

CROSS-BORDER SOCIAL COMMERCE: FROM A TRUST TRANSFER PERSPECTIVE

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ABSTRACT

Social commerce has been seeing exponential growth due to the COVID-19 pandemic, which brought a wave of cross-border commerce as consumers purchase more items online. Business uses social media to reach new markets by accessing potential global buyers, expanding their target markets, and increasing brand popularity. Cross-border e-commerce studies showed that perceived risk is a critical factor that reduces individuals' willingness to purchase unfamiliar foreign products. We introduced an emerging business model, cross-border social commerce (CBSC) and examined the mitigation of perceived risk through trust transfer in a CBSC context. To capture consumers' purchase intention of cross-border commerce, we conducted an online scenario-based survey. Survey respondents comprising a total of 321 social media users in Indonesia were observed. The results demonstrate that consumers' trust can be transferred from friends and platforms to brands, and the transfer effect is contingent on the popularity of the brand. Our findings have crucial implications for trust transfer and cross-border social commerce. This study contributes to academia by introducing a new business model and advancing our understanding of how to enhance trust and mitigate risk. Practitioners can gain insight into trust building in CBSC context.

Keywords: Cross-border social commerce (CBSC); Trust-risk perspective; Trust transfer; Brand popularity; Platform popularity

1. Introduction

Since the outbreak of the COVID-19 pandemic, the social commerce market has grown exponentially among the influence of health-prevention measures worldwide (e.g., lockdowns and social distancing). Trends show that people shop online more frequently while staying at home and avoiding public spaces due to health concerns (WTO, 2020). Social media has become a lifeline to the world and offered an increased opportunity for businesses to reach their target audience. The pandemic has provided huge opportunities for businesses to reach international markets by accessing potential global buyers, expanding their target markets, and increasing brand popularity. As an example, Indonesia's e-commerce accelerated by 91% in 2020 due to the COVID-19 pandemic and is expected to reach US\$ 133

billion by 2025. Specifically, social commerce is becoming a new trend and will make up around 40% of the total e-commerce market by 2020 (SIRCLO, 2020).

The advantage of social commerce is that consumers have opportunities to make more informed purchase decisions by viewing others' shared opinions, experiences, and product-related information (Shi and Cow, 2015). Consumers might feel as though they are taking advice from someone they trust. In traditional social commerce, retailers involve social media influencers such as Youtubers, key opinion leaders (KOL), with some commissions and fees, to introduce specific products to their virtual friends (called followers) in their channels. In this business model, foreign people in one country create a community group on social media with their offline friends (family or other close friends) in their home country. In daily life, these people share some information voluntarily about the products they use.

One emerging business model involves selling products from a source country to a target country using a social network by consumers such as immigrants, migrant workers, and international students. Initially, retailers in the origin country cooperate with individuals who have a strong social connection and can share product information with friends or family members in the target country through social media. Consumers in the target country can purchase products by clicking on a link and completing transactions on an e-commerce platform. For example, when a consumer receives a message including the details of foreign products, product reviews, and linkage of the products from their friends living abroad, they would then purchase the item on a specific platform. This business model is one form of cross-border social commerce (CBSC), which refers to an emerging business model where manufacturers or sellers from a country of brand origin utilize immigrants' and international students' social networks to sell products in a target country.

CBSC offers tremendous market opportunities for international brands and retailers. For example, international retailers can connect with customers without high advertising fees while entering the new market. However, transactions between countries carry higher risks than those within a single country because countries may differ in culture, shopping behavior, and consumer protection policies. Entering overseas markets requires considerable effort because various risks prevent consumers from purchasing foreign products, including the risks of purchasing counterfeit or low-quality goods, identity fraud, payment fraud, and delivery failure. Given the high risk of buying foreign products, knowing how to reduce perceived product risk is crucial in the CBSC environment.

One possible way to reduce perceived risk on foreign brands is to build trust in an international brand. This study applies trust transfer theory to enhance trust in international brands, especially the brand is entirely new or not well known. Trust transfer is a cognitive process in which individuals' trust in a known source is transmitted to another unknown target (Kim, 2008; Stewart, 2003). For example, when consumers receive positive word-of-mouth referrals from trusted sources, they tend to transfer their trust in the sources to an unknown seller (Kim and Prabhakar, 2004; Kuan and Bock, 2007). Moreover, many platforms have established mechanisms to mitigate transaction risk and build a trustworthy market; consumers are then more likely to buy a new or unknown brand. Because consumers have limited trust in unfamiliar foreign products in the CBSC context, whether trust in offline friends and platforms can be transferred to brands and how such a transfer may influence perceived product risk and purchase intention are questions of interest to businesses hoping to expand.

Although trust transference has been studied broadly, most studies have focused on transferring trust in a marketplace or platform to sellers (Chen et al., 2015; Pavlou and Gefen, 2004), from the Internet to mobile (Lee et al., 2011; Wang et al., 2013), from social commerce to another company (Shi and Chow, 2015), from members to communities and websites (Chen and Shen, 2015; Farivar et al., 2017), and from platforms to communities and focal merchants (Xiao et al., 2019). Because social relationships play a critical role in the CBSC model, our first research question is as follows: *Can trust in offline friends be transferred to trust in brands in this context?* In addition, the contingent effects of trust transfer have drawn research attention recently. For example, trust in platforms can be effectively transferred to sellers when sellers maintain a high-quality website (Chen et al., 2015). Trust transfer effects (the relationship between trust in a source and trust in a target) can be increased when specific mechanisms are present (Xiao et al., 2019). Because a foreign brand may be new to local customers or popular among them, trust in offline friends may be more important in one context than in another. Our second research question is as follows: *Is trust transfer more important in one context than in another?*

To address the issue, we adopt a trust-risk perspective and trust transfer theory. According to a trust-risk perspective, trust is one of the major factors that foster customers' acceptance and subsequent purchase intention through social commerce, whereas perceived risks reduce customers' purchase intention (Kim et al., 2008; Farivar et al., 2017; Tang et al., 2021). Trust transfer theory argues that trust in a known subject has an effect on attitudes and perceptions in another unknown subject. Therefore, trust-risk perspective and trust transfer theory are appropriate for examining customers' purchase intention in social commerce.

This study examines the relationship between trust, perceived risk, and purchase intention in the context of CBSC. We propose a model to explain how trust in offline friends, platforms, and brands can be transferred to each other and how these types of trust affect perceived risk and purchase intention. We also explore the moderating effects of brand popularity on the transfer between trust in offline friends and trust in brands and between trust in platforms and trust in brands. By doing so, we make the following contributions to the trust transferring literature. First, we explore whether or not consumer trust transfer occurs both intra-channel (from offline friends to brands) and inter-channel (from offline friends to platforms, and from platforms to brands). More importantly, we demonstrate that trust transfer from a platform to a brand is critical when the brand is relatively unknown. Lastly, this study also offers empirical evidence for CBSC, specifically between Taiwan and Indonesia, which is the largest immigrant population in Taiwan.

The study is structured as follows. In Section 2, we provide the theoretical framework of the study. In Section 3, we present the research model and its associated hypotheses as well as provide details on the research methodology. Section 4 provides a discussion, theoretical and practical contributions, limitations, and suggestions for future research directions.

2. Research Background

2.1. Cross-Border Social Commerce (CBSC)

Social commerce differs from traditional e-commerce in several ways. First, social commerce facilitates social interactions and business activities using social media (Wang and Zhang, 2012); but e-commerce focuses on maximizing one-click purchasing, search engine optimization, and system recommendations based on users' previous shopping activities. Second, in this platform ecosystem, consumers buy a product or service and actively communicate with other friends to review others' opinions, rate new products, share their experiences, and recommend products and services (Hajli, 2012). Third, social commerce integrates social media features with e-commerce platforms to enhance consumers' purchase experience (Farivar et al., 2017).

In the CBSC context, stakeholders involved in the transaction include retailers of the foreign brand, friends who introduce others to the foreign brand, potential buyers in other countries, and e-commerce platforms. Although the information is transferred through social media, the transaction is completed on an e-commerce platform. Because potential buyers may not be familiar with the foreign brand and trust in the brand is a critical antecedent of willingness to purchase, we posit that the brand of the product is a central target of trust transfer (Becerra and Korgaonkar, 2011). We considered "offline friends" to be a key source of consumer trust transfer. A friend is a critical source of trust, and a positive recommendation from a knowledgeable friend about a particular product increases purchase intention (Buttner and Goritz, 2008; Wu and Tsang, 2008). However, even though trust in offline friends may be transferred to different targets, related studies have rarely employed trust in brands as a target of this transfer. Furthermore, we choose "platforms" as a potential source of consumers' trust transfer. Currently, a platform is not only used as a medium for transactions and dissemination of information but also plays a role as an online intermediary. An online platform can be considered a third-party institution that facilitates transactions between different parties in its online marketplace by collecting, processing, and disseminating information through the Internet (Grover and Teng, 2001). When a platform is certified or possesses a strong reputation, consumers may perceive less risk, feel more secure, and thus make purchases (Goldbach and Benlian, 2015). The business process in CBSC is shown in Figure 1.

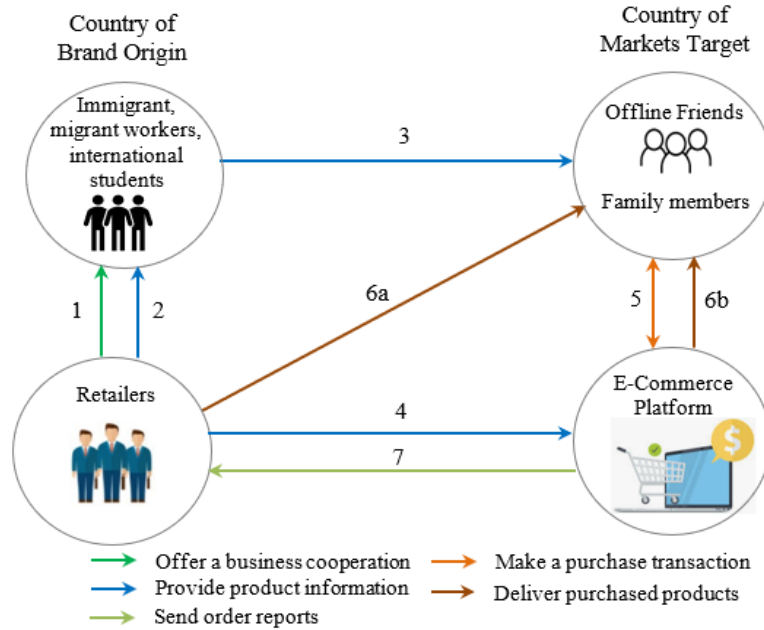


Figure 1: A Business Model of CBSC

To illustrate the process of CBSC, we describe the CBSC example of two countries, Taiwan and Indonesia. Taiwan is considered as the source country and Indonesia as the target country to explain the process: (1) retailers in Taiwan offer business cooperation to Indonesian international students, immigrants, and migrant workers in Taiwan as business partners; (2) retailers introduce products and prepare product information to the partners; (3) partners send a message to their friends in Indonesia via social media wherein the message contains product information and a product linkage that leads to a retailer’s product page on e-commerce platform; (4) retailers upload product information on Indonesia e-commerce platform; (5) Indonesia consumers who are interested in the products make a purchase on the platform; (6a) retailers deliver the products to the buyers; (6b) platform’s logistics division delivers the purchased products to the buyers; (7) platform send orders reports to retailers.

