

Exploring Consumers Risk Mitigation Strategies in E-Commerce: A Qualitative Study of High-Risk Transactions

Tim Kollmer
University of
Innsbruck
tim.kollmer@uibk.ac.at

Khalid Durani
University of
Innsbruck
khalid.durani@uibk.ac.at

Florian Peterhänsel
University of
Innsbruck
florian.peterhaensel@gmx.de

Andreas Eckhardt
University of
Innsbruck
andreas.eckhardt@uibk.ac.at

Nils Augustin
University of
Innsbruck
nils.augustin@uibk.ac.at

Abstract

The recent Covid-19 pandemic has led to a sharp increase in online shopping. While the promises of shopping on e-commerce platforms are vast, there are simultaneously novel and exacerbated risks compared to traditional brick-and-mortar retail purchases. Existing research outlines numerous risk dimensions associated with online shopping. In addition, scholars examine the underlying reasons for consumers' risk perceptions, such as the inability of physical quality checks. However, there is a lack of research investigating how consumers attempt to navigate and mitigate risk perceptions when confronted with a high-risk online transaction. To address this research gap, we conducted 18 semi-structured interviews with consumers who had recently performed an online transaction associated with high-risk perceptions. Our study contributes to the existing literature by identifying an affective and cognitive risk mitigation strategy and respective underlying mechanisms. Notably, we find that online social networks play a central role in shaping consumers' risk perceptions.

Keywords: Risk mitigation, high-risk transactions, online shopping, risk perception, e-commerce

1. Introduction

With the rise of e-commerce retailers and platforms, traditional brick-and-mortar retailers face serious competition, with research indicating a steady increase in purchases made online by consumers (Warrier et al., 2021). This is somewhat unsurprising, considering the comfortable, and convenient shopping experience proffered by e-commerce organizations. Indeed, the COVID-19 crisis, which forced brick-and-mortar retailers to close their stores in many regions worldwide, accelerated the inexorable advance of online shopping (Wingreen et al., 2019). Despite the undeniable advantages of online shopping, consumers also face vast

challenges. For instance, the digital, non-physical online shopping process renders established quality checks by customers prior to the purchase practically infeasible. Therefore, consumers perceive novel and exacerbated risks compared to legacy offline shopping.

These risks infect the entire online shopping process, from searching to receiving, and potentially returning a product. More concretely, consumers face risks concerning a product's functional aspects, the delivery process, whether their private information is sufficiently safeguarded, or how they can protect themselves from financial losses (Cases, 2002; Comegys et al., 2009). To make matters worse, deceptive and manipulative information on the internet abound. For example, online reviews are frequently distorted or contain disinformation (Babić Rosario et al., 2020; Karimi & Wang, 2017; Liu & Park, 2015; Luca & Zervas, 2016). Existing research mainly focuses on defining the versatile risks consumers perceive throughout online transactions and uncovering why and how they are manipulated or deceived (Hu et al., 2012; Plotkina et al., 2020; Zhou & Zafarani, 2020). However, not much is understood of how consumers attempt to *mitigate risk perceptions* (Akalamkam & Mitra, 2018). Overall, risk mitigation refers to consumers' strategies to maneuver and mitigate perceived risks (Kim, 2010).

Perceived risks describe consumers' subjective belief that an online transaction is uncertain and bound to adverse effects, such as identity theft or financial losses (Mou et al., 2017). Prior research mainly emphasizes the role of trust (e.g., Hong, 2015), online reviews (e.g., Filieri et al., 2018), and branding (e.g., Wang & Yang, 2010) in the context of consumer intentions to perform a perceived high-risk online transaction. Nevertheless, the explicit tactics consumers utilize to navigate online transactions with perceived high-risk transactions have thus far not been researched. For instance, it is yet unclear how and when online reviews are considered when consumers face risky

online transactions. Such an understanding can aid online sellers in improving their business models because risk perceptions drastically inhibit consumers purchasing decisions (Ariffin et al., 2018). This, in turn, can render online transactions more secure and, thereby, also benefit consumers in the long term.

The objective of our study is twofold. On the one hand, we seek to identify consumers' overarching decision-making in the form of mitigation strategies when confronted with perceived high-risk online transactions. On the other hand, we are interested in dissecting the underlying mechanisms that attenuate consumers' risk perceptions. Therefore, our research is guided by the following research question (RQ):

How do consumers attempt to mitigate risk perceptions when confronted with a perceived high-risk online transaction?

