Role of B2B Reliance and Brand Image in Reducing Risk Perceptions: A Serial Mediation Model

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ABSTRACT

Purpose- The study explores the role of reliance and brand image (goods-based and service-based) in risk perceptions related to B2B purchases. In particular, time risk, performance risk, and financial risk has been explored in this paper.

Design/Methodology- A questionnaire-based survey data has been collected from 152 respondents from different industries and the model was validated using PLS-SEM.

Findings- The study highlights the importance of reliance and brand image for reducing the effects of perceived risk. While reliance is negatively related to all the risk dimensions, the relationship between reliance and financial risk is serially mediated by SBBI and time risk. The same is also mediated by performance risk. Further, performance risk and time risk are positively related to financial risk.

Research Implications- The findings of this study highlight the importance of reliance and brand image for reducing the effects of risk dimensions. Reliance plays an important role in reducing all risk perceptions. Findings also highlight the importance of SBBI in reducing time risk.

Practical Implications- Our findings provide managers with key insights for reducing risk perceptions by creating a strong reliance and B2B brand image leading to long-term relationship strategies.

Originality/Value- This is one of the few papers in B2B marketing, which focuses on the importance of reliance and brand image in reducing the effects of perceived risk.

Keywords- Reliance, Brand Image, Time risk, Financial risk, Performance risk

Paper Type- Research Paper

1. INTRODUCTION

Risk perception is considered to be a major factor in influencing customers' decision-making and purchase behavior (Johnston and Lewin, 1995; Han *et al*., 2019). Uncertainty arising from possible negative consequences of using a product or service creates anticipation of loss, resulting in perceived risk (Featherman *et al*., 2006). Because B2B purchases are voluminous both in business and monetary terms, the risk is integrated into it. Hence, understanding the risk perceptions and their minimization becomes very important in the organizational buying process.

The extant literature provides many pieces of evidence that indicate the wide acceptance of risk perception in business-to-customer (B2C) contexts, mostly because of the individual customers' involvement in a particular purchase (Mitchell, 1999; Arrifin *et al*., 2018; Wang *et al*., 2019). Such risk perceptions majorly influence decision makings and outcomes (Gu *et al*., 2021), satisfaction (Agarwal and Teas, 2004; Wu *et al*., 2020), value perceptions (Snoj *et al*., 2004; Chen *et al*., 2005), and customer relationships (Brown *et al*., 2011).

However, the literature on buying decision makers' risk perceptions in an organizational or business-to-business (B2B) context is still at the nascent stage. Most of the available studies in extant literature consider perceived risk as a unidimensional construct (Hsieh *et al*., 2010; Brown *et al*., 2011; Gao *et al*., 2012; Mcknight *et al*., 2017) and explore context-specific risk perceptions such as e-commerce (De Matos and Krielow, 2019), SaaS (Benlian and Hess, 2011), internet shopping (Park and Kim, 2007), IoT (Jayshankar *et al*., 2018), internet banking (Namahoot and Laohavichien, 2018) and sharing economy (Gu *et al*., 2021). However, the purchase decision-makers may perceive a variety of potential losses based on varying degrees of insecurity (Zsidisin, 2003). Hence, multiple dimensions of perceived risks must be explored.

To date, research on the influence of relationship drivers on various dimensions of perceived risk, such as financial risk, time risk, performance risk, physical risk, social risk, and psychological risk (Kaplan *et al*., 1974), is still unexplored. In this study, we have focused on performance risk (PR), time risk (TR), and financial risk (FR), as the above three dimensions are more generalizable and applicable to B2B purchase decisions. The risk perception regarding monetary losses (i.e., FR), product performance concerns (i.e., PR), and timely delivery and response concerns (i.e., TR) can be applied to all B2B transactions. Whereas the perception of physical, social, and psychological risk can be applicable only in specific contexts and are more applicable to B2C than

B2B. Moreover, in the post-COVID age, where many B2B purchases have shifted from offline to online channels, risks related to online transactions, delivery time, and no physical accessibility of the vendors make FR, TR, and PR more important (SAP News, 2022). In this article, we shed light on how relational and imagery variables can minimize B2B buying decision-makers risk perceptions regarding potential monetary losses, product performance worries, and timely delivery and response concerns in overall buyer-supplier relationships.

Extant literature suggests that a strong buyer-supplier relationship can help reduce the perceived risk of a customer because it results in shared decision-making and problem-solving (Brown *et al*., 2011). One such relational variable that can reduce risk is the reliance of a buyer on the seller. The reliance on a supplier is defined as "*positive expectations held by organization members that its exchange partner will fulfill the focal organization's specific needs given its proven capability*" (Jiang *et al*., 2013, p. 197). It is considered one of the key drivers of sustainable buyer-supplier relationships (Mouzas *et al*., 2007; Kittur *et al*., 2022). Reliance also helps create a strong image of products and services (Kittur *et al*., 2022). While reliance based on proven product performance and quality is well-known, evidence from SERVQUAL logic also advocates that reliance is a capability to deliver the promised service with accuracy (Gunawardane, 2011; Hess *et al*., 2014). Hence, reliance plays a significant role in both product-specific and service-specific industries (Kittur *et al*., 2022). It leads to some important questions: Does reliance on a supplier similarly reduce B2B customers' risk perception about the products/ services? Moreover, does reliance on a supplier similarly reduce time-related perceptions and risk perceptions regarding monetary losses? It is interesting to explore how reliance and various risk perceptions are interrelated, which is still embryonic in extant literature. The current study fills this gap.

Not only relational variables, but imagery variables can also reduce risk perceptions. For instance, extant B2C branding literature also emphasizes the importance of brand image in reducing perceived risk dimensions (Cox, 1967; Simonian *et al*., 2012; Mohseni *et al*., 2018). However, the same has yet to be explored in B2B contexts. Hence, it is interesting to explore the role of a supplier's brand image in reducing the various risk perceptions of a customer. Moreover, the brand image in the B2B context results from the firm's superior product performance and service performance (Kittur *et al*., 2022). Goods-based brand image (GBBI), defined as the brand image from product performance, and service-based brand image (SBBI), defined as the brand image from service performance, have been found to have differential effects on many B2B outcomes such as satisfaction and loyalty (Cassia *et al*., 2017; Kittur and Chatterjee, 2020). Therefore, understanding and juxtaposing the importance of brand image from both product and service perspectives is necessary while evaluating the perceived risk countermeasures. Based on the above discussion, in addition to the previously-mentioned research questions, we also try to answer the following: Does the GBBI and SBBI of a supplier reduce risk perceptions related to a buyer's time, performance, and monetary losses? How do the imagery variables, GBBI and SBBI, impact the relationship between the relational variable (reliance) and the risk variables (PR, TR, and FRs)? Extant literature lacks evidence for the same, and we fill this gap.