During the CBSC process, perceived risk plays a critical role. Consumers are exposed to varied risks; they may lose their money, receive an unsatisfactory product, etc., as they purchase goods from unfamiliar retailers. Moreover, previous studies in e-commerce and social commerce indicate that trust and perceived risk are both major factors of online transaction behavior (Guo et al., 2018).

Due to the rising popularity of social media, e-commerce has evolved into social commerce in recent years (Zhang, 2012). Most cross-border commerce studies still focused on CBEC (e.g., Cui et al., 2019; Han and Kim, 2019; Huang and Chang, 2019; Kim, 2017; Lin et al., 2018; Mou, 2020; Zhu et al., 2019). There has been little research that explores CBSC, as shown in Table 1.

Table 1: Prior Studies on Different Contexts of Cross-Border Commerce

Study	Theoretical lens	Independent variables	Dependent variable	Context
Kim et al. (2017)	Theory of buyer behavior, classical gravity theory	Express delivery, cross-border supply, transport costs, transport time	Cross-border demand	CBEC
Lin et al., (2018)	Theory of reasoned action, equity theory, and justice theory	Distributive justice, procedural justice, interactional justice, negative emotion, service dissatisfaction	Dysfunctional customer behavior	CBEC
Cui et al. (2019)	Commitment-trust theory and valence framework	System quality, service quality, perceived benefit, perceived cost, trust, and trust	Sellers’ intention to use CBEC platforms	CBEC
Han and Kim (2019)	Adaptive structuration theory	Utilitarian and hedonic motivations, exploitive and explorative IT uses, and consumer informedness	Purchase intention	CBEC
Huang and Chang (2019)	Signaling theory, attachment theory, and perceived value-based model	Information index, information signal, attachment style, cost, benefit, perceived trustworthiness, perceived value	Intention to shop on a foreign website	CBEC

Zhu et al. (2019)	The commitment-involvement theory	Product description, product awareness, platform involvement, perceived trust	Purchase intention	CBEC
Mou (2020)	The commitment-involvement theory, involvement theory	Product description, product involvement, platform involvement	Purchase intention	CBEC
Dai (2009)	Theory of reasoned action, technology acceptance model	Perceived of value added, usefulness, ease of use, enjoyment, and cost, perception of security and privacy, innovativeness, compatibility, subjective, norm	Intention to use	CBMC
Ciu et al., (2020)	Psychological distance theory, commitment-trust theory	Special distance, temporal distance, social distance, communication, opportunistic behavior, satisfaction, investment size, relationship benefit	Intention to use	CBMC
Present study	Trust transfer theory and perceived risk theory	Trust in friends, trust in platforms, trust in brands, perceived product risk, brand popularity, and platform popularity	Purchase intention	CBSC
Notes: CBEC: Cross-border electronic commerce; CBMC: Cross-border mobile commerce; CBSC: Cross-border social commerce				

2.2. Trust Transfer Theory

Trust is the willingness of one party to be susceptible to the actions of another party with the expectation that the trustee will take specific actions important to the trustor (Mayer et al., 1996). Trust is a crucial factor for reducing risk and uncertainty between sellers and buyers during transactions (Hung et al., 2015). Transactions may fail when trust is absent, especially in e-commerce settings, where the levels of risk and uncertainty are high. Therefore, sufficient trust between two parties facilitates successful transactions in e-commerce. McKnight et al. (2002) suggested that trust could be built through three main processes: knowledge-based, institution-based, and trust transfer processes. A knowledge-based process involves building trust through prior interactions with the trustee (Gefen et al., 2003). Institution-based processes build trust based on institutional structures, such as systems, escrow services, or intermediaries (Pavlou and Gefen, 2004).

In simple terms, trust transfer can be defined as the transference process of trust from one trusted entity to another related entity (Nel and Boshoff, 2017). Consumer trust can be transferred from offline to online channels. For example, consumers trust online banking systems because they already trust offline banking services formerly (Lee et al., 2007). Consumer trust also can be transferred from online to online channels. For instance, trust in Internet payment services leads to trust in mobile payment services (Lu et al., 2011). Moreover, Consumer trust can be transferred from online to offline channels. For example, trust in intermediary platforms affects trust in offline merchants (Xiao et al., 2018). Researchers have classified trust transfer into two types: intra-channel and inter-channel (Lee et al., 2007).

Intra-channel trust transfer means trust transference within the same context or channel. For example, Chen et al. (2009) found that the trust transfer process migrated the trust of the known platform's members to unknown platform providers. Chen and Shen (2015) proved that consumers' trust is transmitted from members to the community in social commerce. Farivar et al. (2017) indicated that trust toward social commerce' members leads to trust toward the website. Liu et al. (2018) found that trust could be transferred from consumer-to-consumer (C2C) and from consumer-to-marketer (C2M) during the brand trust building process in the social media communities. Cheng et al. (2019) indicated that trust towards members positively affects system trust towards social commerce apps. Zhao et al. (2019) demonstrated consumers' trust in brands can be built from trust in sellers in C2C social commerce. Xiao et al. (2019) confirmed that trust in the focal merchant comes from trust in the intermediary platform and trust in the user community. Tang et al. (2021) found that users' trust transfers from trust in government and trust in WeChat to trust in government WeChat mini-programs (GWMPs).

Inter-channel trust transfer means that trust transference among different channels (from one context to another). For example, Lee et al. (2007) found that customers' trust in online banking (online channel) can be built from trust in an offline bank (offline channel). Lin et al. (2011) examined trust transfer from an online to a mobile setting and found that customers' trust in an online broker service provider significantly influenced its mobile service. Chen et al. (2015) found that trust-in-platform positively affects trust-in-seller. Chen and Wang (2016) also found that customers' trust in the e-commerce platforms significantly affected their trust in social commerce platforms. Chang et al. (2019) found that customers' trust in brick-and-click stores significantly affected their trust in e-service and mobile service.

As indicated in Table 2, existing studies have extended trust transfer theory through intra-channel or inter-channel ways. However, few studies have integrated intra-channel and inter-channel trust transfers in one research model (e.g., Xiao et al., 2018). Hence, there is a gap in how the "trust transfer" is used to explain CBSC behaviors. Given that CBSC connecting both online channels (i.e., platforms) and offline channels (i.e., offline friends, brands), we propose

that consumer trust transfer occurs both intra-channel (from offline friends to brands) and inter-channel (from offline friends to platforms, and from platforms to brands), and examine its impact on perceived risk and consumers' intention to purchase.

Table 2: Prior Studies on Trust Transfer in Online Environment

Studies	Source of trust	Target of trust	Type of Trust transfer	Moderator (between trust transfer parties)	Mediator	Research context
Chen et al. (2009)	Platform's members	Platform provider	Intra-channel	N/A	N/A	C2C Platform
Lin et al. (2011)	Online brokerage services	Mobile brokerage services	Inter-channel	N/A	N/A	Mobile brokerage services
Lu et al. (2011)	Internet payment	Mobile payment	Inter-channel	N/A	Perceived risk Relative advantage	Mobile payment service
Wang et al. (2013)	Web eWOM service	Mobile eWOM service	Inter-channel	N/A	N/A	Mobile eWOM service
Chen and Shen (2015)	Social commerce members	Social commerce community	Intra-channel	N/A	Community commitment	Social commerce
Chen et al. (2015)	Platform	Seller	Inter-channel	Seller's website quality PEEIM	N/A N/A	C2C online shopping
Yang et al. (2015)	Web shopping services	Mobile shopping services	Inter-channel	N/A	Perceived benefit Perceived risk	Mobile shopping service
Sharma et al. (2017)	Internet Firm	Social commerce	Inter-channel	N/A	N/A	Social commerce
Farivar et al. (2017)	Trust toward members	Trust toward website	Intra-channel	N/A	Perceived commerce risk	Social commerce use
Liu et al. (2018)	C2C C2M	Consumer engagement	Intra-channel	N/A	N/A	Social media brand communities
Xiao et al. (2018)	Trust in the Internet Trust in O2O platforms	Trust in O2O platforms Trust in merchants	Intra-channel Inter-channel	N/A N/A	N/A N/A	O2O commerce
Chang et al. (2019)	Physical stores	E-services	Inter-channel	N/A	Trust in mobile shopping service	Mobile shopping service
Cheng et al., (2019)	Social commerce members	Social commerce apps	Intra-channel	N/A	N/A	Social commerce
Zhao et al. (2019)	Seller	Brand	Intra-channel	Promotion	N/A	C2C social commerce
Xiao et al. (2019)	Intermediary Platform	User community	Intra-channel	Perceived effectiveness of feedback	Trust in focal merchant	Online-to-offline commerce
Tang et al. (2021)	WeChat, government	Government WeChat mini-programs	Intra-channel	N/A	N/A	WeChat
Present study	Offline friends Platforms	Brands Brands	Intra-channel Inter-channel	Brand popularity Brand popularity, Platform popularity	Perceived product risk	CBSC

	Offline friends	Platforms	Inter-channel	Platform popularity		
Notes: N/A: Not available; PEEM: Perceived effectiveness of e-commerce institutional mechanisms; C2C: Consumer-to-consumer; C2M: Consumer-to-marketer; SMBC: Social media brand communities						

Trust transfer has been widely applied in various research areas (as shown in Table 2), including marketing, e-commerce, and information systems. However, limited studies have been conducted to explore in what conditions trust transfer occurs. For example, Chen et al. (2015) demonstrated that a seller’s website quality positively moderates the relationship between trust in a platform and trust in a seller in the C2C context. Zhao et al. (2019) observed that promotion negatively moderated trust transfer from sellers to brands in the C2C social commerce context. Xiao et al. (2019) online-to-offline commerce study concludes that trust in the intermediary platform and user community influenced trust in the focal merchant, the perceived effectiveness of dispute resolution positively moderated the relationship between trust in the intermediary platform and trust in the focal merchant, and perceived effectiveness of feedback positively moderated the impact of trust in the user community on trust in focal merchants. In the literature, calls have been made to explore the moderators of trust transfer in different contexts, such as social commerce. The present study answered the call and proposed two moderators (i.e., brand popularity and platform popularity) to amplify the trust transfer process in the CBSC context.

2.3. Perceived Risk Theory

Perceived risk theory postulates that consumers might perceive risk when they face uncertainty and potentially unwanted outcomes from a purchasing activity (Taylor, 1974; Dowling, 1994). In an e-commerce context, perceived risk can be defined as consumers’ perceptions of the potential negative outcomes of online transactions (Kim et al., 2008; McKnight et al., 2002). Lim (2003) identified four sources of perceived risk in B2C: product-related, technology-related, vendor-related, and social-related factors. First, perceived risk arises from the choice of products because products cannot be observed directly, detailed information of the products is limited, product quality is subject to doubt, and businesses may fail to deliver products as promised (Bhatnagar and Misra, 2000; Stewart, 1999). Second, consumers still have high levels of perceived risk, despite the efforts of IT developers and businesses to build new technologies that improve Internet security, such as encryption, firewalls, protocols, and digital signatures (Kim et al., 2000; Lee et al., 2001). Third, consumers are vulnerable to vendor fraud because it is difficult to identify trustworthy sellers (Gallaughar, 2002). Fourth, people suffer losses due to social influences (Lim, 2003), such as biased recommendations from their friends, families, or colleagues.