To answer the RQ, we employed a qualitative approach and conducted 18 semi-structured interviews. The interviews were guided by questions focused on perceived high risks when performing online transactions in the recent past. Our study contributes to the existing literature by identifying risk mitigation strategies depending on affection and cognition respectively. The former is rooted in consumers' affective sphere of thinking and depends on personal information, regionality, or resonance to appraise an online transaction's risk profile. The latter critically evaluates the risk dimensions associated with an online transaction on the grounds of independent information, visuals, and language. Lastly, we advance existing research on online social networks and their role in online shopping by highlighting the grave significance of user-empowering channels, e.g., YouTube and Instagram, in shaping consumers' risk perceptions.

2. Literature Review

2.1. Dimensions of Risk Perception

Early conceptualizations of perceived risk are traceable to the work of Bauer (Bauer, 1960; Taylor, 1974), who stated that uncertainty and detrimental consequences are central aspects of any consumer behavior (Hong, 2015; Zhang et al., 2015). More than 60 years later, the space of consumer action has increasingly shifted from the traditional, offline environment to the digital, online realm. When undertaking online transactions in e-services, perceived risks refer to the subjective belief of a consumer about the potential for unintended effects and thereby possibly suffering adverse consequences (Mou et al., 2017). While the definitions of perceived risks have largely remained congruent under the digital transition, risks have aggravated indefinitely because internet shopping

manifests heightened uncertainty and severe pernicious ramifications for customers compared to legacy offline shopping (Wu et al., 2020). At heart, the exacerbated risk within the digital realm relates to the nature of online transactions, which are often anonymous, impersonal, and lack face-to-face interactions (Hong, 2015). Hence, it is increasingly difficult to make accurate predictions for consumers. In general, the consumers risk perceptions are induced when they expose themselves to sources of risk such as the product manufacturer or retailer (Glover & Benbasat, 2010). According to the nature of loss that may result from online transactions, perceived risk can be classified into several dimensions (Hong, 2015). Despite some differences in the applied classification schemes, existing research has identified ten overarching classes of perceived risk in online shopping (e.g., Cases, 2002; Hong, 2015). The resulting risk dimensions and operational definitions are described in Table 1.

Table 1. Risk dimensions and definitions.

Risk dimension	Definition	Source
Financial risk	Related to the loss of money in the case of a bad purchase	Cases (2002)
Performance risk	Related to the functional aspects of the product	Crespo et al. (2009)
Psychological risk	Reflects a consumer's disappointment in himself for not achieving a purchasing goal	Featherman and Pavlou (2003)
Physical risk	Related to health and/or safety.	Comegys et al. (2009)
Social risk	Reflects disappointment in the consumer among a social group	Ko et al. (2004)
Time risk	Related to the time spent on the purchase of a product and the time lost in the case of a bad purchase	Featherman and Pavlou (2003)
Privacy risk	Implies the distribution of personal information without consent.	Cases (2002)
Payment risk	Indicates the financial consequences related to the distribution of payment information	McCorkle (1990)
Source risk	Depicts the level of credibility of a website or digital application	Comegys et al. (2009)
Delivery risk	Concerns the risk of not receiving the purchased product and other damage to the product during delivery	Cases (2002)

Noteworthy, existing research indicates that consumers perceive product performance as the most dominant risk (Zheng et al., 2012). However, risk perceptions can be highly idiosyncratic, dependent on customers' circumstances and past experiences (Mou et al., 2017). From a consumer perspective, the risk perceptions are twofold. On the one hand, the risk perceptions affect product related risks such as the social risk of disappointment within social peer groups because of lacking product attributes (Ko et al., 2004). On the other hand, risk perceptions are driven by characteristics of the e-commerce platform itself. For instance, the unwanted distribution of personal data or payment information affects privacy and payment risk (Cases, 2002). Overall, the first five risk dimensions (financial, performance, psychological, social and, time risk) are also prevalent themes in the traditional offline purchase process but are often amplified in online shopping (Dabbous & Barakat, 2020). Apart from lacking tools to assess a product's attributes, consumers are confronted with novel risks distinct from traditional brick-and-mortar shopping (Cases, 2002). For instance, time risk refers to the time spent concerning the product and the fear of not receiving a product in time. It is less critical in legacy shopping in brick-and-mortar stores because consumers can smoothly and apace take a purchased products home. Likewise, other time risks, such as the chance of wasting time with unreliable service providers and correcting errors made during the process, are much more relevant in online purchases (Mou et al., 2017). Some risks, such as privacy risk, payment risk, source risk and delivery risk are almost exclusively unique to online purchases (Cases, 2002).

