves once again how important sensitive data disclosure transparency and management is.

Trust, as an important and dominating factor, has various connections with other variables. Previously discussed consumer satisfaction is one of them. Research, analyzing online group buying phenomena (Shiau and Luo, 2012), revealed that trust and consumer reciprocity, which is very important part of SET, positively affects consumer satisfaction. It means that, regarding previously discussed link between positive prior experience and trust, this connection is reciprocal. Not only satisfied customers have higher levels of store trust, but also trusting and reliance is an outcome of more satisfied customers.



Other relation was examined by Beldad and partners (2012). He wrote about perceived risks, how they affect trust and vice versa – the relation goes both ways. Other scholars proved the one-way relation between them – trust lowers perceived risks or perceived risks reduce trust (Robinson, 2018; Olivero and Lunt, 2004). Perceived risks could influence customers perception on trust of the e-commerce site, while trust negatively affects perceived risks meaning that trust in an organization makes the customers less concerned about possible risks.

On one hand, Beldad (2012) discussed willingness to disclose personal data in online government transactions and found out that levels of trust and its impact on WTD does not vary whether they had previous experience in such processes or not. It means that customers, who had previously disclosed their data, in this case, in governmental institutions, have the same level of trust compared to those who have not. Furthermore, that trust has the same impact on WTD for both types of customers experience. This outcome could be caused by the fact that only governmental institutions were chosen, and they are perceived to be more trustful than online purchasing websites. In this case, prior experience has no impact, but in e-commerce topic this finding could be different.

On the other hand, other scholars found that trust increases customer's willingness to share their data (Premazzi et al., 2010; Belanger, 2002; Beldad et al., 2012), directly and indirectly - dependent on the variables used. For example, Urbonavicius and his colleagues (2021) proved that trust has an indirect effect on willingness to disclose data in online buying sites. Some scholars state that trust affects WTD non directly, but through reciprocal exchange (social networking) (Zimaitis, Urbonavicius, Degutis and Kaduskeviciute, 2020), while others find direct link between them (Mazurek and Malagocka, 2019). In this research a variable called perception of legal regulations (BDAR and so on) was included and it mediated the relation between trust and WTD. Again, the decisive factor whether trust has a direct or indirect impact on WTD is analyzed variables and the overall context of research methodology.

Another operating variable with trust is benefits. As discussed before, those could be of any kind and perceived differently by different customers. Interestingly, it was found that material compensation (gifts, free samples and other material benefits) recovers lack of trust when thinking about data disclosure, but in non - material exchanges trust is of a key importance (Premazzi et al., 2010). This finding could mean that compensation or perceived benefits could be a moderating variable (are those benefits material or not) between trust and WTD. However, Akroush and Al-Debei (2015) found that perceived benefits (or as described in the paper – relative advantage) have a positive

direct impact on trust. Such discrepancy could be explained by the fact that in first research mostly material benefits were analyzed and taken into consideration, but the other talked about non-material ones (time and money saving, convenience of a lot of information in one place and so on) and found the direct impact, not moderating one. In other research perceived benefits appeared to be less important than trust but also had an impact on WTD (Beldad et al., 2012), meaning that customers, concerned about their sensitive information, value their own beliefs and trust in a store rather than offered goods or personalized services. On the contrary, the suggested conclusion, when Beldad (2012) made the assumption that prior experience does not affect WTD directly, was that this relation could be mediated by perceived benefits, which, he proved, affect WTD directly. The advantage, gotten from exchange, determinates whether customers will disclose data or not. So it appears that different research finds different relations between trust, benefits and WTD, though it should be useful to analyze that in e-commerce background regarding customers previous experiences.

#### **3.4. Perceived privacy risks and benefits**

The comparison of two mediating variables of such research is also needed – perceived risks and benefits. Some research has shown that perceived benefits are one of the strongest predictors on WTD (N. Gerber, P. Gerber and Volkamer, 2018). Those benefits depend on e-vendors imagination: it could be discounts, personalized offers, other loyal, trusting customer advantages, which, obviously, customers tend to evaluate as high importance factors for disclosing their data. While others focused on perceived risks. Those risks in e-commerce background could be defined as privacy risks - expectation of losses (Cheung, Lee and Chan, 2013) when buying online and providing some sort of personal details. Those concerns come from realizing that such sensitive information could be used improperly, from hearing about huge public data breach cases and so on.

It was proved, that perceived value, which includes perceived benefits, and risks have a direct positive impact on WTD (Leppaniemi et al., 2017). Specifically, perceived privacy risks affect intention to disclose negatively (Norberg et al., 2007). This statement is strengthened by Zimaitis and his partners (2020) who proved that perceived risks have a direct impact on negotiated exchange (WTD). However, differently than in the latter research, scholars, analyzing social networking sites, resulted in conclusion that perceived risks are irrelevant on WTD (Cheung et al., 2013), but was explained by the fact that consumers are unaware of risks in social networks.

Bol and others (2018) found a relation not only between perceived risks and WTD, but also proved that perceived benefits and trust have a direct impact. Remembering previous analysis of trusts' direct or indirect impact on WTD – makes the relation even more unclear. Robinson (2018) also found that two of the most significant factors influencing WTD are perceived benefits and trust. Directly or not – the question remains unclear. Bol (2018) argued that of those three mentioned before benefits are the ones to be the biggest predictors of WTD. Interestingly, in research analyzing WTD in recommendation systems perceived benefits were found to be insignificant (M. S. Kim and S. Kim, 2018). In research about mobile apps users benefits were found to be of a greater significance than risks (Wang, Duong and Chen, 2016), meaning that mobile users more value possible reward than are concerned about risks.

One research explored what influences perceived privacy risks and perceived benefits (Wang et al., 2016). The first was found to be affected by two factors – perceived severity and perceived control. It was stated that perceived severity is more important among those two, because lowering perceived seriousness of ability to put customers personal data in danger has a bigger effect than giving the sufficient or required amount of control of their data to customers. However, perceived benefits are also influenced by two factors – personalized services and self-representation. The first one was proved to have higher impact and perceived as a more valuable advantage of personal data disclosure. Personalized services can help customers improve trust in online background, while representation ability, such as sharing of experience, can boost WTD, just in a less effective way. Having in mind the previous thought that benefits in this particular research have more power in WTD than risks, proves the main idea why organizations collect customers data. The core outcome mostly used by organizations is exactly personalization of products, services for customers. This research proves that customers value it as well, and this approach works for both sides of exchange.

In conclusion, previous research shows a little bit of a chaos in such research. One scholars findings deny others and vice versa. There is still much space for further research on deepening how and which variables are of the biggest importance and what are the exact relations between them. The lack of literature, particularly related to personal data disclosure in e-commerce and especially prior experience as a variable, urged to incorporate research not only on online purchasing sites, but also of different contexts. On one hand, that probably is the main reason of discrepancies in variables relations, but, on the other hand, such wide approach enriched analysis with different situations and deeper understanding of the overall topic. This research aim is to determine how prior personal data

sharing perceived experience affects customers' willingness to share it in e-commerce, incorporating other three variables, and in that way to identify a clearer understanding of those variable's relations.

## **4. RESEARCH METHODOLOGY FOR MEASUREMENT OF PRIOR EXPERIENCE'S IMPACT ON WILLINGNESS TO SHARE PERSONAL DATA IN E-COMMERCE**

### **4.1. Aim of the research, model and hypotheses**

This part of research concentrates on methodology which is based on previous literature analysis and its' findings. Research aim, problem, chosen methods, conceptual model and hypothesis are presented.

In the first part theoretical model is presented, as well as hypothesis are formulated, based on previous research findings and related studies. In the second part research methodology is described. Data collection methods are presented, chosen constructs and their reliability, origin is depicted. Finally, sample size is set.

For more specific research a particular type of products was chosen – material ones. As statistics show (Annex 2), the best selling things in e-commerce calculated by share of respondents are clothing and footwear (56%), sports and leisure items (44%), health and beauty (42%) and consumer electronics (41%). In this research category of products are not high in importance, but to differentiate between material products and non-material services would be clearer for respondents to imagine the situation and respond reasonably.

**Problem of the research** – how positive prior experience, while buying material items in e-commerce, influence customers' willingness to disclose personal data once again.

**Aim of the research** – to identify what is the relation between positive prior experience and willingness to disclose personal data in e-commerce while buying material products and which of the chosen variables could have impact for such relation.

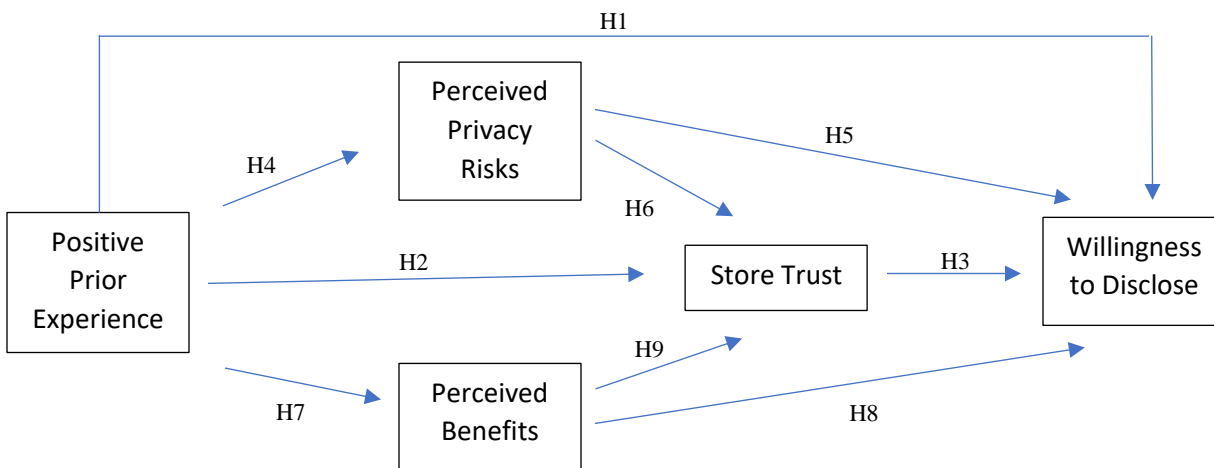
**Research object** – respondents e-commerce experience while buying material items and its effect on willingness to disclose personal data online once again.

Theoretical research model was created (Figure 2). It helps to understand expected relations between variables and prior experiences impact on willingness to disclose personal data in e-

commerce. As the main idea of SET is that individuals and organizations pursue relationships willing to maximize their reward and minimize the cost, the model represents the assumption, that prior experience has effect on customers willingness to disclose personal data. People are interested in personalized services and possible benefits, but they also take into consideration risks that could occur disclosing their data, privacy issues. Having in mind SETs' key factor – reciprocity – both privacy risks and benefits are included in the model. In order to check all possible relations between chosen variables, positive prior experience is also expected to have impact on perceived risks, benefits and store trust. Perceived risks and benefits are expected to have influence on store trust and WTD. Store trust, as a variable, is included separately in the model. It is expected to reduce privacy concerns and have a huge impact on WTD while reducing any negative prior experiences and risks. Presented model would examine direct and non-direct influence of positive prior experience on willingness to disclose personal data in e-commerce.