Product risk remains a major factor influencing online purchases across many product categories (Forsythe et al., 2006). Product risk refers to the likelihood that a product is flawed or does not function as expected, thus failing to satisfy consumers (Grewal et al., 1994). Research indicates that product risk is the greatest barrier to consumers making online purchases (Bhatnagar and Ghose, 2004). In CBSC, a greater potential risk exists than other business models because products come from other countries where consumers may not be familiar. This issue seriously can restrict the development of CBSC. Thus, research exploring how to build consumer trust is crucial to increase online sales. As shown in Table 3, products are a source of risk with multiple consequences. For this reason, we consider product risk as a critical obstacle to be resolved in CBSC.

Table 3: Sources and Consequences of Perceived Risk Adapted from (Lim, 2003)

Consequence of risk	Source of perceived risk			
	Vendor	Technology	Product	Consumer
1. Financial	✓	✓	✓	
2. Performance	✓		✓	
3. Privacy	✓	✓		
4. Psychological	✓	✓	✓	
5. Social				✓
6. Time lost	✓	✓	✓	

2.4. Brand Popularity

Popularity is defined as a signal of acceptance, social preference, favorability, and likeability (Cillessen and Marks, 2011). Brand popularity refers to the extent to which a brand is widely sought and purchased by the general population. It can be used as an “external cue” to evaluate product quality (Kim and Chung, 1997). Popularity differs from familiarity in which familiarity refers to a state of being well known, while popularity refers to a state of being liked or accepted. Popularity could enhance customers’ confidence when they judge brands whose features are not

easy to compare with other alternatives (Chu et al., 2020). Brand popularity also differs from brand reputation, reflecting the brand's ability to deliver its promise (Chaudhuri, 2002).

Consumers tend to believe that a larger number of purchasers indicates a higher quality product (Liebowitz and Margolis, 1994). In other words, popularity is an indication of the quality of a product. Brand popularity occurs from word of mouth, imitation, and signaling effects among a previous user pool that result in high perceptions of brand image (Kim and Chung, 1997), and it is reflected in marketing variables such as price, product quality, current market share, the number of loyal consumers, and cumulative sales.

The interaction of brand popularity and price affects perceived quality, reducing consumers' perceived risk in purchase decision-making. According to Dean (1999), consumers assume a popular brand as a certain level of trust in the brand, thus resulting in a low level of uncertainty. Therefore, we propose brand popularity as a moderator to amplify the trust transference process in the context of CBSC, while most of the previous studies tend to consider brand popularity as a main effect (e.g., Dean, 1999; Kim and Min, 2014).

2.5. Platform Popularity

In the Internet world, platform popularity has two different meanings (Cillessen and Marks, 2015). The first meaning refers to features of what is stated to be popular (e.g., contents, information). The second meaning refers to the attitudes or beliefs of people (e.g., well-accepted or well-liked). There are several reasons why managers put great emphasis on the popularity of the company's platform. First, consumers prefer to buy online in popular stores to reduce risks. Second, popularity enhances consumers' confidence in making a purchase decision. Third, and more importantly, popularity improves the value-added of the merchandise, consequently increasing the numbers of sales.

Platform popularity can be quantified in various ways. First, using the number of views or visits: a popular platform means that the information provided is interesting. For example, Gonçalves et al. (2010) calculated the popularity index of a blog based on the number of cumulative visits. This number indicates that the blog has attracted many readers for a long time. Second, using the number of clicks and hyperlinks of a website: a popular platform means that a platform's content is useful. For example, Ratkiewicz et al. (2010) examined the popularity of topics in Wikipedia based on the number of clicks. Third, using the rating of acceptance: a popular platform means that the content is widely accepted. Swani and Milne (2017) investigated the popularity of a Facebook fan page's content using the number of "Likes." Fourth, using the number of readers' responses (e.g., retweets and shares) in social media circles: a popular platform means that the content is high involvement. For example, Wu and Shen (2015) built a popularity prediction model based on the number of retweets (i.e., Tweet shares).

Popularity cannot be separated from reputation because popularity is reputational judgment. Moreover, Hsiao et al. (2010) defined perceived web reputation as "the degree of website's popularity to which a consumer perceives." Jarvenpaa and Tractinsky (2000) found that perceived web reputation had a positive effect on consumers' trust in an Internet store. The benefits of purchasing in a popular platform affect consumer purchasing directly and immediately in the current period. Users might develop trust on the basis of popularity indices of the platform, such as the daily or accumulative visits. However, this variable has been ignored in the literature. Therefore, we examine and discuss how platform popularity plays a role in strengthening trust transfer.

3. Research Framework and Hypotheses

In this study, we have two major theories: trust transfer theory and the perceived risk theory. A trust-risk perspective was applied to link trust transfer and perceived risk, which is frequently adopted in past studies (e.g., Kim et al., 2008, Farivar et al., 2017, Tang et al., 2021). By adapting the trust-risk perspective, we can connect trust transfer theory and perceived risk theory in an integrated model. Moreover, we argue that trust transfer occurs both intra-channel (from offline friends to brands) and inter-channel (from offline friends to platforms and from platforms to brands). While, as indicated in Table 2, most previous studies focus on inter-channel or intra-channel separately.

To further explore under what conditions trust transfer flows effectively, we propose two moderators: brand popularity and platform popularity. Our motivation is to understand the difference in effects between popular and unpopular factors in the trust transfer process. It is crucial to know how to amplify the trust process in business practice, specifically for an unwell-known entity such as a new brand.

3.1. Risk Effects

Dowling and Staelin (1994) confirmed the negative relationship between perceived product risk and intention to purchase, and the issue of product risk may be even more critical in an e-commerce context. Because buyers cannot access the product before making a purchase decision, they perceive a higher level of uncertainty regarding the unwanted outcomes of making purchases from a social commerce website (Grewal et al., 1994). Some obvious possible results include problematic products and financial fraud. Risk is associated with potential loss; therefore, buyers tend to control or avoid actions associated with risks (Peter and Ryan, 1976). Therefore, perceived risk can reduce the possibility of taking action to avoid unwanted consequences (Nidumolu, 1995). E-commerce research

suggests that perceived risk reduces consumers' willingness to make online purchases (Featherman and Pavlou, 2003; Featherman and Wells, 2010). We thus expect a similar association in the CBSC context and propose the following hypothesis:

H1: Perceived product risk is negatively associated with purchase intention.

3.2. Trust Effects

3.2.1. Trust and Purchase Intention

Trust in platforms arises when consumers believe that a platform provider has sufficient capacity to maintain its integrity and trustworthiness (Gefen et al., 2003). Trust in platforms is a vital antecedent to transactions on that platform (Chen et al., 2015). Consumers are more willing to conduct transactions when they trust vendors (Gefen et al., 2003; McKnight et al., 2002; Pavlou and Gefen, 2004). In a C2C context, sellers and buyers are more likely to use a platform again when they consider the platform to be a trustworthy place for conducting transactions (Chen et al., 2009). We, therefore, propose that online buyers' trust in a CBSC platform can increase their purchase intention. Thus, we hypothesize the following:

H2: Trust in platforms is positively associated with purchase intention.

Individuals tend to purchase a specific brand when they find the producer predictable, trustworthy, and competent (Lau and Lee, 1999). Becerra and Korgaonkar (2011) observed that trust in brands could enhance the willingness to purchase products associated with the brand online. The strong relationship between trust and purchase intention has been confirmed in related studies; specifically, trust in brands was considered a critical antecedent of purchase and repurchase intention (Hegner and Jevons, 2016). Trust in brands or positive expectations about a brand's actions can increase purchase intentions by minimizing possible uncertainties (Delgado-Ballester et al., 2008; Elliott and Yannopoulou, 2007). Based on these arguments, we hypothesize the following:

H3: Trust in brands is positively associated with purchase intention.

3.2.2. Trust and Perceived Product Risk

In addition to building connections, the functions of intermediaries include reducing uncertainties in transactions by implementing policy regulations that detail appropriate conduct on the platform and prevent actors from engaging in opportunistic behaviors (Pavlou and Gefen, 2004). Thus, a trustable platform plays the role of an intermediary that can counterbalance the effect of product risks. A trusted platform can also be expected to reduce uncertainty and perceived product risk in a CBSC context. The following hypothesis is therefore proposed:

H4: Trust in platforms is negatively associated with perceived product risk.

The initial concept of trust in brands was presented by Chaudhuri and Holbrook (2001), who defined trust in a brand as "the willingness of the average consumer to rely on the ability of the brand to perform its stated function." If people believe that the products of a brand will perform as expected, they are less likely to reject that brand. Performance risk is the possibility that the purchased products cannot function normally or cannot last for a long period (Lim, 2003). Such a risk is lower if buyers are familiar with the brand or the producer has a positive reputation. In other words, buyers sense fewer risks when they trust the brand. We thus hypothesize the following:

H5: Trust in brands is negatively associated with perceived product risk.

3.2.3. Trust Transfer

Trust transfer theory suggests that the trust transfer relies on two types of relationships between a source and target, namely similarity and business ties (Stewart, 2003). In the social commerce context, members' trust is classified into two categories: trust in platform providers and mutual trust among members. Delgado-Márquez et al., (2012) stated that trust transfer occurs when an agent (the trustor) trusts an unknown agent (the trustee) because the trustee is related to a trusted third agent (i.e., an agent whom the trustor trusts). Following the same logic, we assumed that consumers' trust (trustor) in a foreign brand as an unknown object (trustee) could be transferred through a known person (e.g., offline friends, family members) and a known object (e.g., platforms).

For the transfer from offline friends to platforms and brands, business ties and familiarity play critical roles. Trust transfer occurs when trustors rely on observable signals (e.g., offline friends) and make mental shortcuts by associating signals with other targets (e.g., platforms). Moreover, trust in offline friends can be transferred to platforms because trust can be transferred from familiar targets to other targets through their association with one another (Doney and Cannon, 1997; Stewart, 2003). Because potential buyers have strong ties with their friends, trust in offline friends can be transferred to platforms and brands. For example, users' trust in a website is associated with the trust cues that they receive from other members of the website (Stewart, 2003). This finding suggests that when trust is strong among social commerce users, individuals are likely to have a stronger foundation for developing trust in the actors or stakeholders affiliated with these friends. Therefore, we argue that trust in offline friends can be transferred to a platform and a brand. Many online platforms have mechanisms to facilitate transactions and protect the rights of both parties of a transaction. One mechanism involves screening the quality of sellers and the products to be sold on the platform. Furthermore, trust in institutions can be transferred to trust in members (Pavlou and Gefen, 2004). When

individual sellers are viewed as a brand on the platform, trust in the platform can, therefore, be transferred to the brand. Accordingly, we propose the following hypotheses:

H6: Trust in offline friends is positively associated with trust in platforms.