Privacy risk is closely linked to the extensive collection of personal data by organizations with the objective of fabricating highly tailored product recommendations and services (Fensel et al., 2001). The other risks emerge from the decoupling of purchasing a product and experiencing the product. In fact, many e-commerce websites deceive consumers through fraudulent practices such as never delivering an ordered product (Wadleigh et al., 2015). Noteworthy, prior research suggests that the risk mitigation strategies of consumers always target a specific risk dimension (see Table 1) (Kim et al., 2012). For example, consumers risk perceptions of a travel backpack may tremendously differ: Whereas a frequent traveler may mainly stress the performance risks associated with their purchase due to the expected usage frequency, a casual traveler might focus more intensely on the financial risks of the purchase (Roehl & Fesenmaier, 1992).

2.2. Risk Mitigation

Naturally, confronted with such intensive and extensive risks, customers opt for versatile mitigation mechanisms to minimize and prevent the uncertainties and adverse effects during the purchasing process (Bauer, 1960; Hong, 2015). This endeavor to maneuver and navigate perceived risks is also known as *risk mitigation* (Mitchell et al., 1999). The first conceptualization of risk mitigation strategies of consumers in traditional brick-and-mortar stores was proffered in a study by Ted Roselius in 1971 (Roselius, 1971). According to his studies, consumers employ four different mitigation strategies to reduce their perceived risk. First, they search for certificates from either governmental or private testing that indicate sufficient product quality. Second, consumers scan and harvest information to reduce uncertainties. This information-gathering process includes comparing various products and their distinct features during the shopping procedure, using free samples, or inquiring about the opinion of friends and family via word-of-mouth. Third, consumers evaluate a brand's status and perception to cope with perceived risks. Specifically, brand loyalty is the most significant factor in consumers' risk appraisals and can extenuate perceived risks across all risk dimensions. Noteworthy, the third mitigation strategy is also influenced by endorsements or testimonials that recommend a specific product. Fourth, consumers incorporate an organization's policies, e.g., warranty promises to assess the perceived risk associated with the transaction (Roselius, 1971).

Within the area of information systems, only scanty research regarding consumers risk mitigation strategies exists. A study by Kim (2010) aligns with the initial findings from Roselius (1971), indicating that the brand of a product or e-commerce platform highly influences consumers' risk perceptions (Kim, 2010). Likewise, in the era of online shopping, consumers aspire to gauge an online shopping transaction's risk profile by considering information available on various websites or inquiring about the opinions of other consumers who shared their impressions through reviews (Akalamkam & Mitra, 2018). In this context, research shows that consumers differentiate between high-risk (e.g., clothes) and low-risk transactions (e.g., books) (Zheng et al., 2012). For high-risk transactions, consumers draw on personal and impersonal information sources to extenuate perceived risk (Zheng et al., 2012). Personal information sources originate from the consumer's local environment, e.g., opinions of family and friends. By comparison, impersonal information is extracted from public sources, such as blogs, product reviews, and newspapers (Kim, 2010). Relatedly, privacy is a tremendous driving force in shaping consumer risk

perceptions in the digital realm. More precisely, consumers prioritize websites that safeguard privacy, i.e., personal information from unauthorized usage (Bart et al., 2005), to mitigate their risk perception (Miyazaki & Fernandez, 2001). Noteworthy, existing research indicates that consumers attenuate risk perceptions of high-risk transactions by choosing cheaper brands or when products are offered at a discount by the e-commerce organization (Vos et al., 2014). In sum, existing research has identified multiple facets of perceived risks of online transactions and mitigation strategies. However, research has not examined which mitigation strategy consumers adopt to grapple with the corresponding varying risk dimensions (see Table 1). For instance, it is unclear if, when, and how impersonal information is utilized to cope with financial risks, or whether reviews are relevant to assess time risks.