**Figure 2.**

*Conceptual model*



Source: made by author based on literature research

Digital age has brought a lot of thoughts about the correlation between privacy and convenience. Concerns about when disclosing personal data is safe, when self-disclosure is really needed are worrying. Especially when the e-commerce sector is rapidly growing and to some level sensitive information is being asked almost in every step online. Customers have the right to choose

and make that decision by themselves, while organizations have the aim to collect as much customers' data as possible. In other words, companies are trying to make that decision of customers to be positive.

Previous research, as it was discussed earlier, have examined a lot of different variables which has an impact on willingness to disclose personal data in e-commerce. Also there has been a few discussions about previous experience and WTD. Leppaniemi and his colleagues (2017) concluded their research with a saying that people's previous actions influence their future intentions. This phrase sums up the main idea of this research – not only actions, but also prior experiences have an impact on WTD. The question is, how the effect is placed, directly or through other variables and which ones. Based on previous research, six main variables were chosen (Figure 2). The following hypothesis are drawn on the strength of literature review and proposed conceptual model.

To begin with, prior experience (PE) is quite undiscovered topic in self-disclosure of personal data. There is definitely a lack of research about the relationships between prior experience and WTD. The first goal of this research is to check the direct impact of PE to WTD in e-commerce – does it exist or not. Previously researchers found that satisfaction or positive prior experience has positive effect on WTD in DIY and groceries retailing contexts (Leppaniemi et al., 2017). While Anic, Skare and Milakovic (2019) declared that negative previous online experience did not have a significant effect on customers privacy concerns in Croatia, which negatively mediated the relation between negative PE and WTD. It is clear, that further research is needed. In this research positive PE is being investigated. It is expected that positive prior experience has a direct impact on WTD in e-commerce.

***H1: Positive prior experience has a positive impact on willingness to disclose personal data in e-commerce.***

The other possibility is that prior experience affects WTD not directly, but through other variables, such as store trust. Previous research has proved that positive prior experience significantly increases trust in e-government transactions (Beldad et al., 2012). Governmental organizations are a bit different field, and the purposes of self-disclosure are not commercial as in e-commerce. On the other hand, some found that in online group buying prior experience is predicted by trust, which is vice versa (Shiau and Luo, 2012). However, there is no clear statement what effect prior experience has on trust in e-commerce context.

***H2: The more positive prior experience is, the more trust in a store a customer has.***

There is no doubt that trust is important variable in personal data disclosure (Bol et al., 2018). If prior experience affects WTD through trust, then trust should affect WTD directly. If a person do not trust the online store, he should be less willing to self-disclose there. Prior researchers have found that both types of trust (in internet and in particular store) have positive influence on personal data disclosure decision making in overall online context (Robinson, 2018). The others found that trust has indirect effect on WTD (Zimaitis et al., 2020). The actual relation is not clear again – specificity of e-commerce context and the relation needs to be measured. Furthermore, there is no data whether prior experience has effect on WTD through trust.

***H3: The less trust in store a person has, the less willingness to disclose personal data he has.***

Another variable which could mediate the relationship between prior experience and WTD is perceived risks. It is possible that if a customer experiences a positive transaction while buying something online, his attitude towards possible risks could become more positive. When analyzing online services of government Beldad and others (2012) stated that positive prior experience decreases perceived risks about personal data disclosure. While Yang and Liu (2014) found out that negative prior experience directly increased perceived risks while operating in social networking sites. Talking about e-commerce background the relation between those two variables is unclear.

***H4: Positive prior experience has a negative impact on perceived risks.***

Perceived risks could be one of the direct variables to influence WTD. Possible threats are a powerful decision-making aspect. A few researchers found that perceived costs, threats or paranoia have positive direct impact on WTD in retailing and e-shopping contexts (Leppaniemi et al., 2017; Zimaitis et al., 2020), others declared that the trade-off between threats and possible benefits is important (Bol et al., 2018). It is necessary to check this relation in particular case in order to find whether perceived risks could mediate relationship between prior experience and WTD.

***H5: Perceived risks will negatively influence willingness to disclose personal data in e-commerce.***

There is also a possibility that mediating variables are linked to each other too. For example, perceived risks could have an impact on store trust. Beldad and others (2012) found out that in e-government transactions perceived risks do affect trust and vice versa. While Robinson (2018) declared that higher trust lowers perceived risks for customers. Perceived risks have an impact on trust in e-commerce, according to Olivero and Lunt (2004), but it was quite some time ago. Online purchasing has changed a lot since then and the relations between risk and trust could have shifted.



This research focuses on how perceived risks affect trust, and then maybe prior experience has impact on WTD through both perceived risks and trust.

***H6: Perceived risks has a negative impact on store trust.***

Relationship between prior experience and perceived benefits is one of the least examined ones. Logical explanation would be that prior experience has direct and clear impact on benefits. Satisfied customers tend to see more and bigger benefits than unsatisfied ones. Beldad and others (2012) researched this relation in e-government personal data disclosure and concluded that positive prior experience has positive impact on perceived benefits. E-commerce context could have the same effects, but very different products (government services and commercial items) could result in a different outcome.

***H7: Positive prior experience increases customer's perceived benefits.***

Perceived benefits could be in the middle of prior experience and WTD. Customers evaluate given benefits and make the decision – to disclose personal data or not. Some research results show that benefits have direct positive impact on WTD, but the contexts are different - DYI, grocery retailing and overall online situation (Leppaniemi et al., 2017; Robinson, 2018). Some even stated that perceived benefits were one of the most significant factors in customers' WTD (Bol et al., 2018). However, there are research which found out that perceived benefits do not have very big influence on intention to disclose personal data, but the context was quite specific – online recommendation systems (M. S. Kim and S. Kim, 2018). Those benefits could be the mediating aspect of prior experience and WTD. In order to measure exactly e-commerce context, the following hypothesis should be examined.

***H8: The bigger perceived benefits, the higher willingness to disclose personal data in e-commerce.***

Just like perceived risks and trust, perceived benefits and trust could also be influenced by each other. This relation is also not very well examined, but there are a few research where perceived benefits were found to be the cause of bigger trust (Akroush and Al-Debei, 2015). Beldad and others (2012) checked this relation only comparing the variables, but not measuring their possible integrity. Trust had a more purposeful impact than incentives. There could be some relation between those benefits and trust and those two could even mediate the relation of prior experience and WTD.

***H9: Perceived benefits have a positive impact on store trust.***

#### 4.2. Data collection methods, constructs, measurements and sample size

Previous research of prior experiences' impact on willingness to disclose personal data online shows that online survey or questionnaire is mostly suitable research method for such field (Pallant et al., 2021; Kim and Son, 2009; Chou and Hsu, 2016; Fernandes and Pereira, 2021; M. S. Kim and S. Kim, 2018; Zhao et al., 2021; Akroush and Al-Debei, 2015; Beldad et al., 2012; Thompson et al., 2019; Pavur et al., 2016; Hsu et al., 2017; Shiau and Luo, 2012), sometimes factorial design is used (Kehr, Kowatsch, Wentzel and Fleisch, 2015; Premazzi et al., 2010). Almost every previous researcher chose online survey, few went with e-mail questionnaires. In this research online questionnaire is chosen. It is easy to reach respondents, manage research data and many questions could be asked giving much more flexibility to the analysis. The questionnaire was developed in English, translated to Lithuanian (Annex 3) and presented in social media, various online groups. Respondents are ensured the anonymity since the identity is not important in this research and the answers are much more sincere, resulting in higher reliability of the survey.

In order to have the highest constructs validity, scales from previous research were chosen and adapted. First of all, to measure prior positive experience, scale from Chou and Hsu (2016) was adapted. They created a construct out of two others – Zhang and others (2011) and Zhao and others (2012) – measuring satisfaction with outcome quality and satisfaction with process quality. Both of those Cronbach  $\alpha$  were pretty high – 0.712 for satisfaction with outcome quality and 0.725 for satisfaction with process quality. Research participants evaluated their positive prior experience on 7-point Likert scale, where 1 means strongly disagree and 7 – strongly agree. The construct contains 4 items. Kim and Son (2009) developed a scale to measure customer satisfaction, but it was rather simple and not so comprehensive as Chous' and Hsus' (2016).

Next variable is mediating one - perceived risks. Scale for it was adapted from Vasic, Kilibarda and Kaurin (2019) because of its high validity (Cronbach  $\alpha = 0.78$ ) and clear, simple statements, which would be easily understandable for respondents. It consists of 3 items and is measured by 7-point Likert scale. Other researchers also used 7-point Likert scale for risk measurement (Aiello et al., 2020; Thompson et al., 2019) and some event the same constructs (Pallant et al., 2021).

Another mediating variable of this research conceptual model is perceived benefits. To measure it a scale from de Kerviler, Demoulin and Zidda (2016) was adapted. It consists of 3 items as well and

is measured the same way as others previously – 7-point Likert scale. Other researchers scales were too specific and linked to some particular site, brand or shop (Leppaniemi et al., 2017; Kim and Son, 2009; Hsu et al., 2017), which in this case is not necessary. The statements were suitable for general perceived benefits measuring in e-commerce. That's why this particular construct seemed the most suitable one (Cronbach  $\alpha = 0.65$ ).

Store trust needs to be measured, too. A scale from King (2018) was adapted. In this dissertation a research on how relationships between individuals and organizations affect WTD and measured store trust on 7-point Likert scale with 2 items. It is really suitable for this research because it could be easily adapted for this research and did not require to specify a particular store. In order to make the questionnaire more understandable and the answers more relevant, it is useful to let people remember their last interaction with e-commerce store. Avoiding any specific stores, the overall experience is expected to be exposed. Furthermore, even though it has only 2 items, its' Cronbach  $\alpha$  is 0.90, which is very high and assures validity of the scale. Other scholars used scales for brand trust measurement (Pallant et al., 2021) or about trustfulness as a character trait (Urbonavicius et al., 2021), so Kings scale was closest option to this research's aim.

Construct to measure willingness to disclose was chosen from Urbonavicius and his colleagues paper (2021). The research focused on social networking and WTD while shopping online. The scale consists of 7 items and is measured by 7-point Likert scale. The origin of Urbonavicius and his colleagues research is quite similar, so the construct is suitable for this particular research. It's Cronbach  $\alpha$  is 0.87 so the reliability is high. Other research developed 7-point semantic differential scale to measure WTD (Anderson and Agarval, 2011), but since 2011 a lot might have changed, so the newest scale was chosen.

All chosen constructs are valid and falls in between the preferred range of Cronbach  $\alpha$  – not lower than 0.7. All scales were adapted at least a little bit to fit this particular research, measure customers' prior experience and e-commerce context. For clearer understanding, Table 2 is presented below– it includes all 5 variables, description of the constructs content, measurement type, references and Cronbach's  $\alpha$  index.