H7: Trust in offline friends is positively associated with trust in brands.

H8: Trust in platforms is positively associated with trust in brands.

3.2.4. Moderating Effect of Platform Popularity

As in the traditional market, the more goods sold, the better the goods. The phenomenon of “rich-get-richer” is widespread in the Internet world. When a website is popular, it tends to be clicked more often (Cho and Roy, 2004). According to signal theory, a large number of platforms’ members could be a signal that the platform is reliable (Xiao et al., 2018). This perception makes consumers sense cozier to transact on a well-known platform rather than on a lesser-known platform. When consumers recognize that a platform is famous, they are more likely to believe that the platform is reliable, honest, and keeps the consumers’ interests in mind (Xiao et al., 2018). In contrast, when consumers perceive that a platform is less well-known, they may seek their friends’ opinions before making a purchase decision to reduce their perceived risk. We argue that trust in real friends can help increase trust in unpopular platforms because individuals tend to be influenced by others with whom they have close relationships (Lin and Lu, 2011). Therefore, when consumers view the platform as unpopular, the presence of trusted friends is more important to support their buying decisions. Accordingly, we hypothesize.

H9: Platform popularity moderates the relationship between trust in offline friends and trust in platforms. Specifically, the positive effects of trust in offline friends on trust in platforms will be weaker for popular platforms.

Even though popularity does not guarantee satisfaction for consumers, they are more confident to make a transaction on famous platforms. For many companies, the platform’s popularity can reflect the company’s image. High popularity means that the information provided by the website is useful or attractive for its visitors (Chu et al., 2004). Popularity can help consumers evaluate products whose features are not easily compared with alternatives (Chu et al., 2020). Online buying on famous platforms (e.g., Amazon, Alibaba, eBay) is preferred because consumers tend to believe the more buyers and sellers, the greater the choice becomes. When a platform is famous already, consumers might believe that the platform is reliable and trustworthy. Thus, the impact of trust in platforms on trust in brands becomes weaker. Conversely, when consumers recognize that the platform is less popular, they may carefully evaluate its reliability. If there are no cues to justify the trustworthiness of the platform, they are unlikely to believe the brand they desire to buy. In other words, the effect of trust in platforms on trust in brands is stronger when a platform is unpopular. Thus, we present the following hypothesis:

H10: Platform popularity moderates the relationship between trust in platforms and trust in brands. Specifically, the positive effects of trust in platforms on trust in brands will be weaker for popular platforms.

3.2.5. Moderating Effect of Brand Popularity

People generally prefer popular over unpopular brands because popularity is assumed to indicate superior quality and acceptability by most people (Dean, 1999). Popularity also leads to trust in brands and enhances the perception of both value and quality (Delgado-Ballester et al., 2008). Prior studies point out that brand popularity affects consumers’ evaluations, and popular brands tend to be more trusted (Kim and Min, 2014). Consumers, therefore, prefer a famous brand rather than an infamous brand. When the brand is popular, consumers are less likely to seek others’ opinions because they have more confidence in their own judgments to form brand trust. In such a condition, we believe that the relationship between trust in offline friends and trust in brands is weaker. On the contrary, when the brand is not popular, consumers are more likely to follow recommendations from their friends in making a purchase decision on a particular product. The relationship between trust in offline friends and trust in brands is therefore much stronger in this condition. Thus, we hypothesize the following:

H11: Brand popularity moderates the relationship between trust in offline friends and trust in brands. Specifically, the positive effects of trust in offline friends on trust in brands will be weaker for popular brands.

Brands are sought after and purchased by consumers because brand popularity serves as a signal of product quality. Research has claimed that consumers select popular brands as a manner to reduce the perceived risk (Kim and Min, 2014). Studies reported that consumers give a better evaluation in terms of their attribute ratings, overall attitudes, and intentions (Kim, 1997), which results in a larger aggregate market share in the long run (Schererand and Ross, 1999). Brand popularity is also considered to be the accumulation of market acceptance and brand goodwill over time (Kim, 2019). When a brand is popular, consumers assume a certain level of trust and confidence in the brand, thereby reducing their level of uncertainty (Dean, 1999). Therefore, we argue that the impact of trust in platforms on trust in brands is weaker when a brand is already popular. Accordingly, it is hypothesized that:

H12: Brand popularity moderates the relationship between trust in platforms and trust in brands. Specifically, the positive effects of trust in platforms on trust in brands will be weaker for popular brands.

Figure 2 depicts our research framework, which reflects the effect of trust transfer on perceived product risk in the CBSC business model and its impact on purchase intention.

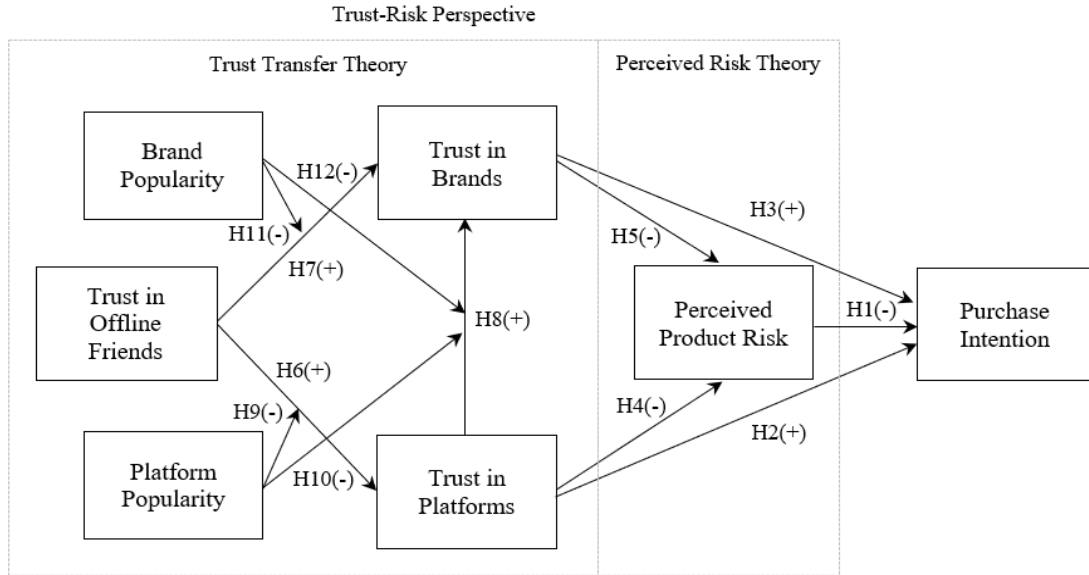


Figure 2: Research Model

4. Research Methods

4.1. Measures

To test the proposed hypotheses, we adopted multi-item scales from prior studies for the measure of constructs. All questionnaire items were measured on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). We adopted three measurement items from Morgan and Hunt (1994) to capture trust in offline friends, three items from Chen et al. (2015) to capture trust in the platform, three items from Habibi et al. (2014) and Laroche et al. (2012) to capture trust in brands, and six items from Hong and Cha (2013) and Dai et al. (2014) to capture perceived risk. For purchase intention, we adopted measures from Hong and Cha (2013). The measurement items and their sources are shown in Table 6. Furthermore, we included gender, age, education, online shopping experience, friend closeness, product familiarity, and domicile (urban or rural) as control variables.

4.2. Research Design and Procedure

According to the National Immigration Agency of Taiwan (2021), Indonesian students and immigrants are about 253,570, the largest immigrant population in Taiwan. Knowing this potential market for CBSC, we conducted a scenario-based online survey in Indonesia. We believe that drawing random samples from relevant populations is the right way to establish external validity (Hair et al., 2014).

We designed a scenario based on the CBSC business model shown in Figure 1. Firstly, an online questionnaire was distributed to Indonesian students and immigrants in Taiwan. We then asked them to share the questionnaire with their friends in Indonesia (participants) through social media (e.g., WhatsApp, Line, Facebook). Secondly, participants are required to answer whether they have friends or family members in Taiwan. If the answer is yes, they are allowed to take our survey. At the beginning of the survey, participants were asked to imagine that one of their friends sent a message through Facebook messenger (Appendix A). In the message, their friend recommended an Indonesia platform that sells Taiwan brands by sharing the link of the platform; after the link was clicked, a manipulated brand recommendation was presented (Appendix B). Participants further evaluated the extent to which they believed in their friends in Taiwan. They then assessed the extent to which they trusted the given platform and brand and rated their perceived product risk. Furthermore, they graded their purchase intention after receiving the product information. All participants were randomly assigned to one of four conditions: popular platform with popular brand, popular platform with unpopular brand, unpopular platform with popular brand, and unpopular platform with unpopular brand. Finally, they completed a questionnaire about demographic and control variables and then assessed our manipulation checks.

We choose mobile phones as the transaction target for two reasons. First, according to SIRCLO (2020), electronics are listed in the top three of Indonesia's social commerce product list. It is common for Indonesian to purchase this type of product online. Second, according to Counterpoint (2021), about 20 percent of mobile phones were sold through online channels in Indonesia in 2020. Therefore, mobile phone is an appropriate transaction target for this study.

4.3. Data Collection

Because they survey was conducted in Indonesia, we performed several steps to ensure translation quality and cross-cultural equivalence. First, we collected English items from previous items and eight doctoral students participated in a focus group discussion to give feedback on scale format, question ambiguity, terminology, semantics, and relevant unlisted questions. We hired a professional linguist to translate the English questionnaire into Bahasa Indonesia to ensure respondent comprehension. Finally, we had a translator with no connection to the study translated all the final items back into English. Importantly, the comparison between initial and back-translated English version of the surveys show now significant semantic differences. To ensure the reliability and validity of the instrument, we then conducted a pilot study using a sample of 25 voluntary graduate students with experience in online shopping through social commerce platforms. All Cronbach’s alpha values were above the cutoff point of 0.70, indicating the instrument had internal consistency (Hair et al., 2011).

In this study, a respondent-friendly technique proposed by Dillman (2008) was applied to increase the response rate. We contacted 55 Indonesian students and immigrant workers in Taiwan to send our questionnaire to their families or friends in Indonesia. Each of them sent 10 to 20 invitations out, and a total of 800 invitations were sent. Of the 800, 373 participated in the survey, resulting in a 46.6% response rate. Among them, 321 participants completed the survey; thus the effective response rate is 40.1%. Since the target respondents are friends of our contact people, a high response rate was yielded compared with general IS studies. In addition, there are no missing values in our data since the respondents answered all required questions. Table 4 presents the characteristics of our sample.

To test nonresponse bias, we followed Armstrong and Overton’s technique (1977) by comparing the early and late responses. We first separated our samples into the early (n= 204) and the late (n =107) groups. We further applied a Chi-Square test to compare the demographic attributes (i.e., gender, age, educational) between these samples. The results demonstrated that none of the demographic attributes have significant differences at the 0.05 level, indicating no systematic nonresponse bias from our response sample.