3. Methodology

Many of the risk dimensions associated with the online purchasing process (see Table 1) are difficult to assess quantitatively. The nature of risk is often ineluctably entangled with a person's individual – perhaps quite idiosyncratic – verdict. For example, the subjective sphere is evident in the psychological aspect of consumers' risk assessment. But it is also embedded in virtually all other dimensions, e.g., financial risks are tied to consumers' net worth, and social risk depends on the social group. Accordingly, the aforementioned research gap and RQ can more accurately be grasped within the context of natural conditions relevant to the phenomenon. Qualitative research is especially helpful in understanding individuals' actual behaviors through their perception of a situation (Krathwohl, 1993). Hence, the chosen research method for this study is a qualitative content analysis based on semi-structured interviews. This qualitative approach allows to identify and assess potential mitigators and relationships with respective perceived risks that are not covered in existing research and, optimally, to discover novel findings, unique to the online purchasing process. In addition, the proposed open questions can lead to more generalizable results (Moser et al., 2014).

Our qualitative research method is based on the qualitative content analysis by Mayring (2004). First, we created an interview guideline based on prior theoretical and empirical work and evaluated the adequacy of our approach with a pilot group. The pilot group involved two interviewees to canvass a general picture of the appropriateness of our interview guideline. After toggling back and forth between our insights and prior research, adapting both the interview guideline and coding categories, we crafted a revised interview guideline. Subsequently, we recruited

participants by an invitation to participate in an “past online product purchases” on social networks. A mandatory requirement for recruitment was that participants must have recently experienced a perceived high-risk online shopping transaction. The participation in our study did not involve any compensation to generate unbiased findings.

Overall, we conducted 18 semi-structured interviews. Concerning the demographics, the interviewees were between 20 and 52 years old, with 61% of all participants being male, and the remaining 39% being female. The majority of the participants had an undergraduate degree from various fields, like medicine, architecture, or computer science. Furthermore, about half of the interviewees stated that they shopped online every month, eight claimed to shop online weekly, and the remaining interviewee indicated to shop online less than once a month (see [Online Appendix](#) for further descriptive information about the participants). Each interview took around 45 minutes on average and was conducted remotely via phone or other digital communication tools such as Discord and Skype. Subsequently, we digitally recorded the interviews with participants' consent. During the semi-structured interviews, we focused on the participants' actual and recent high-risk transactions to investigate authentic experiences. We focused on trying to uncover the decision-making process and strategy, including the risk mitigators the interviewees employed when confronted with high-risk transactions and various actual risk dimensions (see Table 1). On top of that, we sought to spot the strategies consumers employed to avoid perceived risks. Fortunately, products purchased online by the participants were heterogeneous, which, in turn, reduces the potential research bias that would have to be expected in a hypothetical setting with a predetermined product.

Thereinafter, the sessions were transcribed with the permission of the interviewees. The analysis of the transcribed interviews followed an inductive approach involving two independent coders. During the coding process, we checked the analysis of the coders for intercoder reliability on multiple occasions. As a result, we improved the quality of coding significantly (Campbell et al., 2013). We used NVivo 1.6.2 to enhance the coding process.

4. Findings

Consistent with prior research, all interviewees connected high-risk transactions with a feeling of amplified uncertainty, or contingency for adverse consequences. To mitigate risk perceptions, there were two overarching strategies we identified, namely *affective* and *cognitive risk mitigation*.

4.1. Affection as Risk Mitigator

Affective risk mitigation refers to interviewees relying on instinctive and visceral sensations rather than pure logic and reason. Specifically, the focus of this strategy was to seek familiarity and closeness and avoid the "unknown." Overall, we identified two affective risk mitigators during the interviews.

First, the interviewees reported that they heavily rely on *personal attitudes* in order to mitigate their risk perceptions. This includes attitudes toward some e-commerce platforms, retailers, sellers, brands, or products, such as allegedly superb customer service or supposedly extraordinary brand image and high-quality products. Such assumptions – or rather gut feelings – severely mitigated virtually all risk dimensions (Cases, 2002) in Table 1 except for performance risk. For instance, interviewee 7, who purchased a cap and camera recently, explicitly outlined his brand attitude as a risk mitigation mechanism for perceived performance and delivery risk:

[...] I don't know, I'm probably more focused on brands, actually. Because then I have the feeling that something like complaining [...] works better and everything is a bit more legitimate. But I also know that [...] I can't confirm that it's really like that. That's why it's just a feeling.