While rational and imagery variables can reduce the risk perceptions, the path they follow may sometimes overlap and sometimes be independent. For instance, while rational thinking can directly relate the quality signals with reduced risk, a rational thought process also can create an image in the mind of the customers (Meenaghan, 1985), which in turn can reduce risk perceptions. Moreover, different quality signals can have different types of imagery, reducing different types of risk (Richardson *et al*., 1994). The extant literature has not studied this serial effect of rationality-imagery-risk, especially in the B2B context. However, such a study is important as it will help managers understand the strategic paths they can follow to reduce the purchase risk of the customers, more so in uncertain times. Thus, our final research question is: Whether and how GBBI and SBBI, the imagery variables, and PR/TR, the risk variables, serially mediate the reliance-FR relationship? Extant literature lacks evidence for the same, and we fill this gap.

Using survey data of 152 B2B purchase decision-makers from different industries and PLS-SEM, we explore the importance of reliance and brand image in reducing perceived PR, TR, and FR. The paper contributes to the perceived risk and brand image literature and provides meaningful insights for the managers on reducing the customer's risk perceptions while buying from the supplier by exploring the serial mediation between reliance-SBBI-TR- FR. To the best of the author’s knowledge, this is the first study that has explored the serial mediation relationship between reliance, brand image, and perceived risk.

The paper's structure is as follows: first, we identify the research gap based on the analysis of existing evidence in the literature. Next, we draw the conceptual rationale for the hypothesis of the model. Then, we explain the procedure followed for data collection and discuss the results using PLS-SEM. We further explain the theoretical contributions and managerial implications and conclude this paper with limitations and future scope.

2. LITERATURE REVIEW

2.1. Perceived Risk in B2B Purchase Decision Making

Perceived risk is defined as "*a buyer's perception of uncertainty and adverse consequences of buying a product/service*" (Dowling and Staelin, 1994; Conchar *et al*., 2004). The definition mentioned above suggests that perceived risk is conceptualized based on two key elements: uncertainty and consequences. Perceived risk suggests the possibility of an undesirable outcome with unknown probabilities (Oehmen *et al*., 2020). Perceived risk has evolved as an important factor in purchase behavior in B2C (Dowling and Staelin, 1994; Mitchell, 1999; Weber *et al*., 2002).

However, the conceptualization of dimensions of risk perception in the B2B context is still at the evolutionary stage. To date, very few studies provide insights into B2B-specific risk perceptions (Mayer *et al*., 1995; Vaidyanathan and Devraj,2003; Paluch and Wunderlich, 2016). For example, Das and Teng (2001) divide the perceived risk into relational and PR and highlights the importance of trust and control in reducing relational and PR perceptions. A five-factor model for analyzing online risks in e-business explores the potential sources of online risks from new services, new business models, new processes, new technology, and new fulfillment (Vaidyanathan and Devraj, 2003). Sutton *et al*. (2008) explore the relationship between technology and business risks. Pelaez *et al*. (2019) conclude that perceived risk and intention to purchase are negatively related. De Matos and Krielow (2019) empirically prove that Perceived risk is mainly affected by a lack of knowledge and data security.

Few researchers explore the effects of perceived risk dimensions from B2B buyers' perspectives. For example, Mayer *et al*. (1995) advocate that sellers' behavior is the main reason behind the buyer's perceived risk, not the market context. Benlian and Hess (2011) explore the effects of performance, economic, strategic, security, and managerial risks on SaaS adoption in an organization, making it very context-specific. Few researchers investigate the influence of information quality, trust, and risk perceptions on the expected transaction performance of inter-organizational data exchanges (Nicolaou *et al*., 2013).

However, most studies consider B2B perceived risk as a unidimensional construct (Verhagen *et al*., 2006; Munnukka and Jarvi, 2015). The main reason for such absoluteness of a construct may be because of considering contractual buying as a benchmark. However, decision-makers may perceive different types of risks and uncertainties based on varying degrees of insecurity (Zsidisin, 2003). Hence, multiple dimensions of perceived risk should be considered in the B2B context. Moreover, B2B literature conceptualizes the buyer-seller relationship as a dyadic at organizational and individual levels (Wilson, 1995; Munnukka and Jarvi, 2015). Multiple studies highlight the importance of knowledge of an individual key decision-maker for influencing buying processes and their outcomes (Bougheas *et al*., 2013; Groysberg *et al*., 2011; La Placa and Da Silva, 2016; Hinterhuber and Liozu, 2015; Van Zeeland and Henseler, 2018). Hence, the concepts of B2C perceived risk dimensions can also be implemented in the B2B context as well (Munukka and Jarvi, 2015).

Extant literature characterizes perceived risk in six key dimensions, namely: 'Physical', 'Financial', 'Performance', 'Psychological', 'Social' (Cunningham, 1967), and 'TR' (Kaplan *et al*., 1974; Stone and Gronhaug, 1993). While physical risk is related to the possibility of physical harm during buying (Aqueveque, 2006), FR is related to the perception of monetary losses (Jacoby and Kaplan, 1972; Paluch and Wunderlich, 2016). PR indicates concerns regarding the performance of a product (Stone and Gronhaug, 1993). Psychological risk indicates the negative effects of the perception of a self-image and the image perceived by superiors after participation in the buying process. Researchers explain that TR denotes the perception of loss of time during buying process because of follow-up from the supplier. Social risk highlights the perception of negative consequences from society because of the decision taken (Mortimer *et al*., 2020). Extant literature has not studied the mitigators and the inter-relationships of these various types of risks in the B2B context, keeping a gap in the literature that the current study fills in. While the perception of physical risk, social risk, and psychological risk can be applicable only in specific contexts and have higher suitability in B2C contexts instead of B2B contexts, PR, TR, and FR are more common in the B2B context. Therefore, we have chosen these three types of risk in our study.

Extant literature has not explored how relational and imagery aspects of a buyer-seller relationship can reduce the various dimensions of the B2B purchase risks. In this study, we fill this gap.

2.2. Reliance and Perceived Risk

As discussed above, understanding the variables that mitigate perceived risk is very important. One such variable can be the reliance of the buyer on the supplier. Reliance is different from the reliability sub-construct of SERVQUAL. According to the expectancy disconfirmation theory, the reliability subconstruct in service quality measures the difference between quality performance (reliability) expectations and performance (reliability) perceptions (Parasuraman *et al*., 1988). On the other hand, SERVPERF only measures performance (reliability) perceptions (Cronin and Taylor, 1994). However, in our study, we consider reliance to be the expectation of performance based on proven records. Therefore, reliance is the outcome of past quality and satisfaction.