**Table 2.***Questionnaire constructs*

Variable	Description	Measurement	References	Cronbach's Alpha
Prior positive experience	<p>Satisfaction with outcome quality:</p> <ol style="list-style-type: none"> <li>1. I feel satisfied with my previous online shopping results (good experience, decision making quality)</li> <li>2. I am satisfied with online shopping sites, including fulfilling my shopping tasks, providing useful information, security and after-sale support</li> </ol> <p>Satisfaction with process quality:</p> <ol style="list-style-type: none"> <li>1. I feel satisfied with the previous shopping processes</li> <li>2. The shopping processes were pleasant, fair, convenient and without security concerns</li> </ol>	7-point Likert type scale	Zhang et al., 2011; Zhao et al., 2012	0.71, 0.73
Perceived risks	<ol style="list-style-type: none"> <li>1. Last time purchasing online, I hesitated to provide my credit/debit card number.</li> <li>2. Last time purchasing online, there was a risk of the loss of privacy.</li> <li>3. Last time purchasing online, there was a risk of identity theft.</li> </ol>	7-point Likert type scale	Vasic et al., 2019	0.78
Perceived benefits	<ol style="list-style-type: none"> <li>1. Last time I was shopping online, disclosing personal data allowed me to get more information about products.</li> <li>2. Last time I was shopping online, disclosing personal data allowed me to access personalized discounts.</li> <li>3. Last time I was shopping online, disclosing personal data allowed me to save time during online interactions.</li> </ol>	7-point Likert type scale	de Kerviler et al., 2016	0.65

Store trust	<p>1. Based on what I have experienced the last time I was shopping online, I find the e-commerce to be trustworthy.</p> <p>2. I trust the last e-commerce shop I bought in with my personal data. (Data includes your body data, personal data, and location data.)</p>	7-point Likert type scale	King, J., 2018	0.90
Willingness to disclose personal data	<p>While purchasing goods or services in online, you are often asked to provide to them your personal data. Please, specify, how much are you willing to provide personal data of each type:</p> <p>Home address  Mobile phone number  Email address  Date of birth  Marital status  Name  Last name  Gender</p>	7-point Likert type scale	Urbonavičius et al, 2021	0.87

Source: made by author regarding Urbonavičius et al., 2021; King, 2018; de Kerviler et al., 2016; Vasic et al., 2019; Zhang et al., 2011; Zhao et al., 2012

Research methodology requires defining sampling method and sample size. For this particular research population is not defined very strictly, meaning that there are no requirements for specific age gaps, gender or other factors. The only important factors are that respondents should be not less than 15 years old because of the responsibility for their actions and self-decision-making. Respondents were chosen using nonprobability convenience selection sampling method. Sample size was calculated using the Equation 1 and the result is 197.

$$\text{(Equation 1) } n = z^2 p(1 - p) / e^2$$

$N$  in the formula represents sample size;

$z$  – standard error associated with the level of confidence;

$p$  – estimated percent in the population;

$e$  – acceptable sample error.

Margin of error was chosen  $e=5\%$ , confidence level – 95%, so  $z = 1.96$ , and population percent was calculated by Lithuania's permanent residents from 15 years old data in 2021<sup>1</sup> (84.9%).

$$N=3.8416 \times 84.9 \times 15.1 / 25 = 197$$

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<sup>1</sup> <https://osp.stat.gov.lt/lietuvos-gyventojai-2021/salies-gyventojai/gyventoju-skaicius-ir-sudetis>

## 5. STATISTICAL ANALYSIS OF THE RESEARCH ON PRIOR EXPERIENCES IMPACT ON WILLINGNESS TO DISCLOSE PERSONAL DATA IN E-COMMERCE

### 5.1. Demographic characteristics of survey respondents

Gender. The minimum number of answers to collect was defined as 197 respondents. After response checking and cleaning of the data – 206 reliable answers were left. Overall, 56.3% of respondents were women, 41.7% were men and 1.9% of respondents identified themselves as other gender. Table below (Table 3) represents the distribution of respondents based on their gender, while screenshots from statistical analysis with such numbers could be found in annexes (Annex 4).

**Table 3.**

*Respondents' distribution by gender*

Gender	Women	Men	Other
Percentage	56.3%	41.7%	1.9%

Source: made by author based on statistical analysis

Age. In the methodology part the age of respondents was identified when choosing population – from 15 years old because of such respondent's ability to make their own decisions and purchase online by themselves. In order not to discriminate respondents and to get as much reliable data as possible the survey had an option for age of such respondents. There were only a few of them and their answers were eliminated during statistical analysis since they do not fit the requirements. In the table below the distribution of age is represented (Table 4). Screenshots from statistical analysis could be found in annexes (Annex 5).

**Table 4.**

*Respondents distribution by age*

Age category	15-19	20-29	30-39	40-49	50-59	60-69	70 ir daugiau
Percentage	14.6%	42.2%	16%	15.5%	7.8%	2.9%	1%

Source: made by author based on statistical analysis

## 5.2 Reliability of scales and tests for normality

Reliability of whole five scales (constructs) was measured. Cronbach alpha's varied from 0.68 to 0.88, which are good results and each scale of research can be considered reliable. Table with exact Cronbach alpha values is presented below (Table 5), even more detailed information could be found in annexes (see annexes 6-10).

**Table 5.**

*Reliability analysis of constructs*

Scale	Sample size	No. of items per scale	Cronbach alpha
Positive prior experience	206	4	0,881
Perceived risks	206	3	0,845
Perceived benefits	206	3	0,699
Trust	206	2	0,675
Willingness to disclose	206	8	0,770

Source: made by author based on statistical analysis

Before moving on to hypothesis checking, the normality tests for dependent variables should be done, as linear regressions will be used as statistical analysis method. Tests have been done using SPSS program for all dependent variables – WTD, store trust, perceived risks, perceived benefits. Kolmogorov-Smirnov test results were used because of bigger sample size than 50 respondents (N=206).

The results showed that all dependent variable's  $p < .001$ . The detailed results are presented in annexes (Annex 11-14). The results are not ideal but having in mind that sample size is quite big, the rule of  $p > .005$  is not that important. Literature says that normal distribution is significant when sample sizes are small ( $N < 50$ ). As number of respondents goes up, the power of this test decreases (Hernandez, 2021, p. 12). Thus, normality of dependent variables will be assumed as reliable.



### 5.3 Statistical analysis for hypothesis checking

#### 5.3.1 Impact of positive prior experience on willingness to disclose personal data in e-commerce

There are articles about prior experience and WTD, but the exact relation and direct impact is not clear. Previously researchers found that satisfaction or positive prior experience has positive effect on WTD in different contexts (Leppaniemi et al., 2017). On the other hand, negative previous online experience did not have a significant effect on customers privacy concerns (Anic et al., 2019), thus H1 was derived. It examines how positive previous experience affects WTD and what is the relation. For testing it responses from all respondents were used (N=206).

To analyze first hypothesis linear regression was chosen as a statistical analysis method. It analyzed impact of independent variable (positive prior experience) on dependent variable (willingness to disclose). Analysis showed that the correlation between those two variables is significant, but positive prior experience is not a very strong predictor of willingness to disclose personal data in e-commerce. ANOVA table showed that the predictor is not very strong, as  $F(1)=47,741$ ,  $p<0,001$ ,  $R^2=,190$  (Annex 15). The relation type could be seen from Standardized Coefficients Beta indicator – it showed positive impact from non-dependent to dependent variable, meaning that positive prior experience increases WTD by 44% (Table 6). Thus **H1 is confirmed**.

**Table 6.**

*Regression analysis of positive prior experience's impact on willingness to personal data in e-commerce*

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26,966	2,096		12,865	<,001
	Positive_prior_experience	,739	,107	,435	6,909	<,001
a. Dependent Variable: WTD						

Source: made by author based on statistical analysis

#### 5.3.2 Impact of positive prior experience on store trust

Further not direct impact was considered. Previous research have proved that positive prior experience significantly increases trust for example in e-government transactions (Beldad et al., 2012), but commercial field is different. Some researchers found that in online group buying prior experience is predicted by trust (Shiau and Luo, 2012). However, there is no clear statement what effect prior experience has on trust, thus H2 was obtained. H2 examines if positive prior experience has an impact on store trust. For hypothesis testing all respondents answers were used (N=206).

To analyze second hypothesis linear regression was used. It analyzed impact of independent variable (positive prior experience) on dependent variable (store trust). Analysis showed significant correlation between those two variables. ANOVA table showed that positive prior experience might be a predictor of customer store trust, as  $F(1)=66,503$ ,  $p<,001$ ,  $R^2=,246$  (Annex 16). Trust can be explained by 27% of positive prior experience. Standardized Coefficients Beta proves that positive prior experience increases store trust by 50% (Table 7). Thus **H2 is confirmed**.

**Table 7.**

*Regression analysis of positive prior experience's impact on store trust*

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,214	,552		13,068	<,001
	Positive_prior_experience	,230	,028	,496	8,155	<,001
a. Dependent Variable: Trust_1						

Source: made by author based on statistical analysis

### 5.3.3 Impact of store trust on willingness to disclose personal data in e-commerce

If prior experience affects WTD through trust, then trust should affect WTD directly. It is agreed that trust has a positive impact – direct or indirect – on personal data disclosure decision making (Robinson, 2018; Zimaitis et al., 2020). The actual relation in e-commerce context is not clear, thus H3 was received. Hypothesis examines if store trust has impact on willingness to disclose personal data in e-commerce. For this hypothesis all respondent's answers were used (N=206).

H3 was analyzed using linear regression as a statistical analysis method. It analyzed impact of independent variable (store trust) on dependent (willingness to disclose). Analysis showed significant correlation between variables. ANOVA table showed that trust might be a predictor of willingness to disclose personal data in e-commerce, as  $F(1)=58,256$ ,  $p<,001$ ,  $R^2=,222$  (Annex 17). Standardized Coefficients Beta shows that store trust increases WTD by 47% (Table 8), meaning that the less trust customer has, the less willing to disclose he is. **H3 is confirmed.**

**Table 8.**

*Regression analysis of store trust's impact on willingness to disclose personal data in e-commerce*

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20,981	2,670		7,859	<,001
	Trust_1	1,726	,226	,471	7,633	<,001
a. Dependent Variable: WTD						

Source: made by author based on statistical analysis

#### 5.3.4 Impact of positive prior experience on perceived risks

It is clear that perceived risks is an important player in WTD-related research. There was research about governmental environment where positive prior experience decreases perceived risks about personal data disclosure, or negative prior experience directly increased perceived risks in social networking sites (Beldad et al., 2012; Yang and Liu, 2014). Perceived risks could be important mediating variable between prior experience and WTD. Thus H4 was written down. It examines if positive prior experience has direct impact on perceived risks. For this hypothesis all respondent's answers were used (N=206).