In addition, personal attitudes were commonly rooted in interviewees' affiliations. Akin to a herd instinct friends, when colleagues, or family advocated some product, perceived performance risks were potentially minimized. Relatedly, personal attitudes towards an e-commerce platforms' regional backgrounds considerably affected interviewees' risk perceptions, notably delivery risks. Multiple interviewees prioritized certain regions, e.g., Germany over China, when committing to high-risk transactions but seldom – if ever – proffered explicit rationales for their preferences. Unsurprisingly, interviewees attributed fewer risks to products manufactured within the domestic environment. As a risk mitigator, regionality also applied to an online seller's headquarters: Those organizations residing in close proximity to interviewees' residences were generally perceived as less risky options. This enhances a prior investigation by Song and Schwarz (2009) who find that known material is easier to cognitively process and, thus, perceived less risky.

Besides personal experience and regionality, interviewees' *resonance* was another mitigator overriding intensified risk perceptions. Resonance was somewhat a spontaneous – almost impulsive – sensation compared to past personal attitudes. When interviewees resonated with an organization, product, or entity related to the high-risk transaction, virtually all risk perceptions

evaporated. For instance, interviewee 4 perceived multiple aggravated risk dimensions, e.g., performance, finance, delivery, and source risk, during her purchase of an electrical hot-water bottle for menstrual pains advertised on Instagram from a start-up company. Nonetheless, her resonance with the message behind the high-risk transaction encouraged the purchase:

[...] I was already, so connected with the brand itself, in the sense of who is behind it [...] I have to say that it made a tremendous difference to me to see who or what [message] is behind [the product]. The idea behind it is, I think, if this had been launched by a giant company, I would have said, no [...] maybe I don't want to invest any money. Because such a large company already has its own money and so on, and is also less personal. Here, the brand was important in the sense of who and what it stood for. And that was from a woman who shares the same problem, who knows what's behind this product and who really put her heart into it and said, hey, we're doing something for our society, for women.

In a similar vein, another interviewee purchased a cap from some organization despite experiencing multiple risk dimensions because it claimed to donate its profit to philanthropic work and because one influencer, whom the interviewee resonated with, explicitly advocated the company.

4.2. Cognition as Risk Mitigator

By comparison, interviewees tended to exercise their rational and reasonable faculties when the affective logic of decision-making failed. Unlike the warm, intuitive, and apace affective decision-making, the cognition strategy was cold, aloof, and meticulous. Within this strategy, interviewees predominantly relied on accumulating and critically arbitrating three critical aspects of information related to a high-risk transaction.

First, interviewees sought perceived *independent information*. Overall, consumers utilized independent information to mitigate various risk dimensions such as performance risk or delivery risk of the product. The desire for independent information was expressed in interviewees' intensified suspicion concerning claims made by online sellers and conventional customer reviews. Likewise, there was an overall concern that retailer/brand information was exaggerated and skewed. Thus, to cope with perceived risks, interviewees assumed a highly critical – almost scientific – stance and screened the depths of the web for independent, third-party reviews that would confirm or refute assertions advertised by online sellers or the brand related to the high-risk transaction. Specifically, interviewees mentioned considering independent third-party tests to assess whether a products' technical specifications, e.g.,

a graphics card, were whitewashed. Apart from such objective expert evaluations, interviewees also incorporated purported independent information from non-certified experts from user-empowering online social networks, such as social media platforms and forums, to gauge high-risk transactions' risk profiles. Noteworthy, such social media sources were not solely used to evaluate high-tech products like laptops but also for various other species of products, e.g., musical instruments or jewelry. Often, interviewees justified this choice under the belief that social media channels were less biased than retailer/brand information and advertisements due to information democratization and decentralization. As interviewee 16 put it:

*The big advantage is that on YouTube, every fool can upload their sh***. And you just find very variable opinions and that's actually somewhat great. Even if many videos are pretty sh***, the intentionality behind them is usually quite sensible [...] Because everyone pays attention to different aspects and, therefore, you accumulate more input that is also honest.*

Moreover, to acquire independent information, consumers also scrutinized product reviews on e-commerce platforms. Unsurprisingly, both a low amount of product reviews and subpar average review ratings amplified consumers' perceived risk. Nevertheless, interviewees admitted to only consider a small number of reviews to judge an online transaction's risk facets. Interestingly, while both high and low rated reviews were deemed important, there was a universal tendency to denote more gravity and significance to harsh, and negative reviews, particularly to assess performance risks.