Kittur *et al*. (2022) suggest reliance as one of the key drivers of sustainable buyer-supplier relationships. Reliance results in a sense of confidence and a reflection of the rational expectation of the buyer on the supplier in terms of achieving positive outcomes and fulfilling the organization's specific needs based on proven capability (Jiang *et al*., 2013; Kittur *et al*., 2022). Brown *et al*. (2011) suggest that the perceived risk reduces if the relationship between the buyer firm and supplier firm is strong. Reliance being an important relational variable, it is interesting to know whether reliance plays an important role in reducing risk perceptions. Moreover, it is important to understand whether reliance has a differential direct or indirect role in reducing various perceived risk dimensions such as TR, PR, and FR in the B2B purchase context. Extant literature does not shed any light on it and we fill this gap in the literature.

2.3. Branding and Perceived Risk

Branding literature specifies brand image as the perception of a brand created by marketers (Keller, 1993). Risk being an outcome of perceived uncertainty, understanding the effects of brand image on risk perceptions becomes an interesting and important area of study. However, to date, extant B2B literature does not provide concrete evidence of the effects of brand image on risk perceptions. B2B researchers define a firm's brand image through two dimensions: First, product-related brand image, i.e., goods-based brand image (GBBI), which is the quality, reliability, and performance of a supplier's product (Raddats and Easingwood, 2010). Second, brand image due to services, i.e., service-based brand image (SBBI), an image of a supplier, based on the quality of the services like timely delivery; product replacements, value co-creation, and prompt responses provided for a customer firm (Cassia *et al*., 2017; Kittur and Chatterjee, 2020; Michel *et al*., 2008). This paper evaluates the relationship between GBBI, SBBI, and various dimensions of perceived risk.

Table 1 compares the current paper's standing with extant literature focusing on perceived risk. In the next section, we develop a conceptual framework for reliance-perceived risk-brand image relationships.

<Table 1 Here>

3. HYPOTHESIS DEVELOPMENT

3.1. Relationship of reliance with the brand image

Extant literature defines brand image as "*a perception about a brand created by marketers*" (Keller, 1993, Page 3). Brand perception depends on multiple attributes that affect overall brand image differently (Kittur and Chatterjee, 2020). Extant literature in B2B marketing differentiates brand image as a product-oriented image created with superior product performance, i.e., GBBI, and a service-oriented image created with superior service performance, i.e., SBBI. The combined effect of GBBI and SBBI creates superior value perception in B2B customers' minds. While GBBI depends upon the supplier's tangibility, quality, reliability, and performance (Cassia *et al*., 2017; Kittur and Chatterjee, 2020; Kittur *et al*., 2022), SBBI is an image of a supplier's services that aids the value-creation for a customer (Vargo and Lusch, 2008; Kittur *et al*., 2022).

Reliance, on the other hand, is defined as "*positive expectations held by organization members that its exchange partner will fulfill the focal organization's specific needs given its proven capability*" (Jiang *et al*., 2011). For proven capability, the supplier needs to show the ability to fulfill the task, high competency in the market, and maintained performance (O'Cass and Ngo, 2012). Suppliers' proven capability may create the perception of quality and reliability and also help to improve the reputation (Berry, 2000). Hence, we expect that reliance has a positive relationship with GBBI.

However, in the case of intangible services, the expectations and outcomes are always uncertain and inconsistent. Hence, expectations of a specific need fulfillment fluctuate based on time-specific service demands. However, proven performance of services may create a positive perception of services and improve the supplier's reputation in customer's perception (Davis *et al*., 2008; Berry, 2000). Hence, reliance on a supplier represents a sense of certainty in intangible services (Kittur *et al*., 2022). As B2B purchases include heavy, voluminous transactions, suppliers prefer certainty and predictability, i.e., reliance. Hence, we expect the B2B buyers to perceive a strong SBBI based on proven high service quality, co-creation, and timely response (Kittur *et al*., 2022). Thus, we posit,

H1: The reliance of the B2B customer on its supplier will have a positive relationship with (a) GBBI and (b) SBBI

3.2. Relationship of reliance with time risk, performance risk, and financial risk

While discussing the effect of reliance on risk perceptions we bring in the concepts of risk relievers. The concept of risk-relievers was first introduced by Roselius (1971) who identified it as any activity conducted by the vendor or the customer that can reduce perceived risk. The more the perceived risk, the more is the requirement for any risk-reliever to ensure a successful purchase. As perceived risk is related to the uncertainty and consequence of an outcome (Bauer, 1960; Cunningham, 1967; Pelaez *et al*., 2019), risk relievers should either reduce the degree of uncertainty of the outcome or the degree of negative consequences, thus bringing the perceived risk to a "tolerable" level. Extant literature has suggested many seller-related risk relievers, such as endorsements, brand loyalty, brand image, store image, free sample, money-back guarantee, word-of-mouth, the advice of a salesperson, special offers, information on a package, consumer magazines, etc., and buyer-related risk relievers such as private testing, shopping, expensive model, purchasing a cheaper brand, etc. (Derbaix, 1983; Greatorex and Mitchell, 1994; Roselius, 1971; Cambefort and Roux, 2019). The majority of such risk-relievers are pre-purchase in nature. In this section, we discuss how vendor reliance can act as a risk reliever.

As discussed earlier, reliance depends on the proven capability of a supplier firm for specific need fulfillment. Truong (2019) suggests that the suppliers' lack of capability and reliability can lead to negative perceptions of the customers. Therefore, reliance and risk perceptions are interconnected. The proven capability of a supplier may signal higher product quality and performance of the offerings from a supplier. Therefore, it is expected that reliance on the supplier will be negatively related to the PR related to a B2B purchase. Hence, we posit:

H2a: B2B suppliers' reliance will have a negative relationship with performance risk

Service-dominant logic identifies all offerings to be in a continuum of product to service. Therefore, all offerings will also have some level of service components in them. Therefore, reliance may also be related to service quality expectations. According to the SERVQUAL model, reliance ensures the service provider can deliver the promised service accurately (Persuraman *et al*., 1988; Gunawardane, 2011). In the case of B2B service, service accuracy will be only possible when a supplier provides timely delivery, quick response, and co-creation whenever necessary. Hence, reliance on a supplier will signal that the purchase context will have lesser risks related to timely delivery, quick response, and co-creation. Therefore, we posit:

H2b: B2B suppliers' reliance will have a negative relationship with time risk

On the other hand, FR indicates the probability and extent of suffering from financial losses due to hidden costs, maintenance costs, or lack of warranty in case of faults (Cunningham, 1967; Chiu *et al*., 2014). FR is often perceived as a risk that buying from the supplier will lead to monetary losses even if the supplier's product quality and service quality are high. However, B2B customer firms mostly acquire goods and services for their use or resell them along with other products and services. Hence, if the customer firm's end product quality depends upon the supplier firm's product quality and reliability, then customers may think positively about the short-term cost considering the long-term profit. Similarly, B2B customer firms may also prefer the expensive but reliable products of a supplier during reselling with buyer's products to maintain the image and brand repute. So, we expect that reliance on a supplier based on proven product/service quality may negatively impact risk perception regarding the monetary losses, i.e., FR.