H4 was checked using linear regression. It analyzed impact of independent variable (positive prior experience) on dependent (perceived risks). Analysis showed significant correlation between variables. ANOVA table showed that positive prior experience might affect perceived risks, as  $F(1)=18,828$ ,  $p<,001$ ,  $R^2=,084$  (Annex 18). Negative value of Standardized Coefficients Beta shows that positive prior experience decreases perceived risks by 29% (Table 9). **H4 is confirmed.**

**Table 9.***Regression analysis of positive prior experience's impact on perceived risks*

Model		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16,007	1,357		11,794	<,001
	Positive_prior_experience	-,300	,069	-,291	-4,339	<,001
a. Dependent Variable: Perceived_risks						

Source: made by author based on statistical analysis

### 5.3.5 Impact of perceived risks on willingness to disclose personal data in e-commerce

Literature states that perceived costs, threats or paranoia have positive direct impact on WTD in retailing and e-shopping contexts (Leppaniemi et al., 2017; Zimaitis et al., 2020) or that the relation is at least important (Bol et al., 2018). If prior experience has negative impact on perceived risks, there is a need to check if perceived risks affect WTD in some way. Thus H5 was derived. It examines if perceived risks have a negative effect on customers willingness to disclose. For this hypothesis all respondent's answers were used (N=206).

Hypothesis was tested using linear regression method. It analyzed impact of independent variable (perceived risks) on dependent (WTD). This time analysis also showed significant correlation between variables. ANOVA table represented that perceived risks might affect WTD, as  $F(1)=27,608$ ,  $p<,001$ ,  $R^2=,119$  (Annex 19). Standardized Coefficients Beta this time is also negative, declaring that perceived risks affect willingness to disclose negatively (by 35%) (Table 10). **H5 confirmed.**

**Table 10.***Regression analysis of perceived risks impact on willingness to disclose personal data in e-commerce*

Model		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	46,782	1,257		37,225	<,001
	Perceived_risks	-,567	,108	-,345	-5,254	<,001
a. Dependent Variable: WTD						

Source: made by author based on statistical analysis

### 5.3.6 Impact of perceived risks on store trust

Mediating variables could be linked to each other, too. Previous research stated that perceived risks do affect trust and sometimes even vice versa or has a negative impact (Beldad et al., 2012; Robinson 2018; Olivero and Lunt, 2004). There is still not so many research, though it might be that prior experience has impact on WTD through both perceived risks and trust. H6 was raised. It investigates if perceived risks have a negative impact on store trust. All gathered answers of survey were used for this hypothesis checking (N=206).

H6 was examined using linear regression. It analyzed impact of independent variable (perceived risks) on dependent (store trust). Analysis showed significant correlation between variables. ANOVA table revealed that perceived risks might affect store trust,  $F(1)=4,360$ ,  $p=,038$ ,  $R^2=,021$  (Annex 20). Standardized Coefficients Beta, as expected, shows negative relation, meaning that perceived risks decrease store trust by 15% (Table 11). **H6 is confirmed.**

**Table 11.**

*Regression analysis of perceived risks impact on store trust*

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12,223	,362		33,792	<,001
	Perceived_risks	-,065	,031	-,145	-2,088	,038
a. Dependent Variable: Trust_1						

Source: made by author based on statistical analysis

### 5.3.7 Impact of positive prior experience on perceived benefits

Relationship between prior experience and perceived benefits is one of the least examined ones. Literature review revealed that in e-government context positive prior experience has positive impact on perceived benefits (Beldad et al., 2012), but the product in e-commerce is very different. Thus H7 was derived. It examines if positive prior experience increases customer's perceived benefits. All gathered answers of survey were used for this hypothesis checking (N=206).

Chosen method for hypothesis testing was simple linear regression. It analyzed impact of independent variable (positive prior experience) on dependent (perceived benefits). Analysis showed that the correlation is significant. ANOVA table represented that perceived benefits could be impacted by positive prior experience, as  $F(1)=41,136$ ,  $p<,001$ ,  $R^2=,168$  (Annex 21). Standardized Coefficients Beta is positive and states that positive prior experience increases perceived benefits by 41% (Table 12). **H7 is confirmed.**

**Table 12.**

*Regression analysis of positive prior experience impact on perceived benefits*

Model		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,705	1,152		1,479	,141
	Positive_prior_experience	,377	,059	,410	6,414	<,001
a. Dependent Variable: Perceived_benefits						

Source: made by author based on statistical analysis

### 5.3.8 Impact of perceived benefits on willingness to disclose personal data in e-commerce

Some research results show that benefits have direct positive impact on WTD (Leppaniemi et al., 2017; Robinson, 2018) or even are one of the most significant factors in customers' WTD (Bol et al., 2018) or that benefits do not have very big influence on intention to disclose personal data (M. S. Kim and S. Kim, 2018). Yet, the contexts of the research differ. In order to measure exactly e-commerce

context, H8 was raised. It questions if bigger perceived benefits have positive impact on higher willingness to disclose personal data in e-commerce. All gathered answers of survey were used for this hypothesis checking (N=206).

H8 was tested using linear regression. It analyzed impact of independent variable (perceived benefits) on dependent (willingness to disclose). Analysis showed that the correlation is significant. It is seen from ANOVA table that WTD might be explained by perceived benefits, as  $F(1)=7,875$ ,  $p=,005$ ,  $R^2=,037$  (Annex 22). Standardized Coefficients Beta is positive and shows that perceived benefits increase customers willingness to disclose by 19% (Table 13). Thus **H8 is confirmed**.

**Table 13.**

*Regression analysis of perceived benefit impact on willingness to disclose personal data in e-commerce*

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	37,789	1,273		29,695	<,001
	Perceived_benefits	,355	,127	,193	2,806	,005
a. Dependent Variable: WTD						

Source: made by author based on statistical analysis

### 5.3.9 Impact of perceived benefits on store trust

There are a few researches where perceived benefits were found to be the cause of bigger trust (Akroush and Al-Debei, 2015), but no information about the other way relation – how benefits affect trust. To check possible mediation between prior experience and WTD, H9 was derived. It examines if perceived benefits affect store trust and what is the exact effect. All gathered answers of survey were used for this hypothesis checking (N=206).

H9 was tested using linear regression. It analyzed impact of independent variable (perceived benefits) on dependent (store trust). Analysis showed that there is significant correlation between variables. ANOVA table shows that store trust might be explained by perceived benefits, as

$F(1)=37,586$ ,  $p<,001$ ,  $R^2=,156$  (Annex 23). Standardized Coefficients Beta shows positive impact and that benefits increase store trust by 39% (Table 14). **H9 is also confirmed.**

**Table 14.**

*Regression analysis of perceived benefits impact on store trust*

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9,801	,325		30,125	<,001
	Perceived_benefits	,198	,032	,394	6,131	<,001
a. Dependent Variable: Trust_1						

Source: made by author based on statistical analysis

#### 5.4 Summary of statistical analysis

Overall, 9 hypothesis, examining customers willingness to disclose personal data in e-commerce and the importance of previous experience in such phenomena, were raised. Table below shows the summary of the results after statistical analysis and hypothesis checking (Table 15).

**Table 15.**

*Summary of hypothesis testing results*

Hypothesis:	Status:
<i>H1: Positive prior experience has a positive impact on willingness to disclose personal data in e-commerce.</i>	Confirmed
<i>H2: The more positive prior experience is, the more trust in a store a customer has.</i>	Confirmed



<i>H3: The less trust in store a person has, the less willingness to disclose personal data he has.</i>	Confirmed
<i>H4: Positive prior experience has a negative impact on perceived risks.</i>	Confirmed
<i>H5: Perceived risks will negatively influence willingness to disclose personal data in e-commerce.</i>	Confirmed
<i>H6: Perceived risks have a negative impact on store trust.</i>	Confirmed
<i>H7: Positive prior experience increases customer's perceived benefits.</i>	Confirmed
<i>H8: The bigger perceived benefits, the higher willingness to disclose personal data in e-commerce.</i>	Confirmed
<i>H9: Perceived benefits has a positive impact on store trust.</i>	Confirmed

Source: made by author based on statistical analysis

## FINDINGS AND RECOMMENDATIONS

Personal data nowadays is a sensitive topic. Not only for people themselves, but also for organizations. It is extremely valuable for businesses because of improved services, products, better consumer targeting, development of business overall and so on. However, personal data bring not only advantages but could also cause huge disadvantages. Data thefts, breaches, cybercrimes are not so rare occurrence these days. That is why organizations have to adapt to increasing data security issues and try to safeguard their customers data in every possible way. In some cases, such legal regulations as GDPR can help, but this and other laws are criticized for unclear instructions and wide range for opportunities, leaving organizations to deal with data issues by their own understanding. Additionally, with increasing significance to the customers, personal data issues become even more important for organizational performance. Customers attitudes towards organization, regarding willingness to disclose their data, determinates that organizations' sales, customer availability and so on.

Personal data in online environment becomes even more sensitive and important feature. E-commerce usage has extremely increased during the pandemics and quarantines simultaneously improving personal data issues. When buying online it is unavoidable to disclose some sort of data. There are various types of vendors, various ways how they manage customers' data. Organizations choose how to inform and what exchange to offer for their consumers' data. This decision affects customers' attitudes not only for that particular vendor but also for online purchasing sites overall. To sum up, vendors have to take seriously their customers' sensitive information because that is an important determinant for their business's success and performance - the decision to buy or not is made by customers.

### Findings:

1. Personal data is rapidly becoming more and more sensitive topic, especially in online environment. It is the new "currency of the digital world" (Spiekermann et al., 2015, p. 161) because of its worth and importance. However, there is no clear legal regulations how organizations should process, store and manage their customers data. Thus, risk awareness of

customers, in this particular research in B2C context, is growing, while willingness to self-disclose is decreasing.