During the search process of independent information, consumers tend to often compare different products to pinpoint a transaction that proffers the best return on investment. Hence, consumers compare product prices on different search engines to achieve a superior-price performance ratio to mitigate financial risks. Naturally, when consumers have mitigated performance risk by acquiring independent information on a product's quality, they opt for the lowest price they can find. An example of such a mitigation behavior is interviewee 12, who incorporated both onsite reviews and third-party reviews on YouTube into her risk mitigation process for a new laptop purchase.

This brings us to the second crucial factor interviewees were heedful of, namely *visuals*. Both photos and videos were frequently mentioned as an essential element in appraising online sellers' and reviewers' authenticity. Visuals take on the same role as experiences by validating proposed attributes of the product or e-commerce platform (Mou et al., 2017). Interviewee 7 justified the significance of in-motion visuals as follows:

[...] if it is a skin cream or something, where you really want to know how [...] whether it is good. Of course, there are many people who then create videos about it. And I think that's definitely more credible because they have to show their face than simply leaving a comment.

Moreover, interviewees critically examined photos. When, for example, photos depicting a high-risk product were over-edited, interviewees expressed reluctance and became skeptical. Also, photos were a key tool for interviewees to determine the genuineness of consumer reviews. That is, photos posted within consumer reviews affected interviewees' risk perceptions. For instance, interviewee 14 claimed:

*On this one site specifically, and I can't believe I'm forgetting the name of it 'cause I bought some s*** on their site, but I felt like on their site specifically, the reviews were very honest impressions to the point where they would send and add a picture of where they put it in their house. So you could actually see the thing built and put together in the house you know, and I thought really good reviews.*

Finally, interviewees often mentioned being vigilant of *language*. Interviewees noted to scrutinize sentences and words of all provided information on e-commerce platforms, e.g., product reviews and the product descriptions to grasp risk facets. Notably, our interviewees outlined the impact of storytelling because it made conveyed information more relatable. This includes the critical representation of actual experiences of the high-risk transaction. On the one hand, superficial statements with fractional references concerning the high-risk transaction were viewed dubiously. On the other hand, interviewees indicated to ignore texts that were too extensive and cognitively demanding. Additionally, eminently optimistic and exaggerated parlance raised red flags; yet, unprofessional vocabulary, e.g., inaccurate translations also provoked elevated performance risk and source risk.

5. Discussion

E-commerce have become an indispensable part of consumer shopping due to a myriad of advantages. At the same time, online transactions have introduced or aggravated risks for consumers (Zheng et al., 2012). Although prior research has revealed numerous risk dimensions associated with online shopping, and indicated the importance of product reviews concerning trust (e.g., Hong, 2015), online reviews (e.g., Filieri et al., 2018), and branding (e.g., Wang & Yang, 2010) in influencing consumer purchase intentions, the underlying thought and decision-making processes remained unexplored. Therefore, our research was guided by the research question how consumers attempt

to mitigate their risk perceptions when confronted with a high-risk online transaction.

5.1. Risk Mitigation of High-Risk Transactions

Based on our findings, we develop a framework that scholars can utilize in order to generate a more comprehensive understanding of risk mitigation in the context of high-risk transactions (see Figure 1). Confronted with a high-risk transaction, our findings indicate that consumers mitigate risk perceptions through affective or cognitive thinking. Based on our data, affective decision-making is the dominant and “natural” strategy interviewees use because it is less cognitively taxing. In this mode, consumers do not engage in sophisticated calculations but rather depend on what is intimate and appeals to their emotions.

This is evident in the fact that interviewees overemphasized the status quo and what is familiar, i.e., personal attitudes towards an e-commerce platform’s purported reputation and regionality, instead of autonomously appraising an online transactions’ risk profile. It is even more salient when interviewees resonate with aspects related to the online purchase, such as sellers’ ethical stance, some advocating influencers on social media networks the consumer is fond of or a particular proclivity towards some non-functional element of the product. There is a case to be made that this strategy simply evokes courage and thus, overpowers all risk dimensions.