Thus, we posit:

H2c: B2B suppliers' reliance will have a negative relationship with financial risk.

3.3. Reliance, brand image, and risks

3.3.1. Relationship between reliance, brand image, and performance risk

While we propose reliance as a risk-reliever and brand image has been found to be a risk-reliever by extant literature (Derbaix, 1983; Greatorex and Mitchell, 1994; Cambefort and Roux, 2019), it is important to understand how the two risk-reliever, namely reliance and brand image, interplay to reduce risk. Extant literature has not focused on how one risk-reliever can impact the relationship between another risk-reliever and the risk perception relationship. The following discussion focuses on this aspect.

PR specifies the perception of uncertainty about the ability of a product to perform as anticipated (Stone and Gronhaug, 1993). Hence, PR highlights the customer's perception of the supplier's failure to deliver the order according to the buyer's specifications on quality and compliance (Munukka and Jarvi, 2015). As we discussed before, the buyer's performance-related risk concerns can be reduced based on the proven capability, which will create reliance for the supplier.

However, for the supplier, capabilities will be proven only when the supplier provides products of good quality and performance and quality services that will create value for the customer (Kittur and Chatterjee, 2020; Kittur *et al*., 2022). Hence, this proven outcome will strengthen both GBBI and SBBI, which will create a sense of confidence in the customer's mind. For example, the proven capabilities of the products will strengthen GBBI, which would reduce the negative perceptions of a customer regarding the performance of the particular product. Even if the customer does not have experience with a supplier's product, the customer's doubt about the product's performance may get reduced based on strong GBBI. Hence, we expect GBBI to mediate the relationship between reliance and PR.

On the other hand, SBBI is an outcome of co-creation and valuable services such as timely delivery, prompt responses, and good support provided to the customer (Kittur and Chatterjee, 2020). Even if the supplier provides the above-mentioned services adequately and effectively, the doubt and concerns regarding the quality, reliability, and performance of the product may remain as it is unless the customer firm selects or suggests the products specifically. Hence, we expect that the strong SBBI may not reduce a customer's performance-related risk perception because of product quality and performance doubts.

H3: B2B suppliers' GBBI will mediate the relationship between reliance and performance risk.

3.3.2. Relationship between reliance, brand image, and time risk

Munnukka and Jarvi (2015) link B2B customers' perception of a TR with the concern about timely delivery and response. For example, customers get concerned if too much time is consumed contacting and providing information to a supplier otherwise spent to fulfill other tasks. B2C researchers highlight that TR is a delay in the product/service delivery (Dai *et al*., 2014; Forsythe *et al*., 2006). TR also includes the time if the products/services of the supplier are not satisfactory and customers have to either return a product or ask for a replacement of a product or service (Ariff *et al*., 2014).

SBBI, on the other hand, is an outcome of value created by the supplier firm through services provided (Cassia *et al*., 2017). Based on reliable, proven services provided by the supplier will help create a strong SBBI. For example, a supplier's timely delivery can create value in service quality perception, prompt response, and benevolent nature (Kittur and Chatterjee, 2020). Also, service-dominant logic suggests that value for the customer can be generated via co-creation (Vargo and Lusch, 2008). Because both buyer and supplier firms are involved in a co-creation process, the importance of time significantly gets highlighted as both parties look for a possible solution that creates a stronger SBBI. This strong SBBI will represent the proven service quality and timely delivery and response. Hence customers' risk perception about the time may get reduced based on the strong service image of the supplier till the actual time delay exists. Because of such perception, the need for a proven timely response for particular buying may also be reduced. Thus, we expect SBBI to mediate the relationship between reliance and TR.

However, GBBI results from the product's quality, durability, and performance. Hence, even if the customer perceives the delay in delivery, the time constraints may not doubt a product's quality, durability, and performance. Hence, we expect the GBBI will not affect the TR perceptions.

H4: B2B suppliers' SBBI will mediate the relationship between reliance and time risk.

3.3.3. Relationship between reliance, brand image, and financial risk

Financial risks apprehend customers' fear of unexpected monetary loss (Munnukka and Jarvi, 2015). For example, customer perception that a supplier's products/services are too costly, or the follow-up cost would be very high if the problem occurs, resulting in FR. Hence, if the customer thinks that the price of a particular product/service is very high, the customer may incline to avoid the risk with increased skepticism (Campbell and Goodstein, 2001). However, many researchers suggest that brand awareness forms a strong brand image (Baumgarth and Schmidt, 2010; Zhang *et al.*,2015). So, a well-known brand with proven product/service capability can reduce the information cost of B2B customers and reduce the FR because of increased financial performance with the help of a credible brand (Anees-ur-Rehman *et al.*, 2018; Seyedghorban *et al.*, 2016). Hence, relying on the above argument, we expect that GBBI and SBBI will mediate the relationship between reliance and FR.

Thus, we posit:

H5a: B2B suppliers' GBBI will mediate the relationship between reliance and financial risk.

H5b: B2B suppliers' SBBI will mediate the relationship between reliance and financial risk.

3.4. Inter-relationships between time risk, performance risk, and financial risk

As discussed above, perceived TR gets escalated when the customer senses that too much time is spent contacting and providing information to the supplier during a purchase. However, we argue that perception of TR will not limit the causes mentioned above. However, it can also be escalated when the product/service takes a long time to perform as expected. Hence, we expect that risk perception about the time can create doubt about a supplier's credibility and the performance of products/services of a supplier. Hence, we expect that the perception of time loss may escalate the PR perception.