2. Willingness to disclose personal data in e-commerce is quite new and unexplored topic. Some scholars used Theory of Planned behavior to analyze factors influencing WTD, others have talked in terms of Theory of Reasoned action, Dual Calculus model. One of those theories was SET. The dedication and constraint mechanisms, negotiated and reciprocal exchange are an interesting approach to such research. Trust, reciprocity, equal exchange in e-commerce, customer behavior plays an important role when analyzing private data as an asset of exchange. Reciprocity in exchanges, as the main idea of SET, is valuable when examining what customers expect from self-disclosure and how such factors as trust, perceived benefits, risks affect their willingness to do so. SET is a good choice as a theory for examination because of its suitability for reciprocal exchange, particularly when assets are personal data versus some kind of benefits for customer. All of the five mostly discussed variables in this literature analysis are suitable and worth examining in terms of this theory.
3. Previous research examining factors, that terminate if customers are willing to disclose their personal information or not, have discussed different variables and different contexts. As for this paper, the focus is on dispositional variables – prior experience, trust, perceived benefits, perceived risks and WTD. Those variables were all previously proved to have a direct or indirect impact on WTD. The problem is that there is no clear understanding what are the exact relations between those five variables. Those discrepancies are mainly caused by different backgrounds, such as WTD in social networking sites, group buying sites or e-commerce vendors, or could be different research methodologies. Furthermore, prior experience is one of the least examined variables in previous literature.
4. Concluding literature analysis regarding the relations between those five chosen variables reveals that, as stated before, there are many questions left. For example, overall prior experience was stated to have no direct impact on WTD (Beldad et al., 2012) while other scholar proved on the contrary (Leppaniemi et al., 2017; Luo, 2001). Others also argued that satisfaction affects trust (McKnight et al., 2002; Leppaniemi et al., 2016; Shiau and Luo, 2012), which affects WTD, or that satisfaction lowers perceived risks, makes perceived benefits of a higher importance, and both of those affect WTD directly (Beldad et al., 2012). What concerns negative prior experience, some scholars stated that it has almost no impact on WTD (Anic et al., 2019). Trust, as a mediating variable was examined and found out that it

has connections with all of the four others. Trust lowers perceived risks, but also those risks were found to reduce trust (Robinson, 2018; Olivero and Lunt, 2004). Trust was found to impact WTD directly– increase (Premazzi et al., 2010; Belanger, 2002; Beldad et al., 2012; Mazurek and Malagocka, 2019) and non-directly (Urbonavicius et al., 2021; Zimaitis et al., 2020). Trust and perceived benefits were also found to be one of the strongest predictors of WTD (N. Gerber et al., 2018) and have both-sided impact (Akroush and Al-Debei, 2015). Also, direct impact of perceived benefits on WTD were found (Beldad et al., 2012). Perceived risks and benefits, as closely related variables, also have connections. Risks affect WTD directly (Norberg et al., 2007; Zimaitis et al., 2020), while in social networking sites – does not have an impact at all (Cheung et al., 2013). With perceived benefits the problem is the same – one research found direct effect (Bol et al., 2018), while other – indirect and insignificant (M. S. Kim and S. Kim, 2018).

5. Statistical analysis showed that positive prior experience has a positive impact on willingness to self-disclose personal data in e-commerce. It clarifies that the direct effect, without any mediating variables, exists. This outcome coincides with previous researchers founding in DYI and groceries retailing and other contexts (Leppaniemi et al., 2017; Beldad et al., 2012). On the other hand, other authors results were different - negative previous online experience did not have a significant effect on customers privacy concerns in Croatia, which negatively mediated the relation between negative PE and WTD (Anic et al., 2019). The cause could be country-related or that the negative PE was being measured. Current research results show that the more positive prior experience while disclosing personal data in e-commerce a person has, the more willing he is to self-disclose again.
6. Positive prior experience has positive impact on store trust. Results derived from the research showed that if the customer has more positive experience of self-disclosure in e-commerce, the more trusting he is. Those results are consent with previous research in governmental transactions (Beldad et al., 2012), even though the contexts and purpose of self-disclosure are quite different – one is commercial, other not. Other scholars found effect, but it was not clear if it was positive or negative (McKnight et al., 2002; Leppaniemi et al., 2016; Shiau and Luo, 2012).
7. Store trust affects WTD positively. In order the clarify, if PE affects WTD through store trust, the relation was tested. The idea that trust is important variable in personal data disclosure (Bol et al., 2018) was proved. The results are consent with previous research in overall online

context (Robinson, 2018; Premazzi et al., 2010; Belanger, 2002; Beldad et al., 2012), while some stated the non-direct effect (Urbonavicius et al., 2021; Zimaitis et al., 2020). Whereas PPE positively affects store trust, store trust positively affects WTD, the drawn conclusion is that prior experience affects WTD not only directly, but through store trust as well. This finding proves the main idea of SET implications – positive experience creates customers’ trust in a store and thereby the willingness to get involved in an exchange by sharing personal information.

8. Positive prior experience has a negative impact on perceived risks. As it was expected, customer’s previous self-disclosure experience lowers the perceived risks. The results are consent with previous research of online government services and social networking sites (Beldad et al., 2012; Yang and Liu, 2014). In e-commerce prior experience and perceived risks are closely related. Customers’ who have already have engaged in such kind of research and had a fulfilling experience, will think of less reasons why not to engage next time.
9. Perceived risks have a negative impact on willingness to disclose personal data in e-commerce. Perceived risks were considered as one of the possible mediating variables between PE and WTD. As it is seen, the assumption was true. Possible threats are a powerful decision-making aspect which affects customer’s willingness to self-disclose. The results are consent with previous research in retailing and e-shopping contexts (Leppaniemi et al., 2017; Zimaitis et al., 2020; Norberg et al., 2007). However, other scholars have proved that perceived risks are irrelevant on WTD in social networks (Cheung et al., 2013). Regarding this research results, perceived risks mediate the relationship between PE and WTD.
10. Perceived risks have a negative impact on store trust. These findings agree with previous research, thus the contexts differ (Beldad et al., 2012; Olivero and Lunt, 2004; Robinson, 2018). Since both store trust and perceived risks are significant players between PE and WTD, the relationship between prior experience and customer’s willingness to disclose is mediated by them both in e-commerce context. As positive prior experience lowers perceived privacy risks, which influences store trust and WTD negatively, the conclusion is drawn that positive prior experience is highly important in this case because high perceived risks can make a lot of unwanted damage to WTD.
11. Positive prior experience has a positive impact on perceived benefits. Positive self-disclosure experiences result in bigger, more beneficial perceived benefits in customer’s minds. The results comply with previous research, but in different context (Beldad et al., 2012).

12. Willingness to disclose is positively influenced by perceived benefits. As reciprocal exchange is the core of SET, not only trust but also perceived benefits, as expected, are important when choosing to self-disclose or not. The derived results overlap with some of previous research (Leppaniemi et al., 2017; Robinson, 2018; Bol et al., 2018; N. Gerber et al., 2018). Other authors, which stated that perceived benefits do not have very big influence on intention to disclose personal data (M. S. Kim and S. Kim, 2018), had a quite specific context (online recommendation systems), which could have been the reason for such results. In e-commerce context PE impact on WTD is also mediated by perceived benefits.
13. Perceived benefits have a positive impact on store trust. Just like perceived risks and trust, perceived benefits and trust are also significantly related. The current research results are similar to previous research (Akroush and Al-Debei, 2015; Beldad et al., 2012). Finally, the conclusion that perceived benefits and trust mediate the relation of positive prior experience and WTD.
14. Finally, all derived hypotheses were approved. Positive prior experience affects willingness to disclose both directly and through other variables. Considering SET framework, reciprocal exchange is important in e-commerce context. Perceived benefits, possible risks and store trust are significant players when talking about willingness to self-disclose and gathering customer's data for business purposes. Positive prior experience creates store trust and together with it – willingness to engage in such exchanges, where cost is personal data, advantage – personalized services, discounts, convenience and so on.

Limitations of the research and recommendations for future studies:

1. In the current research positive previous experience as independent variable was examined. This way only one side of the variable is taken into consideration. For future research, negative prior experience could be included, too. To gather data two different surveys could be made – one for positive experience and one for negative. Also, factorial design could be used, as it is quite challenging to collect data about negative customer's experience, not much would state that they have had such experience. That way the results could be more precise and all-encompassing.
2. Store trust was chosen as one of the mediating variables between prior experience and willingness to disclose. For future research, another type of trust could be considered, too –

trustfulness as a character trait. In such way trust as a variable would be measured comprehensively.

3. In this particular research, relations between perceived risks and benefits were not tested. For future research it might be beneficial to test the both-way relations between variables and whole possible relations of the conceptual model.
4. In this research, answers of 206 respondents were examined. For future research it could be beneficial to have bigger sample size, which might result in more precise results. What is more, a better demographic dispersion could be reached. In the current research, 56% of women and 42% of men participated, left percentage identified their gender as “Other”. Regarding age of the respondents, almost half of them were between 20-29 years old. It is known that younger users are more computer literate, more willing to shop online (Levin et al, 2003). For future research it would be more reliable to have more evenly distributed respondents by gender and age.
5. Finally, it is important to note that not all possible factors, mediating the relation between willingness to self-disclose and positive prior experience, were considered in this research. However, regarding SET and its framework, many of the important ones in personal data studies were included.

#### Managerial implications:

1. Based on the particular research results it is seen that positive prior experience is really important factor in e-commerce context. Research revealed that positive experience affects WTD directly. Online shopping sites’ owners should ensure that customers fulfill their needs, maybe get rewards, and are pleased by the overall purchasing process online, since everything starts from this point – is the customer satisfied with the purchasing process, did they reach their goals.
2. As the results of the research shows and SET implicates, trust is core variable. It mediates the relation between positive prior experience and WTD. All three variables – positive prior experience, perceived risks and benefits affect trust. Businesses should build store trust not only by making sure that customers are satisfied (positive experience), but also by reducing risks and increasing benefits. They should come up with the ideas what interests their customers the most and what could be used as a reward for personal data disclosure. As every

business can offer personalized services, they can offer personalized rewards, too. Another important aspect is reducing risks. First of all, businesses have to start from the basics – clear instructions and communication with their customers how their data is going to be used, for what purposes. That could be done with communication campaigns, explaining not only purposes of collecting data, but also steps which the organization takes in order to protect that data. Sometimes customers could choose themselves which personal data usage purposes they allow and which not. In other words – to give control of their own data for customers. That way they would feel more secure as the decisions would be made by themselves. Reduced risks and valuable benefits increase customers' trust and WTD together, so such factors are important for customers, as well as businesses.



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[https://www.researchgate.net/publication/345149934 Impact of Age on the Willingness to Disclose Personal Data in E-Shopping](https://www.researchgate.net/publication/345149934)

# **PRIOR SELF-DISCLOSURE EXPERIENCE'S IMPACT ON WILLINGNESS TO SHARE PERSONAL DATA IN E-COMMERCE**

**Jorė ŠILKŪNAITĖ**

**Master Thesis**

*Marketing and Integrated Communication master study program*

Vilnius University, Faculty of Economics and Business Administration

Supervisor - Doc., Dr. Mindaugas Degutis

Vilnius, 2023

## **SUMMARY**

Number of pages - 90, number of tables - 15, number of figures - 2, number of annexes - 23, number of references - 83.

The main purpose of this master thesis is to determine factors, influencing customers' willingness to disclose personal data in e-commerce, focusing on positive prior experience and its' role in this relation.

**The problem of the paper:** how prior personal data self-disclosure perceived experience impacts willingness to share it in e-commerce.

**The aim of the paper:** to determine how prior personal data sharing perceived experience affects customers willingness to share it in e-commerce.

The paper consists of three main parts – literature analysis, research and its' results, findings and recommendations.

The literature analysis chapters cover scientific literature analysis. Various research literature and its' findings, related to this topic, are analyzed, compared and summarized. It gives an overview of the definition and understanding of overall personal data, then willingness to share personal data in e-commerce phenomena is explained. Later social exchange theory (SET) is being analysed, its definition and core variables, prior studies which used it are analysed, its applicability in studies is discussed and comparison with other possible theories in such research is presented. Also this part

analyses prior studies which examined prior experiences impact on willingness to disclose personal data in e-commerce and identifies the most usually examined variables, as well as identifies the most relevant and suitable ones for SET framework in such research.