Table 4: Demographic Information (N=321)

Measure	Categories	#	%	Measure	Categories	#	%
Gender	Male	168	52.3	Education	Below bachelor	115	35.8
	Female	153	47.7		Bachelor	165	51.4
Age	19 and under	68	21.2		Master or above	41	12.8
	20- 40	201	62.6	Online shopping experience (frequencies per week)	Inexperience	119	37.1
	41 and above	52	16.2		1 – 2 times	121	37.7
Domicile	Rural	159	49.5		3 – 4 times	57	17.8
	Urban	162	50.5		Above 4 times	24	7.5

4.4. Manipulation Check

A post-experimental questionnaire was used to assess the manipulation check. We included two brands (one popular and one unpopular) and two platforms (one popular and one unpopular) to understand the strength of the moderating effect of brand popularity and platform popularity after linking trust in offline friends to trust in platforms and trust in brands.

For brand popularity, we selected two of Taiwan’s smartphone brands: “ASUS” as a popular brand based on Statistita (2019) and “InFocus” as an unpopular brand which is a newcomer brand. Because we considered one brand to be less popular than the other, we performed two manipulation checks (see Table 5). To ensure the effectiveness of the manipulation, we asked participants to rate the popularity of the given brand from 1 (very unpopular) to 10 (very popular) in Indonesia. As expected, a one-way analysis of variance revealed that participants reported Asus (M = 7.65) to be more popular than InFocus (M = 3.89; F = 175.46, p < .001). Thus, the manipulation of brand popularity was successful.

For platform popularity, we selected two of Indonesia’s platforms: “Lazada” as a popular platform and “Alfacart” as an unpopular platform based on the survey by Iprice Insight (2018). To ensure the effectiveness of the platform popularity manipulation, we asked participants to rate the popularity of the given platform (1 = “Very Unpopular,” 10 = “Very Popular”) in Indonesia. The results also show that participants reported Lazada (M = 7.16) more popular compared to Alfacart (M = 3.97; F = 130.92, p < 0.001).

Table 5: Results of One-way Anova

Group	Brand Popularity			Platform Popularity		
	Mean	F-value	Sig.	Mean	F-value	Sig.
Popular	7.65	175.46	0.00	7.16	130.92	0.00
Unpopular	3.89			3.97		

5. Analysis and Results

5.1. Measurement Model

We tested the reliability, construct validity, convergent validity, and discriminant validity to assess the properties of the measurement model, as reported in Table 6. To assess reliability, we examined Cronbach's alpha and composite reliability (CR). The values all exceeded the benchmark value of 0.70 (Barclay et al., 1995), demonstrating a high level of reliability for each construct. To assess construct validity, we examined the factor loadings of each reflective construct. The factor loadings ranged from 0.84 to 0.94, which met the minimum requirement of a value greater than 0.70, indicating the validity of each item construct (Chin, 1998). We applied average variance extracted (AVE) to assess convergent validity. All AVE values exceeded 0.50, suggesting sufficient convergent validity (Henseler et al., 2009). We also assessed the discriminant validity of the constructs. As shown in Table 7, the square roots of the AVEs (see the main diagonal elements in bold denote) were higher than the correlations of the other constructs, providing further evidence of discriminant validity (Fornell and Larcker, 1981).

Table 6: Measurement Validity and Reliability

Constructs	Item	Loading
Trust in offline friends $\alpha = 0.91$; $CR=0.94$; $AVE=0.84$	1. My friend can be trusted at all times.	0.93
	2. My friend can be counted on to do what is right.	0.94
	3. My friend has high integrity.	0.89
Trust in Platforms $\alpha = 0.90$; $CR=0.94$; $AVE=0.84$	1. This platform can be trusted at all times.	0.90
	2. This platform has a high level of integrity.	0.93
	3. This platform is competent and knowledgeable.	0.91
Trust in Brands $\alpha = 0.89$; $CR=0.93$; $AVE=0.82$	1. This is an honest brand.	0.92
	2. I believe this brand.	0.93
	3. This brand never disappoints me.	0.87
Perceived Product Risk $\alpha = 0.95$; $CR=0.96$; $AVE=0.79$	1. The product quality may be lower than that advertised in the online store.	0.94
	2. The product appearance may be different from the product picture shown in the online store.	0.84
	3. The product's dimensions may be different from those advertised in the online store.	0.93
	4. It is difficult for me to judge adequately the quality of the products.	0.85
	5. It is difficult for me to compare the quality of similar products.	0.91
	6. The product purchased may not perform as expected.	0.85
Purchase Intention $\alpha = 0.89$; $CR=0.93$; $AVE=0.82$	1. I would like to buy the brand's products as my friend recommended.	0.92
	2. Given the chance, I would like to buy the brand's products as my friend recommended.	0.87
	3. As my friend recommended, I might buy the brand's products soon.	0.91

Note: CR = composite reliability, AVE = average variance extracted

Table 7: Measurement Model Statistics

Construct	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) <i>Trust in offline friends</i>	5.74	0.33	0.92						
(2) <i>Trust in platforms</i>	4.67	0.34	0.29	0.92					
(3) <i>Trust in brands</i>	5.04	0.42	0.43	0.35	0.91				
(4) <i>Brand popularity</i>	-	-	0.08	-0.14	0.36	-			
(5) <i>Platform popularity</i>	-	-	0.04	0.27	-0.07	0.03	-		
(6) <i>Perceived product risk</i>	2.82	0.46	-0.33	-0.42	-0.42	-0.12	-0.22	0.89	
(7) <i>Purchase intention</i>	4.52	0.48	0.35	0.42	0.4	0.03	0.17	-0.43	0.91

Notes: The diagonal line represented the square root of AVE. SD: Standard deviation; -: not available

5.2. Common Method Bias

Since the data were self-reported and collected from the same respondent, common method bias (CMB) was a potential concern. To determine this, we first conducted Harman's single factor test by including the latent variables and control variables in our measurement model. Our results revealed that the largest variance explained by a single factor was 22.12%, which is lower than the minimum of 25% (Podsakoff, 2003). Second, we applied a marker variable using Lindell and Whitney's technique (2001). The correlation observed between the marker variable, and the theoretically unrelated variable was interpreted as an estimate of common method variance. We used privacy risk as an unrelated variable because, as reported by Lim (2003), the dimension of privacy risk dimension is not related to product risk (see Table 1). Given the lack of correlation between the marker variable and the unrelated variable ($p > 0.10$), common method bias was not an issue.

5.3. Structural Model

PLS is adopted in this study. Different from covariance-based SEM that many indexes are available, Standardized Root Mean Square Residual (SRMR) and the effect sizes (f^2) (Benitez et al., 2020) are the most commonly adopted model fit index. A model has a good fit when SRMR is less than 0.08 (Hu and Bentler, 1999). The value of f^2 ranging from 0.02 to 0.15, 0.15 to 0.35, or higher than 0.35 indicates weak, medium, or large effect size, respectively (Cohen, 2013). The results show that the SRMR value is 0.075 (< 0.08), and the f^2 value for hypothesized relationships ranges from 0.045 and 0.222 (small to medium). The results are shown in Table 8.

Table 8: Overall Fit of the Estimated Model

Overall fit	Value
SRMR	0.075
Effect size	f^2
Perceived product risk → Purchase Intention	0.064
Trust in platforms → Purchase intention	0.076
Trust in brands → Purchase intention	0.045
Trust in platforms → Perceived product risk	0.115
Trust in brands → Perceived product risk	0.108
trust in offline friends → Trust in platforms	0.084
trust in offline friends → Trust in brands	0.134
Trust in platforms → Trust in brands	0.222

To assess the structural model, we analyzed the relationship between hypotheses and included the control variables of age, gender, education, domicile (urban/rural), and online shopping experience. The results of the structural model are illustrated in Figure 3. Perceived risk had a negative impact on purchase intention ($\beta = -0.24$, $p < 0.01$); therefore, H1 was supported. For the impact of trust on purchase intention, both trust in platforms ($\beta = 0.26$, $p < 0.01$) and trust in brands ($\beta = 0.20$, $p < 0.01$) were positively associated with purchase intention. Therefore, H2 and H3 were supported. For the impact of trust on perceived risk, both trust in platforms ($\beta = -0.31$, $p < 0.01$) and trust in brands ($\beta = -0.30$, $p < 0.01$) significantly negatively affected perceived risk. Therefore, H4 and H5 were supported. Trust in offline friends had an impact on trust in platforms ($\beta = 0.27$, $p < 0.01$) and trust in brands ($\beta = 0.29$, $p < 0.01$); thus, H6 and H7 were supported. Trust in platforms significantly affected trust in brands ($\beta = 0.39$, $p < 0.01$); thus, H8 was supported.

Furthermore, platform popularity significantly moderates the effect of trust in offline friends on trust in brands ($\beta = 0.12$, $p < 0.01$), but it is opposite with H9 (the coefficient should be negative). Platform popularity did not moderate the effect of trust in platforms on trust in brands ($\beta = -0.04$, $p > 0.05$). Therefore, H9 and H10 were not supported. Brand popularity did not moderate the effect of trust in offline friends on trust in brands ($\beta = 0.08$, $p > 0.10$), but brand popularity moderates the effect of trust in platforms on trust in brands ($\beta = -0.17$, $p < 0.01$). Therefore, H11 was not supported, whereas H12 was supported.

The explanatory power of the research model is also shown in Figure 3. The predictive power of a research model can be assessed by reference to the percentage of total variance it explains (R^2). Our research model explained 45%

of the variance in consumers' trust in brands and 17% of the variance in consumers' trust in platform. Moreover, R^2 was 28% when trust in brands and trust in platforms were used to predict perceived product risk. Further, R^2 was 30% when consumers' perceived product risk was used to predict intention to purchase. According to Chin (1998), R^2 values around 33% is average explanatory power. Besides, our R^2 is similar to related studies published in the past (Hajli, 2015; Hsu et al., 2015; Kim et al., 2008; Lu et al., 2010).

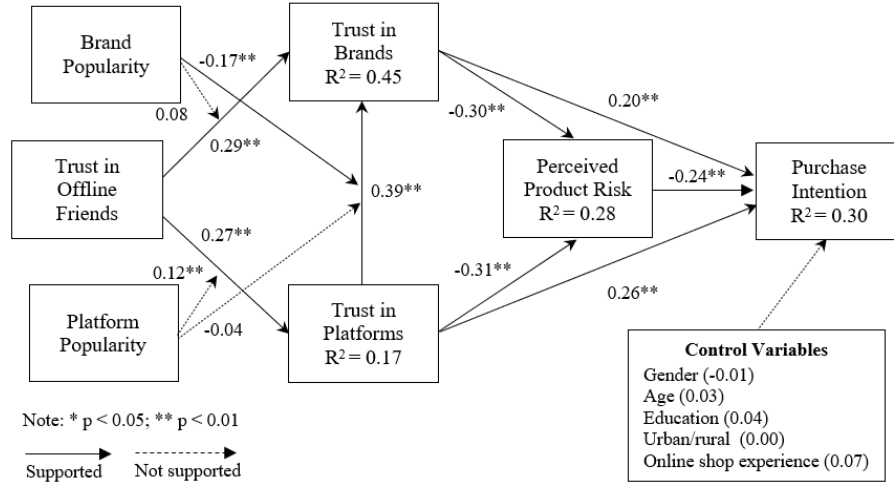


Figure 3: Structural Model

We further employed a simple slope analysis to understand the moderating effect of brand popularity on the relationship between trust in platforms and trust in brands. As depicted in Figure 4, the plotted graph shows that the slope of the unpopular brand is larger, while the slope of the popular brand is slighter. It means that the effect of trust in platforms on trust in brands is stronger when the brand is unpopular, but it is weaker when the brand is popular.