Similarly, the risks mentioned above will further escalate the uncertainty about the purchase process and lead to the customer's negative attitude. This negative attitude may escalate the perception of a possible unexpected monetary loss in the customer's mind. Hence, we expect that the perception of a TR and PR will increase the perception of FR. Thus, we posit,

H6: B2B customer's perception of (a) time risk and (b) performance risk will have a positive relationship with financial risk

3.5. Serial mediating effect of reliance, brand image, performance risk, and financial risk

It is well established that reliance will have direct positive effects on GBBI (Hypothesis H1a) and negative effects on PR (H2b) and FR (H2c). The proven capability of a supplier to fulfill customers' needs creates a strong brand image of the product (GBBI) because of the supplier's high quality, reliability, and performance. The strong, credible brand image will reduce the concerns regarding performance (H3), further reducing the perception of possible financial losses. Thus, we can expect that PR will mediate the GBBI and FR relationship. The above, along with H3, suggests that GBBI and PR sequentially or serially mediate the relationship between reliance and FR. Hence, we expect a serial mediating effect of GBBI and PR between reliance and FR, or, a significant reliance-GBBI-PR-FR indirect effect.

Similarly, the proven quality of services will create a strong services-related brand image (SBBI) (Hypothesis H1b), which indicates co-creation, timely delivery, timely response, and benevolence. Hence, strengthening SBBI will reduce the time-related risk (H4). If the time-related risk gets reduced, the customer's perception of possible financial losses will also reduce (H6a). Therefore, we can expect that TR will mediate the SBBI-FR relationship. If this holds, along with H4, we can suggest that SBBI and TR sequentially or serially mediate the relationship between reliance and FR. Hence, we expect a serial mediating effect of SBBI and TR between reliance and FR, or, a significant reliance-SBBI-TR-FR indirect effect.

Thus, we posit:

H7: The relationship between reliance and financial risk will be serially mediated by GBBI and performance risk

H8: The relationship between reliance and financial risk will be serially mediated by SBBI and time risk

Figure 1 represents the conceptual model for the above-mentioned hypotheses.

<Figure 1 Here>

4. EMPIRICAL STUDY

4.1. Method

We gathered the data for this study using retrospective experience sampling. In this method, we asked our respondents to recall information about any B2B purchase experience in the last two months. The respondents with recent B2B purchase experiences were preferred for collecting data (Huang *et al.*, 2019). We chose the retrospective approach because of its helpfulness in overcoming the limitations of experimental studies dependent upon the respondents' imagination related to their role-playing ability (Huang *et al.*, 2019; Greenberg and Eskew, 1993). Even though many researchers argue that the method depends upon the respondents' memory, modern marketing literature widely prefers it (Chatterjee, 2019; Huang *et al.*, 2019).

We designed a procedure similar to critical incident research where the respondents express what they have felt and experienced in the purchase incident. We used close-end questions to get an idea about such an experience. Following past studies, we set our eligibility criteria for the respondents as the following: whether they had a B2B purchase experience in the recent past? (last two months) (Huang *et al.*, 2019; Kittur and Chatterjee, 2020).

4.2. Sample

The authors collected the data based on a structured questionnaire in multiple cities in India between September 2021 to December 2021. We focused more on the purchase managers and owners of various companies for face-to-face data collection using a convenience sampling approach (Vowles *et al.*, 2011). We considered only one purchase manager or owner for each response and decided the participant's eligibility based on his/her seniority in the organization, experience, and the latest purchase experience. We asked them the following questions to check the eligibility of the participant.

1. Does the respondent owns the organization? Does the respondent work in a senior position within the organization?
2. Does the respondent has an experience of at least two years in the organization?
3. Have the respondent taken any purchase decisions in recent time (past two months)?

To determine the sample size, we did power calculations which suggested a minimum requirement of 98 sample size for maintaining the power of 0.80 across all conditions (Cohen, 1992; Matherly, 2018). We have approached 485 companies, out of which we found 152 suitable survey responses, which indicate a response rate of 31.34% and a power of 0.95. We collected responses from various industries such as industrial (17.1%), healthcare/pharma (5.9%), construction (7.9%), heavy electrical (13.2%), automobiles (11.8%), IT (7,2%), textile (9.9%), chemicals (3.3%), hotels (10.5%), and wholesalers (13.2%). The demographics are shown in Table 2. We covered various products and services such as medicines, wood, tiles, power transformers, automobile parts, software, clothing, lubricants, healthcare machinery, food products, and consumer durables. Covering the range of variety was mainly to generalize the results for overall B2B purchases.

We did not find a significant difference between the response and non-response groups while checking for non-response bias. We have done a Chi-square test to check if the response is related to the industry or not, and found no such relationship (p=NS). We also conducted a t-test on the years of the total experience of the contacts for the response and non-response groups and found no significant difference ($M_{response}$=9.3 years, $M_{non\text{-}response}$=10.7 years, $t=1.65$, $p<0.05$).

<Table 2 here>

4.3. Procedure

We first gathered relevant information from the respondents about the demographics of a company, such as the industrial sector (e.g., automobiles, IT, chemicals, etc.) and a respondent's position in that company. Then we requested them to memorize any recent B2B purchase they administered in the last two months and be involved as a key decision-maker in that purchase. Then we requested to share the details of a supplier, such as a name and product/service the respondent's firm purchased from the supplier. We have also asked for how long they are in a relationship with the vendor of the purchase context. The relationship duration (in months) and the type of offering purchased (product or service) has been used as control variables in our models.

We then asked the respondents to reply with certain statements related to reliance, PR, TR, FR, the brand image of products, and the brand image of the supplier's services on a 7-point scale. We chose a 7-point scale because extant literature highlights the shreds of evidence of good results (Leung, 2011). On a 7-point scale, one means the respondent strongly disagrees with a certain statement, whereas seven means he/she strongly agrees. The details of all the statements and their sources are given in Table 3. We adapted the scale items from extant literature as our context without significant changes. We preferred English as a primary language to ask all the questions; however, we provided translation into Hindi, Marathi, and Bengali for a few respondents.

We took procedural preparations to minimize the possibility of common method bias. We did not inform our respondents about the purpose of the study. We also ensured confidentiality and anonymity for their responses which helped to reduce the response bias (Podsakoff *et al*., 2003). We also informed respondents that there are no right or wrong answers, and their responses will be helpful for the research which may have improved the quality of responses. We also avoided unnecessary, unusual, and ambiguous words that lead to confusion. Finally, we did Harman's single-factor test as suggested by Podsakoff *et al*. (2003) to check the existence of general factors. As all our factors were less than 50% of the covariation thus ensuring that no general factor was apparent.