In the next chapter research methodology is presented. Based on SET conceptual model is created, 9 hypotheses are raised. Later data collection methods and instruments are presented. Survey as a data collection method is applied. Questionnaire constructs are adapted from previous research, sample size is calculated. The survey was made of 8 questions. Overall 206 respondents filled the questionnaire. Main aim of the research was to identify what is the relation between positive prior experience and willingness to disclose personal data in e-commerce while buying material products and which of the other chosen variables (perceived benefits, perceived risks, store trust) could have impact for such relation.

The third part is dedicated to empirical data analysis, research results, summary of chosen variables effect on willingness to share personal data in e-commerce. Collected data was analyzed using IBM SPSS software. The results showed that there are statistically significant relations between: positive prior experience and WTD, positive prior experience and perceived risks, positive prior experience and perceived benefits, positive prior experience and store trust, perceived risks and store trust, perceived risks and WTD, perceived benefits and WTD, perceived benefits and store trust, trust and WTD.

# **BUVUSIOS DUOMENŲ ATSKLEIDIMO PATIRTIES ĮTAKA NORUI DALINTIS ASMENINIAIS DUOMENIMIS EL. PREKYBOJE**

**Jorė ŠILKŪNAITĖ**

**Magistro baigiamasis darbas**

***Rinkodaros ir integruotos komunikacijos studijų programa***

Vilniaus Universitetas, Ekonomikos ir verslo administravimo fakultetas

Darbo vadovas - Doc., Dr. Mindaugas Degutis

Vilnius, 2023

## **SANTRAUKA**

Puslapių skaičius - 90, lentelių skaičius - 15, paveikslų skaičius - 2, priedų skaičius - 23, literatūros šaltinių skaičius - 83.

Pagrindinis šio magistro darbo tikslas – nustatyti veiksnius, turinčius įtaką klientų norui atskleisti asmens duomenis elektroninėje prekyboje, akcentuojant teigiamą ankstesnę patirtį ir jos vaidmenį šiame santykiuje.

Darbo problema: kaip ankstesnė asmens duomenų atskleidimo patirtis veikia norą jais dalytis elektroninėje prekyboje.

Darbo tikslas: nustatyti, kaip ankstesnė asmeninių duomenų atskleidimo patirtis, suvokiama vartotojo, veikia klientų norą dalintis jais elektroninėje prekyboje.

Darbą sudaro trys pagrindinės dalys – literatūros analizė, tyrimas ir jo rezultatai, išvados ir rekomendacijos.

Pirmieji skyriai yra apie mokslinės literatūros analizę. Analizuojama, lyginama ir apibendrinama įvairi mokslinė literatūra ir jos išvados, susijusios su šia tema. Juose apžvelgiamas bendras asmens duomenų apibrėžimas ir suvokimas, paaiškinamas toks reiškinys kaip noras dalytis asmens duomenimis elektroninėje prekyboje. Vėliau nagrinėjama socialinių mainų teorija (eng. Social Exchange Theory), jos apibrėžimas ir pagrindiniai kintamieji, analizuojami ankstesni tyrimai, kuriuose ji buvo naudojama, aptariamas jos pritaikomumas studijose ir palyginimas su kitomis galimomis tokio tyrimo teorijomis. Taip pat šioje dalyje analizuojami ankstesni tyrimai, kuriuose

buvo nagrinėjama ankstesnės patirties įtaka pasirengimui atskleisti asmens duomenis elektroninėje prekyboje ir identifikuojami dažniausiai tiriami kintamieji, taip pat identifikuojami aktualiausi ir tinkamiausi faktoriai, veikiantys pasirinktos (SET) teorijos rėmuose.

Kitame skyriuje pristatoma tyrimo metodika. Remiantis SET koncepciniu modeliu, iškeltos 9 hipotezės. Vėliau aptariami duomenų rinkimo būdai ir instrumentai. Pasirinktas duomenų rinkimo metodas - apklausa. Anketa sudaryta iš adaptuotų ankstesnių tyrėjų naudotų konstruktyvų, apibrėžiamas imties dydis. Apklausa buvo sudaryta iš 8 klausimų. Iš viso anketą užpildė 206 respondentai. Pagrindinis tyrimo tikslas buvo nustatyti, koks yra ryšys tarp teigiamos ankstesnės patirties ir noro atskleisti asmens duomenis elektroninėje prekyboje perkant materialius produktus ir kuris iš kitų pasirinktų kintamųjų (suvokiama nauda, suvokiama rizika, pasitikėjimas parduotuve) galėtų turėti įtakos šiems ryšiams.

Trečioji dalis skirta empirinei duomenų analizei, tyrimų rezultatams, pasirinktų kintamųjų poveikio norui dalintis asmens duomenimis elektroninėje prekyboje apibendrinimas. Surinkti duomenys buvo analizuojami naudojant IBM SPSS programinę įrangą. Rezultatai parodė, kad yra statistiškai reikšmingi ryšiai tarp teigiamos ankstesnės patirties ir WTD, teigiamos ankstesnės patirties ir suvokiamos rizikos, teigiamos ankstesnės patirties ir suvokiamos naudos, teigiamos ankstesnės patirties ir pasitikėjimo parduotuve, suvokiamos rizikos ir pasitikėjimo parduotuve, suvokiamos rizikos ir WTD, suvokiamos naudos ir WTD, suvokiamos naudos ir pasitikėjimo parduotuve, pasitikėjimo parduotuve ir WTD.

## ANNEXES

### Annex 1. Fields of research based on SET

Study	Area	Purpose	Factors based on SET	Results
Salam et al. (1998)	Electronic commerce transactions	To use social exchange framework to understand how trust economic incentive play roles in facilitation of electronic commerce over the Internet	Trust	Trust → Perceived risk <sup>2</sup>
Gefen and Keil (1998)	Adoption of expert system	To examine the adoption of an expert system by a combined TAM and SET model where developer responsiveness was not only found strongly influenced both PU and PEOU, but also indirectly affected actual behavior	Economic incentive Developer responsiveness	Economic incentive → Perceived risk <sup>2</sup> Developer responsiveness → Perceived usefulness  Developer responsiveness → Perceived ease of use
Young-Ybarra and Wiersema (1999)	Information technology alliances	To utilize a framework wherein both transaction cost economics and social exchange theory are used to examine two elements of strategic flexibility in strategic alliances: the flexibility to modify the alliance and the flexibility to exit the alliance relationship	Trust	Trust → Modification flexibility
Gefen and Ridings (2002)	CRM user evaluation	To examine whether different degrees of actual responsiveness in different sites during CRM implementation result in significant differences in the users' favorable assessment of the correctness and ultimately their approval of a new CRM	Influence Alternatives Importance Perceived responsiveness	Influence → Trust <sup>2</sup> Influence → Modification flexibility <sup>2</sup> Alternatives → Modification flexibility <sup>2</sup> Perceived responsiveness → Cooperative intentions
Hsu and Lu (2004)	Online game adoption	To apply TAM that incorporates social influences from SET and flow experience to predict users' acceptance of on-line games	Social norms	Perceived responsiveness → Configuration correctness Social norms → Intention



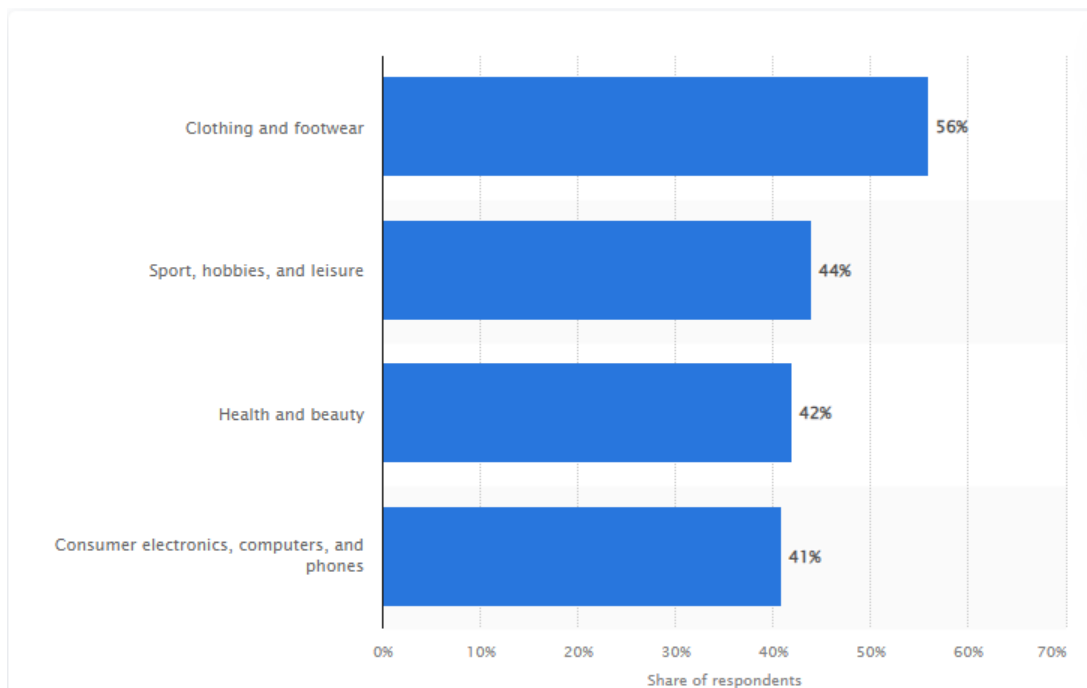
Dwyer et al. (2007)	Social networking sites	To compare perceptions of trust and privacy concern, along with willingness to share information and develop new relationships in social networking sites	Critical mass Trust	Critical mass → Attitude In online interaction, trust is not as necessary in the building of new relationships as it is in face to face encounters; in an online site, the existence of trust and the willingness to share information does not automatically translate into new social interaction
Hsu and Lin (2008)	Acceptance of blog usage	To incorporate TAM, knowledge sharing and social influence factors to understand blog usages	Knowledge sharing factors: Altruism, expected reciprocal benefit, reputation, trust, expected relationship Social influence factors: Social norms, Community identification	Altruism → Attitude Reputation → Attitude Community identification → Intention
Pappas and Flaherty (2008)	Strategic behavior and sales performance	To examine the nature and extent of strategy participation exhibited by customer contact personnel	Trust	Trust → Willingness to participate Involvement → Rating of performance
de Clercq and Rangarajan (2008)	Entrepreneurs' commitment to customers	To identify a key mechanism that explains relationship outcomes in entrepreneur–customer dyads	Reliability of exchange:  Customer reputation Procedural justice Quality of exchange: Communication intensity Social interaction	Reliability of exchange → Attitude Quality of exchange → Attitude
Bunduchi (2008)	B2B exchanges	To analyze the outcome that the use of Internet based electronic markets (EM) has on the nature of inter-organizational relationships	Transaction costs  Trust dependency	The nature of an inter-organizational relationship depends on the interaction between three relational features: transaction costs, trust and dependency
Hald, Córdón, and	Buyer–supplier	To explore how firms are attracted to	Expected value	Expected value, trust, and dependence

*Continuation of Annex 1*

Pelozo, Hudson, and Hassay (2009)	Employee volunteerism	To examine employee volunteerism in the context of a co-ordinated, employer sanctioned corporate philanthropy program, or intra-organizational volunteerism	Altruist motive  Egoistic motive Organizational citizenship behavior motive	Egoistic motive → Attitude Organizational citizenship → Attitude
Thomas, Esper, and Stank (2010)	Supply chain relationship	To test how the imposition of time pressure (viewed as a relational cost that could potentially outweigh the benefits of the exchange) affects key elements of retail supply chain relationships	Time pressure	Time pressure → Collaborative behaviors <sup>2</sup> Time pressure → Relationship loyalty <sup>3</sup> Time pressure → Relationship value <sup>2</sup>
Tsai et al. (2011)	Online group buying acceptance	To examine the impact of technology acceptance factors and social factors on online group buying	Sense of virtual community  Trust in the virtual community	Sense of virtual community → Intention Trust in the virtual community → Intention
Lusch, Brown, and O'Brien (2011)	Relational assets	Using SET and other theories to investigate how to protect relational assets in a marketing channel when an upstream horizontal business combination between key suppliers arises	Normative contract breach	Normative contract breach → Propensity to exit  Normative contract breach → Channel member performance Normative contract breach → Channel member satisfaction <sup>2</sup>
Qin, Kim, Hsu, and Tan (2011)	Online social networks	To investigate the determinants of user acceptance of online social networks, with attention given to the effects of social influence	Subjective norm	Subjective norm → Perceived usefulness

Source: Shiau, W.- L., & Luo, M. M. (2012).