However, when consumers cannot draw on their personal attitude or when resonance is unavailable, they engage in profound and vigilant ponderings to grapple with the risk dimensions associated with online transactions. It is precisely here where cognition takes over, and consumers seek to accurately apprehend the risk profile of some perceived high risk online purchase. Specifically, they seek putative independent information, both from certified experts and multiple non-experts active on numerous online social networks, e.g., YouTube or Instagram, to objectively apprehend the risk facets of some products. In addition, consumers become increasingly attentive to visuals and language, which they harness in order to filter and exclude specific products. This strategy is much slower and more prudent but, at the same time, more rigorous because it actively and critically tests various risk dimensions related to the high-risk transaction and, ultimately, seeks to either confirm or disconfirm information.

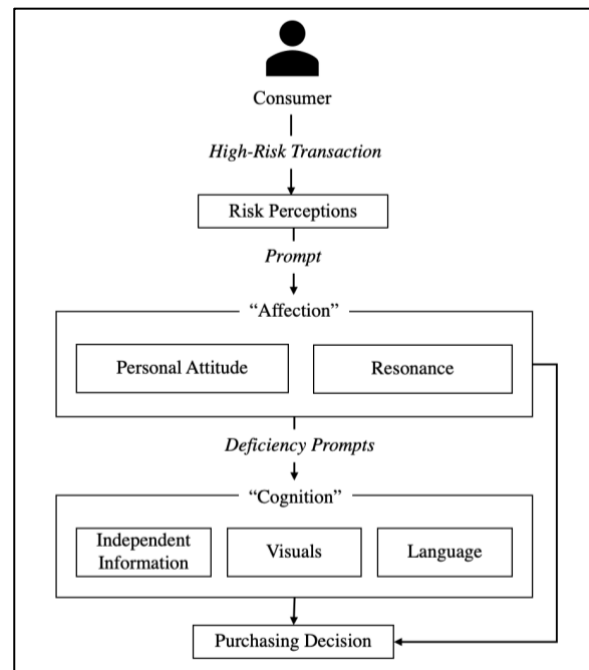


Figure 1. Risk mitigation framework.

5.2. Implications for Research

Overall, our findings have several implications for research and practice. In line with Kim (2010) and Roselius (1971), our findings indicate that brand reputation is a potent risk mitigator. In addition, consistent with prior research (Kim, 2010; Zheng et al., 2012), our insights reveal that personal and impersonal information are factors that impact consumers' risk perceptions. However, we extend these findings and show that when personal information is scarce, consumers seek independent, third-party information from various sources.

Especially user-empowering online social networks were popular destinations for interviewees to acquire information and, thereby, evaluate an online transaction's risk profile. This finding is interesting and suggests that, unlike legacy, offline shopping, there is a shift from focusing on official institutional certificates (e.g., Roselius, 1971) toward content on social media to assess an online transactions' risk dimensions. Indeed, the sway of user-empowering online social networks should not be underestimated. Existing research outlines the severe impact of online social networks on consumers decision-making (Sadovykh et al., 2015). We enhance this understanding by providing evidence of the essential role of online social networks during consumers risk mitigation. This includes attitudes toward some e-commerce platforms such as allegedly superb customer service or supposedly extraordinary brand image and high-quality products. Furthermore,

we enrich understanding of risk dimensions of online transactions. Our findings align with prior scholarship showing that performance risk is most dominant in online shopping (Zheng et al., 2012). Next to performance risk, our findings revealed a high prevalence of perceived delivery risks. While interviewees frequently mentioned perceiving source risks, e.g., on Instagram, rarely did it influence purchase intention. Moreover, contradictory to prior research, privacy risks was basically irrelevant in our study and only implicitly alluded to by interviewees (Ariffin et al., 2018). Accordingly, our study points to different tiers and hierarchies of risk dimensions in online transactions.

As we have seen, active organizations that advertise themselves and their products by taking a laudable normative stance or recruiting influencers for promotion can persuade consumers and relax consumer suspicions by appealing to their emotions. This finding is consistent with the rich literature on ethical research in IS advocating for thriving and prospering moral principles because they mutually benefit businesses and consumers (Culnan & Williams, 2009). Relatedly, our findings point to the gravity of visual content in perceived risks. More precisely, what and by whom visual content is utilized to demonstrate, advertise, or review a product can fuel or dampen consumers' risk perceptions. This augments existing research, which outlines the positive influence of product advertising in online social networks on consumers purchasing intention (Alalwan, 2018). Yet another theoretical implication is that review which contain visuals, e.g., photos or videos, can signify and evoke authenticity and thus, play an essential role in perceived risks. Hence, we expand existing research by unearthing that visuals not only increase the perceived helpfulness of an information source (Wu et al., 2021) but also drastically mitigate consumers risk perceptions.