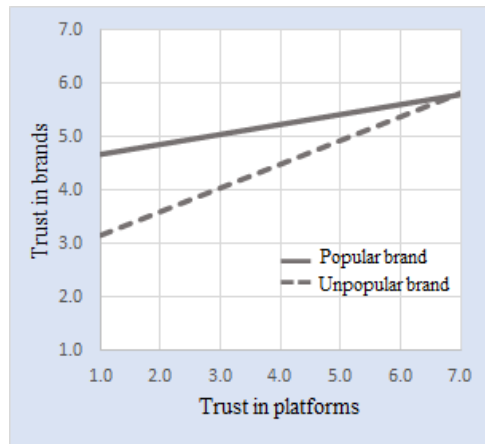


Figure 4: Interacting Effect between Trust in Platforms and Brand Popularity on Trust in Brands

6. Discussion

This study responds to the need for theoretical insights into how to reduce consumers' perceived risk in cross-border social commerce. Taking a trust-risk perspective as a framework, we propose a model to overcome this barrier by generating sources of consumer trust in brands. Specifically, we have four key findings as outlined below.

Our findings show that the trust transfer occurs in CBSC by inter-channel and intra-channel processes; that is, trust transfers directly from offline friends to brands and indirectly from offline friends to platforms and from platforms to brands. This finding supports Shi and Chow's (2015) argument that trust can be built with two approaches: identification-based and information-based. A consumer trusts a source (e.g., an offline friend, a platform) probably because they have identified those trustworthy. On the other hand, a consumer trusts a source because the information received from those sources is convincing. Our results align with Xiao et al.'s (2018) study, which concluded that

trust could be transferred within the same channel and across different channels. However, previous studies considered the trust transfer process is two-way (online-to-online and online-to-offline), while this study trust transfer process is three-way (offline-to-online, online-to-offline, and offline-to-offline).

We found a phenomenon that trust transfer from friend to friend (F2F) occurs in CBSC. This finding aligns with a study in the social commerce context by Chen and Shen (2015), which claimed that trust in social commerce members leads to trust in the social commerce community. Unlike prior study which focuses on F2F trust transfer in an online channel, our findings explore F2F trust transfer in an offline channel where they are real friends and know each other rather than virtual friends in social media. In such friendships, the quality of the relationship between friends is more robust, thus the effect of F2F trust transfer will be stronger. For example, when individuals want to buy a product of an unfamiliar brand, they are likely to seek opinions from others. If the opinions come from their virtual friends on social media, they may not fully believe it. But, if the opinions come from their physical friends, they may more believe and follow what their friends do, even though they live in different countries.

It was found that trust in platforms is negatively associated with perceived product risk. It means that when buyers believe that the platform is secure to make a transaction, it can help to alleviate the sense of risk. This happens because trust reduces the uncertainty which underlies risk assessments (Nicolaou and McKnight, 2006). If consumers believe that a platform is competent and reliable, they may feel free to buy on it. We also found that trust in brands is negatively associated with perceived product risk. This finding suggests that when buyers consider a brand trustworthy, the perceived uncertainty of using the brand will be reduced. If buyers believe that a brand will perform as expected, it can be an assurance to reduce risk perceptions (Kim, 2008). Given that the trust transfer occurs from offline friends to platforms and brands, and trust in platforms and trust in brands reduce perceived product risk, we believe that the trust transfer process can be utilized to overcome consumers' perceived risk in a CBSC business model.

Inconsistent with our hypothesis, the contingent effect of brand popularity on the link between trust in offline friends and trust in brand is not significant. It means that the level of trust between offline friends and brand will not change whether the brand is popular or not popular. Moreover, the impact of trust transferred from a platform was stronger when the brand was less popular. It indicates that when the brand is not so famous, consumers are more likely to follow what their friends suggest to make a purchase decision. However, when the brand is famous, they are less likely to seek others' opinions because popular brands tend to be more trustworthy (Kim and Min, 2014; Whang et al., 2015).

Unexpectedly, the contingent effect of platform popularity on the link between trust in offline friends and trust in platforms is significant, but the path coefficient is positive. This indicates that trust in offline friends has a stronger impact on trust in platforms when the platforms are popular. In other words, an endorsement from a friend makes the popular platforms more trustworthy. Furthermore, the contingent effect of platform popularity on the link between trust in platforms and trust in brand is not significant. One possible reason is that people tend to choose the most trustworthy and reliable platform for making a transaction; thus, they do not pay attention to how popular the platform is.

6.1. Implication and Future Research

6.1.1. Theoretical Implications

This study advances trust transfer theory from online service to social commerce and introduces the new business model, cross-border social commerce (CBSC). Social commerce is a complex environment where consumers interact with platforms, friends/consumers, and products. Therefore, trust plays an important role in determining the quality of the products and thus in motivating consumers' purchase intention (Zhang et al., 2018). Based on trust-risk perspective and trust transfer theory, we examine the effect of trust transfer among offline friends, brands, and platforms and their effects on perceived risk and purchase intention in the context of CBSC. This paper contributes to the literature in the following ways.

First, we introduce cross-border social commerce (CBSC), an emerging business model in ASEAN. In traditional social commerce, consumers might abandon their shopping journey when they experience friction and inconveniences, including unclear return/exchange policy and poor customer service. Moreover, consumers are less likely to trust social commerce with risks or scams; they may lose their money, receive an unsatisfactory product, etc., as they purchase goods from unfamiliar retailers. CBSC offers an effective approach for manufacturers or sellers working with immigrants, migrant workers, and international students' social networks to sell products in a target market. Hence, building trust through trust transfer from friends holds promise for the development of social commerce. Our study identifies a potential emerging research stream in specific social commerce.

Second, this study enriches the social commerce literature by highlighting offline friends as a main source of trust in the CBSC context. Studies on trust transfer in social commerce contexts have mainly focused on virtual friends-to-friends such as word of mouth, referral, or community members (Chen et al., 2015; Hong et al., 2017; Kim and Park, 2013; See-To and Ho, 2016; Wang et al., 2013). Our results show that consumers' trust in a foreign brand is positively

related to trust in offline friends and trust in platforms. This indicates that trust in offline friends serves as a bridge between consumers and foreign brand because it enhances consumers' subjective belief in brand and triggers purchase intention. Unlike prior studies focusing on examining the effects of trust in online community members (Chen et al., 2009; Cheng et al., 2019), our study is one of the first to examine trust in offline friends in CBSC. Moreover, when consumers want to purchase products of a foreign brand, they might check the detailed information of the products (e.g., technical specifications, features, quality, or prices) on a trusted platform. This finding confirms the established trust transfer theory, indicating that trust can effectively be transferred through communication and cognitive processes (Stewart, 2003). The communication process of trust transfer occurs when communication with a trusted source can influence the trustor directly, whereas the cognitive process occurs when trust transfer is due to customers' knowledge of the target and trusted source association (Liu et al., 2018).

Third, our research findings point out that consumers' trust can be transferred in two different ways: intra-channel and inter-channel. It implies that a consumer's evaluation of a foreign brand is based on offline friend suggestions and platform reputation. Subsequently, consumers evaluate brands of the products and the platform to reduce product risks and further determine their purchase intentions. Consumers evaluate brands of the products and the platform in order to reduce product risks, and further determine their purchase intentions. Social commerce-related research has verified that trust can be transferred between the targets of trust on inter- and intra-channel (Cheng et al., 2019; Farvivar et al., 2017; Sharma et al., 2017). However, prior studies focus on either intra-channel trust transfer (Cheng et al., 2019) or inter-channel trust transfer (Sharma et al., 2019); few studies have addressed both types of trust transfer at the same time. From this perspective, we fill this gap by examining both the intra-channel and inter-channel trust transfer among different targets of trust.

Lastly, we explored whether the transfer of trust is contingent on other factors because limited studies have been conducted to explore in what conditions trust transfer occurs. We successfully demonstrate that the transferring effect from trust in platforms to trust in brands is stronger when a brand is less popular. When a brand is not popular and or known by potential buyers, whether the products are sold on a famous platform is a critical consideration. Individuals sense a higher risk under this context and trust that the platform can offset such concerns. However, when a brand is popular, perceived risk is relatively low already, and the effect of the platform is minor.

6.1.2. Practical Implications

This study provides several practical implications. First, this study provides an in-depth understanding of the trust transfer process for marketing managers. We determined that consumers' trust can be transferred from friends to brands either directly or indirectly through the platform. Managers, therefore, should more effectively harness the social relationships of immigrants with their home countries when they intend to expand into global markets. For example, to target the Indonesian market, Taiwan exporters can approach students, temporary workers, or new immigrants who can share experiences and information about Taiwanese brands with their friends or families in Indonesia through social networking or community discussions. The trust that Indonesian buyers have in their friends in Taiwan eases uncertainty and perceptions of potential risks. We suggest using an intensive approach to target prospective consumers through social media and promote brands in popular marketplaces to gain consumers' trust in global market products. The relationship between product brands and customers can be strongly enhanced using social media platforms such as Twitter, Facebook, Line, WhatsApp, WeChat, and Instagram. Marketers should have a high-quality and reliable platform to provide a trusted source of information.

Second, we also observed that trust transfer was contingent on the popularity of a brand and platform. This implies that managers should pay more attention to brands that are not popular with potential buyers. While attempting to sell unpopular brands, retailers should sell the products on a popular platform. Selling the products on a popular platform might cost more than a less popular one, but this can effectively ease possible concerns and reduce perceived risks. However, if the product is sufficiently known among a target market, it may be appropriate to use social networks to target new immigrants and then complete transactions on a cheaper but relatively less popular platform to save costs.

6.2. Limitations and Future Research

This study has several limitations that create avenues for future research. First, data was collected in Indonesia. Future research can extend our conceptual model to other ASEAN countries. Second, we used a mobile phone as a sample product to assess the measurement items. Even though about 20% of mobile phones are sold through online channels, future research can use inexpensive products such as fashion and beauty products to reexamine these specific relationships. Third, R^2 was 30% when consumers' perceived product risk was used to predict intention to purchase. Even though the R^2 in our model is similar to related studies (Hajli, 2015; Hsu et al., 2015; Kim et al., 2008; Lu et al., 2010), apparently this result also implies that some important antecedents of purchase intention are not included in our model. Future research is encouraged to have more variables and verify our results. Finally, the proposed moderating effects of brand popularity and platform popularity are not fully supported in this study. Thus, future

studies could generate valuable insights into the conditions under which factors could moderate the trust transfer among different parties.