## Annex 2. Most popular cross-border online shopping product categories worldwide in 2021



Source – Statista.com, 2022

## Annex 3. Constructed questionnaire in Lithuanian

Sveiki,

Esu Jorė Šilkūnaitė, rinkodaros ir integruotos komunikacijos (angl. k.) Magistro programos studentė Vilniaus Universitete. Šiame tyrime ir savo diplominiame darbe nagrinėju kaip buvusios patirtys veikia vartotojų apsisprendimą pateikti savo asmeninius duomenis perkant internetu. Šiais laikais nusipirkti kažką neatskleidžiant jokių savo asmeninių duomenų yra beveik neįmanoma, o klientų identifikaciniai duomenys yra itin vertingi verslui.

Jūsų dalyvavimas apklausoje - indėlis į VU mokslinę veiklą.

Svarbu: pirkinių tipas – materialūs daiktai (rūbai, maistas, elektronika ir pan.).

Atsakyti į klausimus užtruksite iki 5 minučių.

Apklausa visiškai anoniminė, tad atsakymai nebus siejami su konkrečiais asmenimis, o analizuojami apibendrinus.

Jei turite klausimų apie šią apklausą ar tyrimą, galite mane pasiekti el. paštu [jore.silkunaite@evaf.stud.vu.lt](mailto:jore.silkunaite@evaf.stud.vu.lt).

Ačiū už pagalbą ir indėlį į mano magistro tyrimą!

- Ar esate pirkęs(-usi) prekes internetinėse parduotuvėse:
  - Taip
  - Ne
- Pakalbėkime apie Jūsų patirtį, susijusią su asmeninės informacijos atskleidimu, kai pirkote daiktus internetu. Žemiau pateikti teiginiai, kurie apibūdina galimą patirtį. Prašau pateikti savo nuomonę 7 balų skalėje, kai 1 - visiškai nesutinku, 7 - visiškai sutinku.

	1	2	3	4	5	6	7
Jaučiuosi patenkintas savo ankstesnio duomenų atskleidimo e-komercijoje rezultatais (gera patirtis).							
Esu patenkintas asmeninių duomenų pateikimu internetinėms parduotuvėms (tai padėjo lengviau nusipirkti norimą daiktą, gavau naudingos informacijos, mano duomenys buvo saugūs).							
Jaučiuosi patenkintas ankstesniais duomenų atskleidimo rezultatais (tai atnešė naudos)							
Asmeninių duomenų atskleidimas buvo maloni patirtis - sąžininga, patogi ir be rūpesčių dėl saugumo.							

- Prisiminkite paskutinį kartą, kai pirkote kažkokius daiktus internetinėje parduotuvėje. Įvertinkite žemiau esančius teiginius (1- visiškai nesutinku, 7- visiškai sutinku):

	1	2	3	4	5	6	7
Paskutinio apsipirkimo internete metu dvejojau, ar pateikti savo adresą, banko kortelės duomenis ar kitą asmeninę informaciją.							
Paskutinio apsipirkimo internete metu atskleidžiant asmeninius duomenis susimąščiau apie galimą privatumo praradimo pavojų.							
Paskutinio apsipirkimo internete metu atskleidžiant jautrius asmeninius duomenis susimąščiau apie galimą tapatybės vagystę.							

4. Prisiminkite paskutinį kartą, kai pirkote kažkokius daiktus internetinėje parduotuvėje. Įvertinkite žemiau esančius teiginius (1- visiškai nesutinku, 7- visiškai sutinku):

	1	2	3	4	5	6	7
Paskutinį kartą apsipirkinėjant internetu pateikta asmeninė informacija (gyvenamoji vieta, pomėgiai, amžius ir pan.) suteikė galimybę sužinoti daugiau apie dominančius produktus.							
Paskutinio apsipirkimo internete metu, dėl svetainei suteiktų asmeninių duomenų, man buvo pritaikyta personalizuota nuolaida.							
Paskutinį kartą apsipirkinėjant internete, dėl pateiktų asmeninių duomenų, sutaupiau laiko (greičiau radau norimą prekę, pirkimo procesas buvo greitas ir pan.).							

5. Prisiminkite paskutinį kartą, kai pirkote kažkokius daiktus internetinėje parduotuvėje. Įvertinkite žemiau esančius teiginius (1- visiškai nesutinku, 7- visiškai sutinku):

	1	2	3	4	5	6	7
Paskutinį kartą apsiperkant internetu, el. parduotuvė man atrodė patikima.							
Aš pasitikėjau paskutine el. parduotuve, kurioje pirkau, tiek, kad atskleisčiau savo asmeninius duomenis (gyvenamoji vieta, pomėgiai, amžius ir pan.)							

6. Prisiminkite paskutinį kartą, kai pirkote kažkokius daiktus internetinėje parduotuvėje. Tikriausiai Jūsų buvo prašoma pateikti tam tikrus asmens duomenis. Nurodykite, kiek esate linkęs/(-usi) pateikti žemiau išvardintus asmens duomenis: (1- visiškai nelinkęs/(-usi), 7- visiškai linkęs/(-usi)):

	1	2	3	4	5	6	7
Namų adresas							
Mob. Telefono numeris							
El. pašto adresas							
Gimimo data							
Šeiminė padėtis							
Vardas							
Pavardė							
Lytis							

7. Jūsų lytis:

- Moteris
- Vyras
- Kita

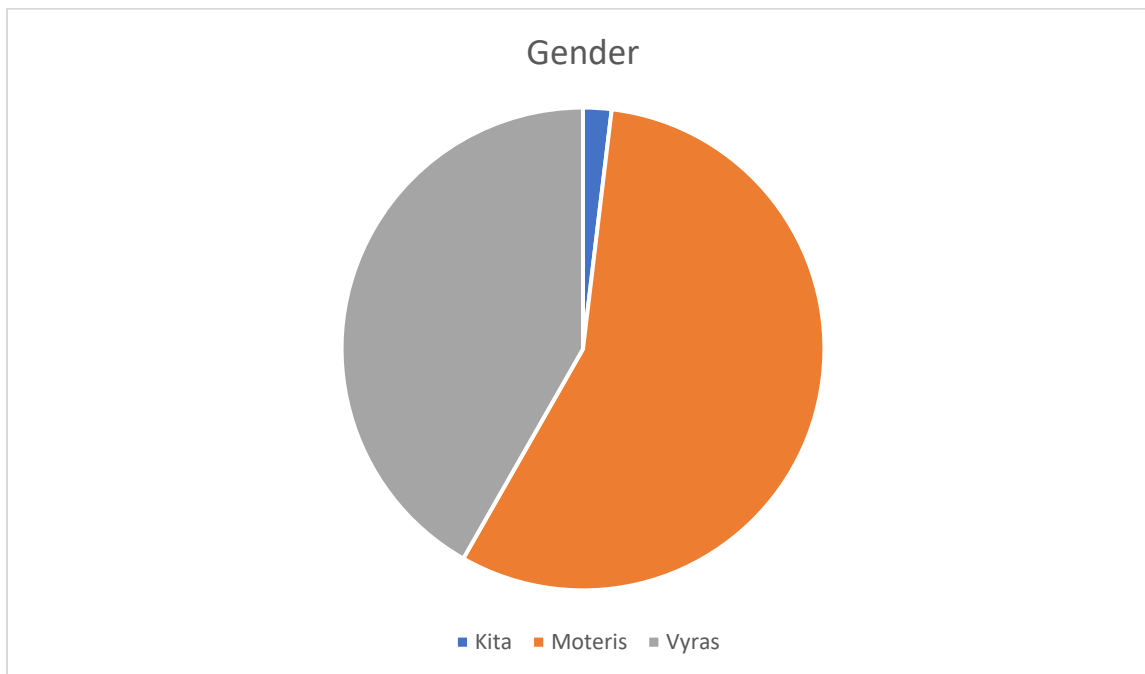
8. Jūsų amžius:

- Iki 15
- 15-19
- 20-29
- 30-49
- 50-69
- 70 ir daugiau

#### Annex 4. Gender distribution in survey

Statistics		
Gender		
N	Valid	206
	Missing	0

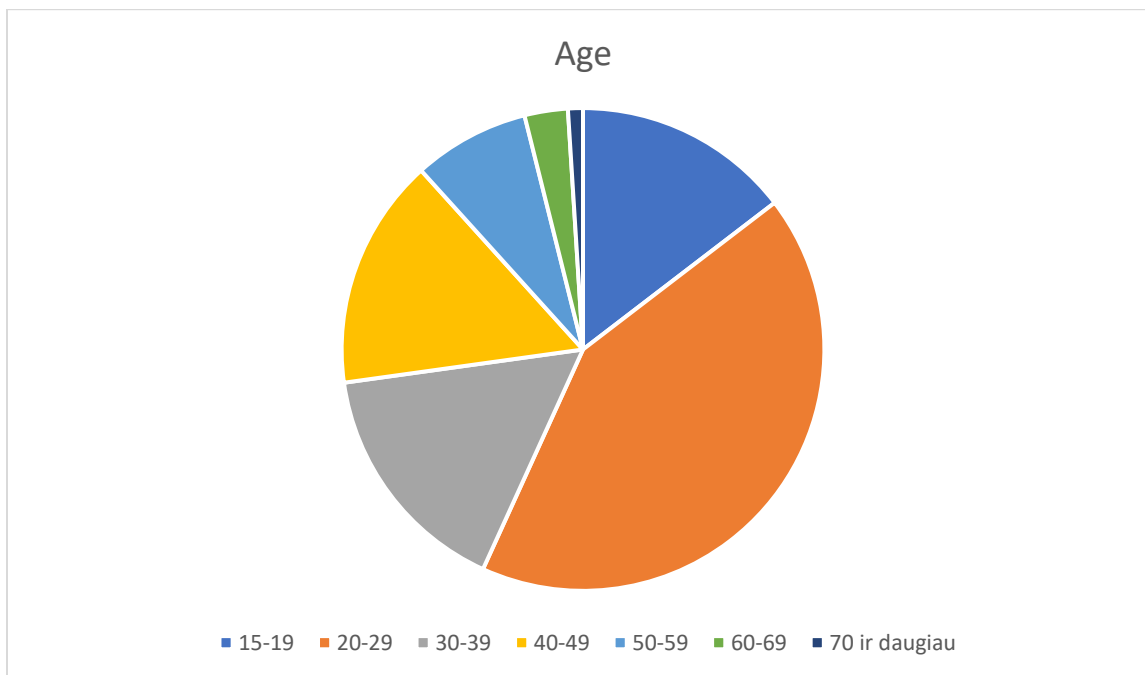
Gender		
	N	%
Kita	4	1,9%
Moteris	116	56,3%
Vyras	86	41,7%