<Table 3 Here>

5. ANALYSIS AND RESULTS

5.1. Measurement Model

We followed a two-step approach as Anderson and Gerbing (1988) suggested. First, we checked the reliability of our measures. As shown in Table 3, We assessed the construct's reliability using Cronbach's alpha. All the item loadings fulfill the necessary criteria with Cronbach's alpha values greater than the recommended threshold of 0.7 (Hair *et al*., 2010) and hence are significant. We also found that the average variance extracted (AVE) of each latent construct is greater than 0.5, as Hair *et al*. (2010) suggested, which fulfills the necessity requirement. We recognized discriminant validity by comparing the square root of AVE with the correlation between latent variables. AVE was found to be higher than its correlation with any other construct, thus fulfilling discriminant validity criteria (Hair *et al*., 2010). The details of discriminant validity are given in Table 4. We also further screened the Heterotrait–monotrait ratio (HTMT) of the correlations to check possible discriminant validity issues. No HTMT values exceeded the threshold of 0.90 (Henseler *et al*., 2015; Henseler, 2020; Hair *et al*., 2019). Table 5 indicates the HTMT values.

<Table 4 Here>

<Table 5 Here>

5.2. Structural Model

We used the partial least square method (PLS-SEM) using the smartPLS 4.0 for assessing measurement and structural model (Shmueli *et al*., 2019; Sharma *et al*., 2022). The method mentioned above is very useful for the prediction of constructs. The ability of PLS-SEM to provide path coefficients helps draw inferences based on the strength of the relationships between the constructs and variance (Hair *et al*., 2014). Another advantage of PLS-SEM is the ability to accommodate small samples and assess the measurement, which is the case of this study (152 samples) (Wold, 1982). Relating to its covariance-based counterpart, PLS-SEM is not bounded by normality assumptions. Being the early stage of theory development, PLS has been very useful, as Hulland (1999) suggested.

We have tested our results in four models as shown in Figure 2. In model 1, we checked the effects of control variables and reliance on GBBI, SBBI, TR, PR, and FR. We considered control variables as relationship duration and category of a recent purchase (product 1/ service 0). We found no relationship between the purchase context and GBBI, SBBI, and the three types of risks. However, we did find that relationship duration is negatively related to TR (β=-0.26, $p<0.01$). While testing the hypotheses, at first, we tested hypotheses H1a and H1b, which suggest that reliance positively affects GBBI and SBBI. To test this relationship, we checked the relationship between reliance-GBBI (β=0.80, $p<0.001$) and reliance-SBBI (β=0.62, $p<0.001$), which were found to be positive and significant, thus supporting H1a and H1b. Then, to check H2a, H2b, and H2c, we checked the relationship between reliance-TR (β= -0.33, $p<0.001$), reliance-PR (β= -0.46, $p<0.001$), and reliance-FR (β=-0.32, $p<0.001$), which was found negative and significant. Hence, we found support for all three hypotheses, H2a, H2b, and H2c.

<Figure 2 Here>

Then we tested model 2 to check the mediating effect of GBBI and SBBI in reliance-PR, reliance-TR, and reliance-FR. After including GBBI as a mediator, we found an insignificant relationship between GBBI-PR (β=0.00, NS), whereas reliance-PR remains unchanged, which was not in line with our expectations. Thus, we found no support for H3. Similarly, we found no relationship between GBBI-FR (β=-0.03, NS) and SBBI-FR (β=-0.05, NS), whereas the negative relationship between reliance-FR (β=-0.27, $p<0.05$) compared to model 1. Thus, we found no mediation effect and thus support for H5a and H5b. Although we found an insignificant relationship between GBBI-TR (β=0.09, NS), we found a positive relationship between SBBI-TR (β=-0.30, $p<0.001$) and found that the relationship between reliance-TR became insignificant (β=-0.23, NS) when SBBI is considered as a mediator. Hence, we found full mediation of SBBI in the reliance-TR relationship as per the expectations, thus supporting H4.

Then we checked model 3 to test the relationship between TR- PR and TR-FR. We found a positive and significant relationship between TR-PR (β=0.47, $p<0.001$). Hence, we found support for H6a. Similarly, we found support for H6b because of a significant positive relationship between TR and FR (β=0.58, $p<0.001$). Moreover, we found that the relationship between GBBI- PR (β=-0.05, NS) and GBBI-FR (β=-0.02, NS) is insignificant. Hence, we reject the H7, which hypothesized a serial relationship between reliance and FR mediated via GBBI and PR. However, from H4 and H6, we found the indirect serial path between reliance-SBBI-TR-FR, in which we found a positive relationship between reliance-SBBI (β=0.62, $p<0.001$), SBBI-TR (β=-0.29, $p<0.001$), and TR- FR (β=0.58, $p<0.01$). Thus, we found support for H8.

While reliance-GBBI-PR-FR was not supported, we tested for an alternate serial mediation path reliance-SBBI-TR-PR-FR. Effectively, we were testing whether the TR-FR relationship is mediated by PR. In model 4, we tested for the same. We found PR has a positive relationship with FR (β=0.52, $p<0.001$). We also found that in the presence of PR, the TR-FR relationship (β=0.31, $p<0.01$) gets weaker (than that in model 3), suggesting a partial mediation.

The models had acceptable and improving goodness of fit (adjusted R^2 for model 1= 0.32, model 2= 0.33, model 3=0.41, and model 4 = 0.45). Moreover, we also did a predictive model assessment using Q^2, and CVPAT. The Q^2 values were significantly greater than zero for all endogenous constructs ensuring predictive relevance (Shmueli *et al*., 2016). Similarly, we also found that models have significantly lower average loss compared to CVPAT IA benchmarks which meet the minimum standard of predictive validity (Shmueli *et al*., 2019; Sharma *et al*., 2022). Also, compared to the CVPAT LM outcomes, RMSE results have low prediction errors which ensure the improvement in the predictive performance of the path model (Sharma *et al*., 2022).

The results of all structural models and the summary of the hypotheses are given in table 6 and table 7. In the next section, we discuss the above results in depth.