Finally, our findings allude to the significance of language. Existing research already pinpoints at the critical role of language in product review whereby consumers assess the content, lexical characteristics, and syntax of product reviews to identify authenticity (Kollmer et al., 2022). Our results augment these findings by indicating that parlance matters across all communication steps, including pertaining to the product and platform, e.g., descriptions and reviews. In particular, inaccurate translations and overly positive statements amplify consumers risk perceptions.

5.3. Implications for Practice

Our work provides several fruitful implications for practice. To start with, our data revealed that consumers prefer reputable and local online sellers during high-risk

transactions. This implies that smaller, less-known, or foreign e-commerce platforms and retailers will find it tremendously challenging to compete against established giants – unless they assume a laudable normative, e.g., political or ethical stance, or promote their product on various online social networks, possibly with the aid of popular influencers. If correctly leveraged, online sellers can circumvent the brutal risk assessment of the cognitive decision-making process and, entice consumers' affective sphere of thinking.

However, it is also possible to intervene and influence consumers' cognitive decision-making process. For one, online sellers should ascertain that information is accurate. While distorted information may be beneficiary in the short-term, it will (most likely) backfire and can quickly destroy reputations in the far-term future. In addition, recruiting independent experts and non-experts to – ideally visually – test a product can attenuate consumers' skepticism. Relatedly, photos and videos of some products, including the description's parlance, should not be immaculate and taintless as it raises consumers' suspicions. Moreover, our study highlights the importance of product reviews on consumers risk mitigation. Usually e-commerce platforms do not incentivize consumers for writing product reviews (Garnefeld et al., 2020). However, such incentives could prompt consumers to write product review, which, in turn, can attenuate future consumers' risk perceptions. However, because language is critical according to our data, e-commerce platforms should implement length restrictions as both too short and too long reviews are construed as unhelpful in attenuating risk perceptions. Indeed, considering the sway of visuals, e-commerce platforms may also consider mandating photos or videos for online reviews – notably in the context of unverified reviews. Not only could such a policy reduce the prevalence of fake reviews because visuals can conduce as verification tool for unverified purchases but, at the same time, appease consumer risk perceptions.

In sum, fostering honesty, authenticity, and genuineness, i.e., fostering an ethical culture internally and externally should be a focal concern for e-commerce platforms to reduce consumers risk perceptions and, thereby, increase purchase intentions (Ariffin et al., 2018). Risk perceptions are influenced by consumers past experience with the product and/or e-commerce platform. In conclusion, ethical behavior of the e-commerce platform is a powerful force to create a sustainable relationship with the consumer because it reduces the perceived risks associated with a high-risk product purchase. Put differently; “*ethics is good business*” (Culnan & Williams, 2009, p. 682).

5.4. Limitations and Future Research

Despite the valuable insights regarding consumer's decision-making process when navigating a perceived high-risk online transaction, our manuscript is subject to some limitations. For one, this study used a qualitative interview-based method; thus, the information gathered from the interviewees had to be taken at face value. While this approach enabled us to interrogate authentic experiences, it simultaneously limits the generalizability of our findings. Hence, the developed framework in figure 1 should be construed as tentative.

These limitations could be addressed in future research. A quantitative survey or case study could validate and further explain the differences between the risk mitigation mechanisms of consumers. Also, an experimental setting that manipulates the aforementioned mechanisms may also advance research concerning consumers' risk mitigation strategies. Finally, it would be interesting to see whether some strategy and the respective underlying mechanism is particularly prevalent for certain products, e.g., high-tech, clothes, or cosmetics.

6. Conclusion

Our study makes several contributions. To begin with, we augment research on e-commerce. We show that affection and cognition are dominant strategies in consumer risk perceptions and, among other things, that ethical standards, visuals, and language are central in shaping risk perceptions. Additionally, we point to the importance of online social networks, particularly user-empowering channels, e.g., YouTube and Instagram, including the significance of recruiting social media influencers to shape risk perceptions and, ultimately, persuade consumers. Moreover, our work advances research on risk dimensions. Specifically, we find a hierarchical order and context-dependence on risk dimensions. Finally, our work has important theoretical and practical implications by providing guidelines for established platforms to improve their businesses and for start-ups to penetrate the fiercely competitive e-commerce environment.

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