#### Annex 5. Age distribution in survey

Statistics
------------

Age		
N	Valid	206
	Missing	0
Age		
	N	%
15-19	30	14,6%
20-29	87	42,2%
30-39	33	16,0%
40-49	32	15,5%
50-59	16	7,8%
60-69	6	2,9%
70 ir daugiau	2	1,0%



### Annex 6. Reliability analysis of Positive Prior Experience scale

Reliability Statistics	
Cronbach's Alpha	N of Items
,881	4

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted

Jaučiuosi patenkintas savo ankstesnio duomenų atskleidimo e-komercijoje rezultatais (gera patirtis).	13,77	18,128	,712	,863
Esu patenkintas asmeninių duomenų pateikimu internetinėms parduotuvėms (tai padėjo lengviau nusipirkti norimą daiktą, gavau naudingos informacijos, mano duomenys buvo saugūs).	13,99	16,697	,755	,844
Jaučiuosi patenkintas ankstesniais duomenų atskleidimo rezultatais (tai atnešė naudos)	14,62	14,168	,774	,838
Asmeninių duomenų atskleidimas buvo maloni patirtis - sąžininga, patogi ir be rūpesčių dėl saugumo.	14,33	14,934	,762	,840

### Annex 7. Reliability analysis of Perceived Risks scale

Reliability Statistics	
Cronbach's Alpha	N of Items
,845	3

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Paskutinio apsipirkimo	6,90	13,571	,726	,771



internete metu dvejotau, ar pateikti savo adresą, banko kortelės duomenis ar kitą asmeninę informaciją.				
Paskutinio apsipirkimo internete metu atskleidžiant asmeninius duomenis susimąsčiau apie galimą privatumo praradimo pavojų.	6,56	13,496	,748	,749
Paskutinio apsipirkimo internete metu atskleidžiant jautrius asmeninius duomenis susimąsčiau apie galimą tapatybės vagystę.	7,19	14,830	,664	,830

### Annex 8. Reliability analysis of Perceived Benefits scale

Reliability Statistics	
Cronbach's Alpha	N of Items
,699	3

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Paskutinį kartą apsipirkinėjant internetu pateikta asmeninė informacija (gyvenamoji vieta, pomėgiai,	5,91	11,674	,620	,485

amžius ir pan.) suteikė galimybę sužinoti daugiau apie dominančius produktus.				
Paskutinio apsipirkimo internete metu, dėl svetainei suteiktų asmeninių duomenų, man buvo pritaikyta personalizuota nuolaida.	6,33	13,170	,418	,721
Paskutinį kartą apsipirkinėjant internete, dėl pateiktų asmeninių duomenų, sutaupiau laiko (greičiau radau norimą prekę, pirkimo procesas buvo greitas ir pan.).	5,42	10,654	,524	,601

### Annex 9. Reliability analysis of Trust scale

Reliability Statistics	
Cronbach's Alpha	N of Items
,675	2

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Paskutinį kartą apsiperkant internetu, el. parduotuvė man atrodė patikima.	5,62	2,578	,540	
Aš pasitikėjau paskutine el. parduotuve,	5,93	1,303	,540	

kurioje pirkau, tiek, kad atskleisčiau savo asmeninius duomenis (gyvenamoji vieta, pomėgiai, amžius ir pan.)				
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### Annex 10. Reliability analysis of WTD scale

Reliability Statistics	
Cronbach's Alpha	N of Items
,770	8

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Namų adresas	35,83	60,073	,502	,740
Mob. telefono numeris	35,26	64,643	,492	,744
El. pašto adresas	34,95	65,163	,565	,737
Gimimo data	36,54	57,489	,543	,732
Šeiminė padėtis	37,94	64,465	,283	,784
Vardas	34,82	64,197	,630	,730
Pavardė	35,50	60,417	,540	,733
Lytis	35,65	60,824	,394	,763

### Annex 11. Normality test of dependent variables for linear regression analysis – willingness to disclose

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
WTD	,114	206	<,001	,961	206	<,001

a. Lilliefors Significance Correction

**Annex 12. Normality test of dependent variables for linear regression  
analysis – store trust**

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Trust_1	,186	206	<,001	,871	206	<,001
a. Lilliefors Significance Correction						

**Annex 13. Normality test of dependent variables for linear regression  
analysis – perceived privacy risks**

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Perceived_risks	,105	206	<,001	,938	206	<,001
a. Lilliefors Significance Correction						

**Annex 14. Normality test of dependent variables for linear regression  
analysis – perceived benefits**

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Perceived_benefits	,120	206	<,001	,925	206	<,001
a. Lilliefors Significance Correction						

**Annex 15. Regression analysis. Impact of positive prior experience on  
willingness to disclose personal data in e-commerce**

Model Summary
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Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,435 <sup>a</sup>	,190	,186	8,00062
a. Predictors: (Constant), Positive_prior_experience				
b. Dependent variable: WTD				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3055,889	1	3055,889	47,741	<,001 <sup>b</sup>
	Residual	13058,019	204	64,010		
	Total	16113,908	205			
a. Dependent variable: WTD						
b. Predictors: (Constant), Positive_prior_experience						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26,966	2,096		12,865	<,001
	Positive_prior_experience	,739	,107	,435	6,909	<,001
a. Dependent variable: WTD						

## Annex 16. Regression analysis. Impact of positive prior experience on store trust

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,496 <sup>a</sup>	,246	,242	2,10703
a. Predictors: (Constant), Positive_prior_experience				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	295,243	1	295,243	66,503	<,001 <sup>b</sup>
	Residual	905,669	204	4,440		
	Total	1200,913	205			
a. Dependent variable: Trust_1						

b. Predictors: (Constant), Positive\_prior\_experience

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,214	,552		13,068	<,001
	Positive_prior_experience	,230	,028	,496	8,155	<,001
a. Dependent variable: Trust_1						

### Annex 17. Regression analysis. Impact of store trust on willingness to disclose personal data in e-commerce

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,471 <sup>a</sup>	,222	,218	7,83859
a. Predictors: (Constant), Trust_1				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3579,425	1	3579,425	58,256	<,001 <sup>b</sup>
	Residual	12534,483	204	61,444		
	Total	16113,908	205			
a. Dependent variable: WTD						
b. Predictors: (Constant), Trust_1						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20,981	2,670		7,859	<,001
	Trust_1	1,726	,226	,471	7,633	<,001
a. Dependent variable: WTD						

**Annex 18. Regression analysis. Impact of positive prior experience on perceived risks**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,291 <sup>a</sup>	,084	,080	5,18023
a. Predictors: (Constant), Positive_prior_experience				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	505,254	1	505,254	18,828	<,001 <sup>b</sup>
	Residual	5474,299	204	26,835		
	Total	5979,553	205			
a. Dependent variable: Perceived_risks						
b. Predictors: (Constant), Positive_prior_experience						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16,007	1,357		11,794	<,001
	Positive_prior_experience	-,300	,069	-,291	-4,339	<,001
a. Dependent variable: Perceived_risks						

**Annex 19. Regression analysis. Impact of perceived risks on willingness to disclose personal data in e-commerce**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,345 <sup>a</sup>	,119	,115	8,34110
a. Predictors: (Constant), Perceived_risks				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1920,821	1	1920,821	27,608	<,001 <sup>b</sup>

	Residual	14193,087	204	69,574		
	Total	16113,908	205			
a. Dependent variable: WTD						
b. Predictors: (Constant), Perceived_risks						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	46,782	1,257		37,225	<,001
	Perceived_risks	-,567	,108	-,345	-5,254	<,001
a. Dependent variable: WTD						

## Annex 20. Regression analysis. Impact of perceived risks on store trust

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,291 <sup>a</sup>	,084	,080	5,18023
a. Predictors: (Constant), Perceived_risks				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25,129	1	25,129	4,360	,038 <sup>b</sup>
	Residual	1175,784	204	5,764		
	Total	1200,913	205			
a. Dependent variable: Trust_1						
b. Predictors: (Constant), Perceived_risks						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12,223	,362		33,792	<,001
	Perceived_risks	-,065	,031	-,145	-2,088	,038
a. Dependent variable: Trust_1						



**Annex 21. Regression analysis. Impact of positive prior experience on perceived benefits**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,410 <sup>a</sup>	,168	,164	4,39871
a. Predictors: (Constant), Positive_prior_experience				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	795,933	1	795,933	41,136	<,001 <sup>b</sup>
	Residual	3947,120	204	19,349		
	Total	4743,053	205			
a. Dependent variable: Perceived_benefits						
b. Predictors: (Constant), Positive_prior_experience						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,705	1,152		1,479	,141
	Positive_prior_experience	,377	,059	,410	6,414	<,001
a. Dependent variable: Perceived_benefits						

**Annex 22. Regression analysis. Impact of perceived benefits on willingness to disclose personal data in e-commerce**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,193 <sup>a</sup>	,037	,032	8,72088
a. Predictors: (Constant), Perceived_benefits				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.

1	Regression	598,928	1	598,928	7,875	,005 <sup>b</sup>
	Residual	15514,980	204	76,054		
	Total	16113,908	205			
a. Dependent variable: WTD						
b. Predictors: (Constant), Perceived_benefits						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	37,789	1,273		29,695	<,001
	Perceived_benefits	,355	,127	,193	2,806	,005
a. Dependent variable: WTD						

### Annex 23. Regression analysis. Impact of perceived benefits on store trust

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,394 <sup>a</sup>	,156	,151	2,22957
a. Predictors: (Constant), Perceived_benefits				

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	186,836	1	86,836	37,586	<,001 <sup>b</sup>
	Residual	1014,076	204	4,971		
	Total	1200,913	205			
a. Dependent variable: Trust_1						
b. Predictors: (Constant), Perceived_benefits						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9,801	,325		30,125	<,001
	Perceived_benefits	,198	,032	,394	6,131	<,001
a. Dependent variable: Trust_1						