<Table 6 Here>

<Table 7 Here>

6. DISCUSSIONS

In this study, we explored the relationship between reliance, brand image, and dimensions of perceived risk. From the thread of theoretical underpinning represented by Mouzas *et al*. (2007) and Kittur *et al*. (2022), we suggest that reliance is an essential aspect of sustainable business relationships, which improves brand image and reduces perceived risk. Our results indicate that reliance improves GBBI and SBBI and reduces time, performance, and FR. The above relationship can be explained based on the fact that reliance represents the proven capability of the supplier (Jiang *et al*., 2013). This proven capability will be only possible when the supplier's product is of good quality, reliability, durability, and performance (Kittur and Chatterjee, 2020). Hence, the above qualities result in a strong perception of the GBBI and the product's performance. Similarly, good quality services that create value in co-creation, timely delivery, and response (Vargo and Lusch, 2008; Kittur and Chatterjee, 2020) create a strong perception of SBBI. Hence, customers' perception of both GBBI and SBBI is positively influenced by reliance.

While exploring the relationship between SBBI-TR, we found that the presence of SBBI results in full mediation of the relationship between reliance and TR. The main reason behind this full mediation is that the supplier's SBBI itself represents an image that includes timely delivery and response (Vargo and Lusch, 2008; Cassia *et al*., 2017). The proven capability can show both product-related performance and service-related performance. As service-related performance is directly related to time expectations, reliance on a vendor will lead to reducing TR only through the perception of the vendor's service, i.e., SBBI. Hence customers' time-related concerns get reduced based on the SBBI of the supplier. On the other hand, while exploring the relationship between GBBI-PR, we did not find any significant effects of GBBI on PR, which was against our expectations. One possible reason for the above result may be that PR is inevitable in an emerging market, even for brands with relatively higher GBBI. For instance, Steven and Britto (2016) found that outsourcing manufacturing in emerging markets is strongly associated with product recalls, even for stronger brands. As the data was collected from an emerging market, GBBI may not be directly related to PR. As the GBBI-PR link was not established, the GBBI-FR relationship was not mediated by PR and similarly, the reliance-FR relationship was also not serially mediated by GBBI and PR.

We further explored the relationship between TR, PR, and FR. First, we found that the perception of a TR escalates PR because of a positive relationship between TR-PR. The possible reason for such escalation is that B2B TR is limited to the supplier's delay in communication or response and is also related to the product's performance time delay. The above argument may be context-specific; however relevant in the B2B context where voluminous or heavy purchase investments are involved. Moreover, in B2B, customers also sell the product to the end-user by consuming a product/service taken from the supplier. So, the concerns regarding timely execution create doubt regarding the expected performance of a product/ service. Hence, more exploration in terms of TR and PR is required.

We also explored the relationships between time and PRs on FR and found a positive relationship. We found that concerns regarding the timely delivery, response, and product performance increase the concern about possible monetary losses in the purchase. Hence, both time and PRs are positively related to FR. However, we found that the customers' concerns regarding performance are more valuable than time concerns. Precisely, customers prefer product performance as a key to timely delivery. Hence, the effects of PR on FR were comparatively higher than TR.

Next, the paper explored how reliance affects FR via serial mediation of two mediators, namely SBBI and TR. Serial mediation is important because it gives an idea of how reliance and FR are related to each other and how reliance on a supplier reduces FR, especially in service-dominant logic.

Lastly, we found that relationship duration reduces TR and PR. As the information asymmetry and deviations from expectations reduce when the vendor and the customer have a long-term relationship, the risks related to timeliness and performance drop as the customers know what to expect from the vendor. However, that does not reduce the FR as the expectation itself can be low. This is particularly true in the emerging market context where, due to a resource-constrained environment, customers often have to stick with a vendor even if the expectation is low.

7. THEORETICAL CONTRIBUTIONS

The study offers many vital implications to the B2B extant literature. First, the concept of perceived risk in the B2B context is still at the evolutionary stage (Munukka and Jarvi, 2015). This pioneering study focuses on exploring the importance of reliance and the brand image of a supplier in reducing TR, PR, and FR. The study provides empirical justification for exploring the importance of GBBI and SBBI on TR, PR, and FR, which is embryonic in extant literature.

Second, most of the available B2B perceived risk literature considered perceived risk as a unidimensional construct and independent variable that affects the outcome variables such as revisit intention (Yu *et al*., 2021), compliance (Tong and Crosno.,2021), customer loyalty (Zhang *et al*., 2019), behavioral intention to use (Namahoot *et al*., 2018; Nicolaou and Mcknight, 2006), and relationship commitment (Munukka and Jarvi, 2015). However, to our best knowledge, we did not find any evidence highlighting the effects of reliance and brand image on reducing perceived risk, which is covered in this research study. While exploring the relationship of reliance with perceived risk, we found that reliance plays a crucial role in reducing TR,PR, and FR. Such importance of reliance in reducing risk perception has never been studied before in B2B or B2C context.

Third, extant literature seldom explained the relationship between brand image and risk perceptions. Few pieces of evidence in B2C literature suggest that brand image has a negative relationship with product risk and TR (Simonian *et al*., 2012; Chenga *et al*., 2008; Liljander *et al*., 2009). However, to date, none of the studies have juxtaposed the effects of GBBI and SBBI on the perceived risk in the context of B2B purchases. Our study provides empirical validation and shows that while reliance helps reduce PR, SBBI plays an important role in reducing TR. The outcome mentioned above contributes to perceived risk literature (Munukka and Jarvi, 2015) and service-dominant logic (Lusch and Vargo, 2006).

Fourth, we further explored the relationship between TR, PR, and FR. While little of the evidence in the extant literature on B2C state that the perceived risk dimensions are correlated with each other (Stone and Gronhaug, 1993; Kim *et al*., 2005), there is no study in the B2B context that explored the relationship between them. While exploring the same, our study suggests that risk perception of performance and time-related constraints increase the perception of FR. We also found the direct effect of PR on FR is higher than that of TR, however, the total effect (direct and indirect) of TR is higher. This asymmetric impact of TR and PR on FR is a new insight and creates a newer theoretical understanding. Such a relationship between the risks has not been explored in extant literature.

Fifth, we also explored the indirect relationship between reliance and FR through a serial mediation of SBBI and TR. The extant literature provides a few shreds of evidence that suggest the importance of product image (GBBI) in reducing product risk perception (Simonian *et al.*, 2012; Munukka and Jarvi, 2015). However, we found that for reducing the risk perception related to the performance of a product, only GBBI is not sufficient, but reliance based on proven capability is a must. The above outcome is critical and thus contributes to the extant literature on B2B branding and perceived risk (Kittur and Chatterjee, 2020).

Sixth, we have found how two risk relievers, namely reliance, and brand image interplay to reduce risk perceptions. We found while the reliance-SBBI-TR-FR serial mediation path is valid, the reliance-GBBI-PR-FR path is not. Instead, we did find another serial mediating path, namely reliance-SBBI-TR-PR-FR. Such results show how risk mitigators can interplay and reduce risk, thus contributing to the literature on B2B risk perceptions (Munnukka and Jarvi, 2015).