REFERENCES

- Armstrong, J., & Overton T. (1997). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14(3), 396-402.
- Barclay, D., Higgins T., & Thompson, R. (1995). The partial least square (PLS) approach to causal modeling, personal computer adoption and use as an illustration. *Technology Studies*, 12(2), 285-309.
- Becerra, E. P., & Korgaonkar P. K. (2011). Effects of trust belief on consumers' online intention. *European Journal Marketing*, 45(6), 936-962.
- Bhatnagar, A., & Ghose S. (2004). Segmenting consumers based on the benefits and risks of internet shopping. *Journal of Business Research*, 57(12), 1352-1360.
- Bhatnagar, A., & Misra, S. (2000). On risk, convenience, and internet shopping behavior. *Communication of the ACM*, 43(11), 98-105.
- Buttner, O., & Goritz, A. S. (2008). Perceived trustworthiness of online shops. *Journal of Consumer Behavior*, 7(1), 35-50.
- Chang, H. H., Wong, K. H., & Ho, P. W. (2019). The determinants of trust transfer on mobile shopping decision: Flow experience as a moderator. *Journal of Mobile Communications*, 17(2), 213-248.
- Chaudhuri A. (2002). How brand reputation affects the advertising-brand equity link. *Journal of Advertising Research*, 42(3), 33-43.
- Chaudhuri, A., & Holbrook M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, 65(2), 81-93.
- Chen, X., Huang, Q., Davison, R. M., & Hua Z. (2015). What drives trust transfer? The moderating roles of seller-specific and general institutional mechanisms. *International Journal of Electronic Commerce*, 20(2), 261-289.
- Chen, J., & Shen, X. L. (2015) Consumers' decisions in social commerce context: An empirical investigation. *Decision Support System*, 79(November), 55-64.
- Chen, L., & Wang, R. (2016). Trust development and transfer from electronic commerce to social commerce: An empirical investigation. *American Journal of Industrial and Business Management*, 6(5), 568-576.
- Chen, J., Zhang, C., & Xu Y. (2009). The role of mutual trust in building members' loyalty to a C2C platform provider. *International Journal of Electronic Commerce*, 14(1), 147-171.
- Cheng, X., Yu. G., & Jia, S. (2019). An integrated view of particularized trust in social commerce: An empirical investigation. *International Journal of Information Management*, 45(April), 1-12.
- Cillessen, A. H., & Marks, P. E. (2011). *Conceptualizing and measuring popularity*. The Guilford Press.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G.A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295-336). Lawrence Erlbaum Associates.
- Cho, J., & Roy, S. (2004, May). Impact of search engines on page popularity. In *Proceedings of the 13th Conference World Wide Web - WWW '04*.
- Chu, X., Liu, Y., Chen, X., & Ling, H. (2020). Whose and what content matters? Consumers' liking behavior toward advertisements in microblogs. *Journal of Electronic Commerce Research*, 21(4), 252-276.
- Chu, K. K., Shen, T. C., & Hsia, Y. T. (2004, October). Measuring website popularity and raising designers' effort. In *Proceedings of IEEE Internital Conference System, Man, and Cybernetics*.
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences (2nd ed.)*. Academic Press.
- Counterpoint Channel Tracker (2021), *Online channels grab record 20% of indonesia smartphone sales in Q4 2020*, Retrieved from <https://www.counterpointresearch.com/online-channels-indonesia-smartphone-sales-q4-2020>.
- Cui, Y., Mou, J., Cohen, J., & Liu, Y. (2019). Understanding information system success model and valence framework in sellers' acceptance. *Electronic Commerce Research*, 19(4), 885-914.
- Dai, B., Forsythe, S., & Kown, W. S. (2014). The impact of online shopping experience on risk perceptions and online purchase intentions. *Journal of Electronic Commerce Research*, 15(1), 13-24.
- Dean, D. (1999). Brand endorsement, popularity, and event sponsorship as advertising cues affecting consumer pre-purchase attitudes. *Journal of Advertising*, 28(3), 1-12.
- Delgado-Ballester, E., Espallardo, M. H., & Hernández-Espallardo, M. (2008). Building online brands through brand alliances in internet. *European Journal of Marketing*, 42(9), 954-976.
- Delgado-Márquez, B. L., Hurtado-Torres, N. E., & Aragón-Correa, J. A. (2012). The dynamic nature of trust transfer: Measurement and the influence of reciprocity. *Decision Support System*, 54(1), 226-234.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2008). *Internet, phone, mail, and mixed-mode survey: The tailored design method*, John Wiley & Sons.

- Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61(2), 35-51.
- Dowling, G. R., & Staelin, R. (2007). A model of perceived risk and intended risk-handling activity. *Journal of Consumer Research*, 21(1), 119-134.
- Elliott, R., & Yannopoulou, N. (2007). The nature of trust in brands: A psychosocial model. *European Journal of Marketing*, 41(9), 988-998.
- Farivar, S., Turel, O., & Yuan, Y. (2017). A trust-risk perspective on social commerce use: An examination of the biasing role of habit. *Internet Research*, 27(3), 586-607.
- Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human-Computer Studies*, 59(4), 451-474.
- Featherman, M. S., & Wells, J. D. (2010). The intangibility of e-services: Effects on perceived risk and acceptance. *ACM SIGMIS Database: the DATABASE for Advances in Information System*, 41(2), 110-131.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Forsythe, S., Liu, C., Shannon, D., & Gardner, L. C. (2006). Development of a scale to measure the perceived benefits and risks of online shopping. *Journal of Interactive Marketing*, 20(2), 55-75.
- Gallaughar, J. M. (2002). E-commerce and the undulating distribution channel. *Communications of the ACM*, 45(7), 89-95.
- Gefen, D., Karahana, E., & Straub, D. W. (2003). Trust and tam in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51-90.
- Goldbach, T., & Benlian, A. (2015, March). How informal control modes affect developers' trust in a platform vendor and platform stickiness. In *Proceedings of the 12th International Conference on Wirtschaftsinformatik* (pp.1328-1342).
- Gonçalves, M. A., Almeida, J. M., dos Santos, L. G. P., Laender, A. H. F., & Almeida V. (2010). On popularity in the blogosphere. *IEEE Internet Computing*, 14(3), 42-49.
- Grewal, D., Gotlieb, J., & Marmorstein, H. (1994). The moderating effects of message framing and source credibility on the price-perceived risk relationship. *Journal of Consumer Research*, 21(1), 145-160.
- Grover, V., & Teng, J. T. C. (2001). E-commerce and the information market. *Communication of the ACM*, 44(4), 79-86.
- Guo, Y., Bao, Y., Stuart, B. J., & Le-Nguyen, K. (2018). To sell or not to sell: Exploring sellers' trust and risk of chargeback fraud in cross-border electronic commerce. *Information Systems Journal*, 28(2), 359-383.
- Habibi, R. M., Laroche, M., & Richard, M. O. (2014). The roles of brand community and community engagement in building brand trust on social media. *Computers in Human Behavior*, 37(August), 152-161.
- Hajli, M. (2012). An integrated model for e-commerce adoption at the customer level with the impact of social commerce. *International Journal of Information Science and Management*, 16(Special Issue), 77-97.
- Hajli, N. (2015). Social commerce constructs and consumer's intention to buy. *International Journal of Information Management*, 35(2), 183-191.
- Han, J. H., & Kim, H. M. (2019). The role of information technology use for increasing consumer informedness in cross-border electronic commerce: An empirical study. *Electronic Commerce Research and Applications*, 34(1), 1-16.
- Hair, J., Ringle, C., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice* 19(2), 139-152.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis*. Pearson.
- Hegner, S. M., & Jevons, C. (2016). Brand trust: A cross-national validation in Germany, India, and South Africa. *Journal of Product Brand Management*, 25(1), 58-68.
- Henseler, J., Ringle, C. M. & Sarstedt, M. (2014). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-35.
- Hong, I. B., & Cha, H. S. (2013). The mediating role of consumer trust in an online merchant in predicting purchase intention. *International Journal of Information Management*, 33(6), 927-939.
- Hoang, T. B. N., & Mothe, J. (2018). Predicting information diffusion on twitter: Analysis of predictive features. *Journal Computer Science*, 28(September), 257-264 .
- Hong, Y., Pavlou, P. A., Shi, N., & Wang, K. (2017). On the role of fairness and social distance in designing effective social referral systems. *MIS Quarterly*, 41(3), 787-809.
- Hsiao, K. L., Lin, J. C. C., Wang, X. Y., Lu, H. P., & Yu, H. (2010). Antecedents and consequences of trust in online product recommendations an empirical study in social shopping. *Online Information Review*, 34(6), 935-953.

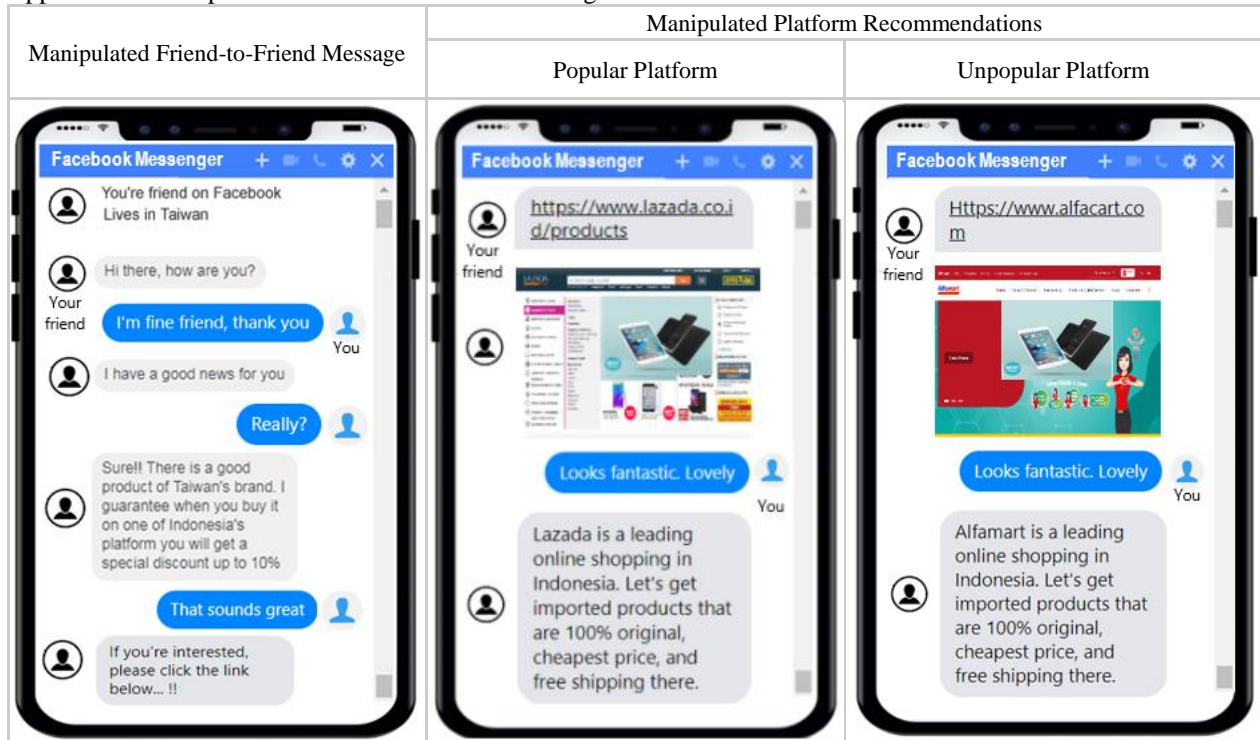
- Hsu, M. H., Chang, C. M., & Chuang, L. W. (2015). Understanding the determinants of online repeat purchase intention and moderating role of habit: The case of online group-buying in Taiwan. *International Journal of Information Management*, 35(1), 45-56.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Huang L. (2015). Trust in product review blogs: The influence of self-disclosure and popularity. *Behaviour & Information Technology*, 34(1), 33-44.
- Huang, S. L., & Chang, Y. C. (2019). Cross-border e-commerce: Consumers' intention to shop on foreign websites. *Internet Research*, 29(6), 1256-1279.
- Iprice Insight (2019). *The map of e-commerce in Indonesia (Data per Third Quarter 2019)*. Retrived from <https://iprice.co.id/insights/mapofecommerce/en>.
- Jarvenpaa, S. L., Tractinsky, N., & Michael V. (2000). Consumer trust in an internet store. *Information Technology Management*, 1(1), 45-71.
- Kim, K. C., & Chung, J. Y. (1997). Brand popularity, country image, and market share: An empirical study. *Journal of International Business Studies*, 28(2), 361-386.
- Kim, D., Rao, R., & Cho, B. (2000, December). Effects of consumer lifestyles on purchasing behavior on the internet: A conceptual framework and empirical validation. In *Proceedings of the 21st International Conference on Information Systems*.
- Kim, K. K., & Prabhakar, B. (2004). Initial trust and the adoption of b2c e-commerce: The case of internet banking. *ACM SIGMIS Database: the DATABASE for Advances in Information System*, 35(2), 50-64.
- Kim, J. D., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. *Decision Support Systems*, 44(2), 544-564.
- Kim, S., & Park, H. (2013). Effects of various characteristics of social commerce (s-commerce) on consumers' trust and trust performance. *International Journal of Information Management*, 33(2), 318-332.
- Kim, J. H., & Min, D. (2014). The effects of brand popularity as an advertising cue on perceived quality in the context of internet shopping. *Japanese Psychological Research*, 56(4), 309-319.
- Kim, T. Y., Dekker, R., & Heij, C. (2017). Cross-border electronic commerce: Distance effects and express delivery in european union markets. *International Journal of Electronic Commerce*, 21(2), 184-218.
- Kim, M.-Y., Moon, S. & Iacobucci, D. (2019). The influence of global brand distribution on brand popularity on social media. *Journal of International Marketing*, 27(4), 22-38.
- Kuan, H., & Bock, G. (2007). Trust transference in brick and click retailers: An investigation of the before-online-visit phase. *Information and Management*, 44(2), 175-187.
- Laroche, M., Habibi, M. R., Richard, M. O., & Sankaranarayanan, R. (2012). The effects of social media-based brand communities on brand community markers, value creation practices, brand trust and brand loyalty. *Computers in Human Behavior*, 28(5), 1755-1767.
- Lee K. C., Kang, I., & McKnight, H. (2007). Transfer from offline trust to key online perceptions: An empirical study. *IEEE Transaction Engineering Management*, 54(4), 729-741.
- Lee, D., Park, J., & Ahn, J. (2001, December). On the explanation of factors affecting e-commerce adoption. In *Proceedings of the 22nd International Conference on Information Systems*.
- Lau, G. T., & Lee, S. H. (1999). Consumers' trust in brands and the link to brand loyalty. *Journal of Marketing Management*, 4(4), 341-370.
- Liebowitz, S., & Margolis, S. (1994). Network externality: An uncommon tragedy. *Journal of Economic Perspectives*, 8(2), 133-150.
- Lim, N. (2003). Consumers' perceived risk: Sources versus consequences. *Electronic Commerce Research and Application*, 2(3), 216-228.
- Lin. K. Y., & Lu. H.-P. (2011). Why people use social networking sites: An empirical study integrating network externalities and motivation theory. *Human Behavior*, 27(3), 1152-1161.
- Lin, J., Lu, Y., Wan, B., & Wei, K. K. (2011). The role of inter-channel trust transfer in establishing mobile commerce trust. *Electronic Commerce Research and Applications*, 10(6), 615-625.
- Lin, J., Eldon, Y. L., & Lee, S.-Y. (2018). Dysfunctional customer behavior in cross-border e-commerce: A justice-affect-behavior model. *Journal of Electronic Commerce Research*, 19(1), 36-54.
- Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86(1), 114-121.
- Liu, L., Matthew, K. O. L., Liu, R., & Chen, J. (2018). Trust transfer in social media brand communities: The role of consumer engagement. *International Journal of Information Management*, 41(28), 1-13.

- Lu, Y., Yang, S., Chau, P. Y. K., & Cao, Y. (2011). Dynamics between the trust transfer process and intention to use mobile payment services: A cross-environment perspective. *Information and Management*, 48(8), 393-403.
- Lu, Y., Zhao, L., & Wang, B. (2010). From virtual community members to c2c e-commerce buyers: Trust in virtual communities and its effect on consumers' purchase intention. *Electronic Commerce Research and Applications*, 9(4), 346-360.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20(3), 709-734.
- McKnight, H. D., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, 13(3), 334-361.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20-38.
- Mou, J., Zhu, W., & Benyoucef, M. (2020). Impact of product description and involvement on purchase intention in cross-border e-commerce. *Industrial Management and Data Systems*, 120(3), 567-586.
- Nel, J., & Boshoff, C. (2017). Development of application-based mobile-service trust and online trust transfer: An elaboration likelihood model perspective. *Behaviour and Information Technology*, 36(8), 809-826.
- Nicolaou, A. I. & McKnight, D. H. (2006). Perceived information quality in data exchanges: Effects on risk, trust, and intention to use. *Information Systems Research*, 17(4), 332-351.
- Nidumolu, S. (1995). The effect of coordination and uncertainty on software project performance: Residual performance risk as an intervening variable. *Information System Research*, 6(3), 191-219.
- Pavlou, P. A., & Gefen, D. (2004). Building effective online marketplaces with institution-based trust. *Information System Research*, 15(1), 37-59.
- Peter, J. P., & Ryan, M. J. (1976). An investigation of perceived risk at the brand level. *Journal of Marketing Research*, 13(2), 184-188.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y. & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Ratkiewicz J, Flammini, A., Menczer, F. (2010, August). Traffic in social media I: Paths through information networks. In *Proceedings of International Conference on Social Computing*.
- SCIRLO (2020), *Navigating Indonesia's e-commerce: covid-19 impact and the rise of social commerce*, Retrived from <https://Navigating-Indonesia-s-E-Commerce-COVID-19-Impact-and-The-Rise-of-Social-Commerce-SIRCLOXRavenry.pdf>.
- Scherer, F. M., & Ross, D. (1990). *Industrial market structure and economic performance (3rd ed.)*. Houghton Mifflin.
- See-To, W. K. E., & Ho, K. W. K. (2016). A study on the impact of design attributes on e-payment service utility. *Information and Management*, 53(5), 668-681.
- Sharma, S., Menard, P., & Mutchler, L. (2017). Who to trust? Applying trust to social commerce, *Journal of Computer Information Systems*, 59(1), 32-42.
- Shi, S. & Chow, W. S. (2015). Trust development and transfer in social commerce: Prior experience as a moderator. *Industrial Management dan Data System*, 115(7), 1182-1203.
- Statista (2019). *Most popular smartphone brands to browse the internet in Indonesia as of April 2019*, Retrived from <https://www.statista.com/statistics/1038166/indonesia-smartphone-brands-for-internet-access/>.
- Stewart, J. K. (1999, December). Transference as a means of building trust in world wide web sites. In *Proceedings of the 20th the International Conference on Information Systems*.
- Stewart, J. K. (2003). Trust transfer on the world wide web. *Organization Science*, 14(1), 5-17.
- Swani K., & Milne, G. R. (2017). Evaluating Facebook brand content popularity for service versus goods offerings. *Journal of Business Research*, 79(October), 123-133.
- Tang, Z., Zhou, Z., Xu, F., & Warkentin, M. (2021). Apps within apps: Predicting government wechat mini-program adoption from trust–risk perspective and innovation diffusion theory. *Information Technology and People*.
- Taylor, J. W. (1974). The role of risk in consumer behavior. *Journal of Marketing*, 38(2), 54-60.
- Wang, N., Shen, X. L., & Sun, Y. (2013). Transition of electronic word-of-mouth services from web to mobile context: A trust transfer perspective. *Decision Support Systems*, 54(3), 1394-1403.
- Wang, C., & Zhang, P. (2012). The evolution of social commerce: The people, management, technology, and information dimensions. *Communications of the Association for Information Systems*, 31(5), 105-127.
- World Trade Organization (WTO) (2020), *E-commerce, trade, and the COVID-19 pandemic*. Retrieved from https://www.wto.org/english/tratop_e/covid19_e/ecommerce_report_e.pdf.
- Wu, J. J., & Tsang, A. S. L. (2019). Factors affecting members' trust belief and behaviour intention in virtual communities. *Behaviour and Information Technology*, 27(2), 115-125.

- Wu, B., & Shen, H. (2015). Analyzing and predicting news popularity on Twitter. *International Journal of Information Management*, 35(6), 702-711.
- Xiao, L., Fu, B., & Liu, W. (2018). Understanding consumer repurchase intention on O2O platforms: An integrated model of network externalities and trust transfer theory. *Service Business*, 12, 731-756.
- Xiao, L., Zhang, Y., & Fu, B. (2019). Exploring the moderators and causal process of trust transfer in online-to-offline commerce. *Journal of Business Research*, 98(May), 214-226.
- Yang, S., Chen, Y., & Wei, J. (2015). Understanding consumers' web-mobile shopping extension behavior: A trust transfer perspective. *Journal of Computer Information Systems*, 55(2), 78-87.
- Zhao, J.-D., Huang, J.-S., & Su, S. (2019). The effects of trust on consumers' continuous purchase intentions in C2C social commerce: A trust transfer perspective. *Journal of Retailing and Consumer Service*, 50(September), 42-49.
- Zhang, K. Z., Benyoucef, M., & Zhao, S. J. (2016). Building brand loyalty in social commerce: The case of brand microblogs. *Electronic Commerce Research and Application*, 15(January-February), 14-25.
- Zhu, W., Mou, J., & Benyoucef, M. (2019). Exploring purchase intention in cross-border e-commerce: A three stage model. *Journal of Retailing and Consumer Services*, 51(2), 320-330.

APPENDIX

Appendix A: Manipulation of Friend-to-Friend Message and Platform Recommendation



Appendix B: Manipulation of Brand Recommendation