8. MANAGERIAL IMPLICATIONS

The paper has several managerial implications. First, this study reveals the effects of customers' reliance on the perceived brand image from the product (GBBI) and services (SBBI) and their effects on dimensions of perceived risk such as TR, PR, and FR. The study also reveals serial mediation relationships between reliance, SBBI, TR, and FR. The findings in this research paper provide new valuable insights useful for creating effective strategies to tackle B2B customers' risk perception. Moreover, this study provides information about reducing TR, PR, and FR by communicating the strength of a supplier and creating a positive image of both products and services.

Second, our results suggest that the increase in performance and TR perception also escalate the concern regarding potential monetary losses. Hence, managers should always focus on reducing the concerns related to product performance and timely delivery and response. For instance, during COVID-19, B2B customers were facing severe FR for any purchase context. Successful vendors took help on online services and digital media to mitigate TRs. They also used

B2B online reviews to reduce PRs which helped them successfully reduce the FRs of the purchase. The direct effect of PR on FR is higher than that of TR, however, the total effect (direct and indirect) of TR is higher. This means the managers should always focus on timeliness and time management irrespective even when the direct consequence is not visible.

Third, to reduce performance-related concerns, managers should focus more on portraying the product's quality, reliability, and performance. On the other hand, managers should focus on co-creation, timely response, and delivery to reduce time-related concerns of a customer firm. However, one must note that we did not find any significant relationship between GBBI and PR. This means, in an emerging market setup, PR may not be mitigated by creating a product-related brand image. Instead, we found TR reduces PR. Therefore, to reduce PR, the companies may have to signal that timely support will be provided to the customer even if any performance issue comes up. This is a unique and new finding.

Fourth, we also found that TR is positively related to PR, which in turn affects FR. The above suggests the importance of timeliness in the context of brand image and evaluation of performance. An otherwise well-performing vendor may not be evaluated positively and can create significant risk in the purchase context if the vendor cannot keep its time-related promises. Future managers should keep the same in mind.

Lastly, we found that the length of the relationship can play an important role in reducing some risks. Therefore, managers should be more careful about relationships that are of mid-level relationship length. Managers of the vendor firm may often take such relationships for granted and not do the extra bit which is required to continue the relationship. Such complacency may have huge opportunity costs from the customer relationship management point of view.

9. LIMITATIONS AND FUTURE RESEARCH

Although our study offers new insights into the role of reliance and brand image in reducing perceived risk, it is subject to some limitations that indicate future research opportunities. First, while collecting the responses, we have covered a variety of manufacturers, suppliers, and distributors to generalize the results. However, there is a possibility that the risk perceptions vary based on the type of industry. Hence, collecting significant samples for a particular industry type in future research would help get industry-specific insights. It will also help us to compare the model over multiple industries.

Second, we considered only micro-economic factors, which involve internal factors; external factors such as new government policies, environmental concerns, political influences, demographics, and technological advances can also influence risk perceptions. Future research should be done to understand the factors mentioned above. Moreover, the model can also be tasted for cross-cultural or international relationship contexts. For instance, how does the model vary in countries with varying degrees of uncertainty avoidance or long-term orientation? How does the model vary in the context of the import of raw materials or the purchase of international services? How does the country of origin impact these relationships? All these are interesting questions and can be answered by future researchers.

Third, the data was collected between September 2021 and December 2021, when India's covid-19 cases were considerably low. However, there might be some effects of uncertainties on risk perception and purchase decisions. Future research can be done to find the effects of macro-factors such as policies, environmental factors, technological changes, and uncertainties like covid-19 on risk perceptions of B2B customers.

Furthermore, we have considered only those respondents individually involved in a purchase decision. Understanding group dynamics and their influence on risk perceptions can stimulate exploration. Moreover, we relied on data collection via a monadic approach involving the customer. Following a dyadic approach and simultaneously understanding the supplier's side could also provide key insights. Hence, we suggest further development in this model by understanding the relationship between reliance, brand image, and perceived risk from organizational and network-level perspectives.

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APPENDICES

FIGURE 1: Conceptual model

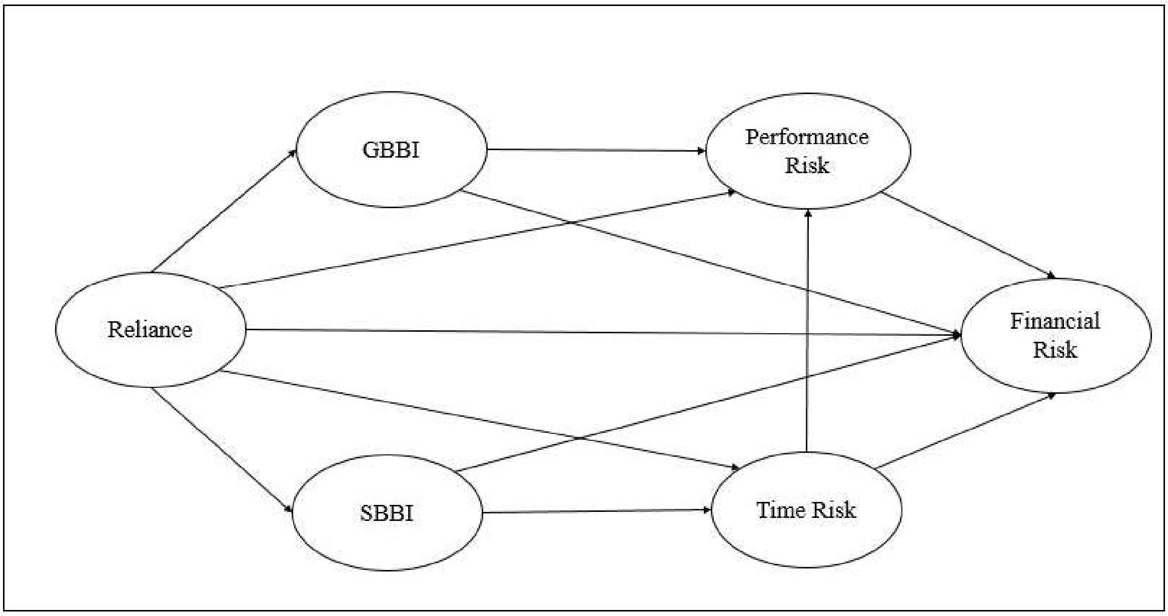

Figure 1: *Conceptual Model*

FIGURE 2: Representation of structural models

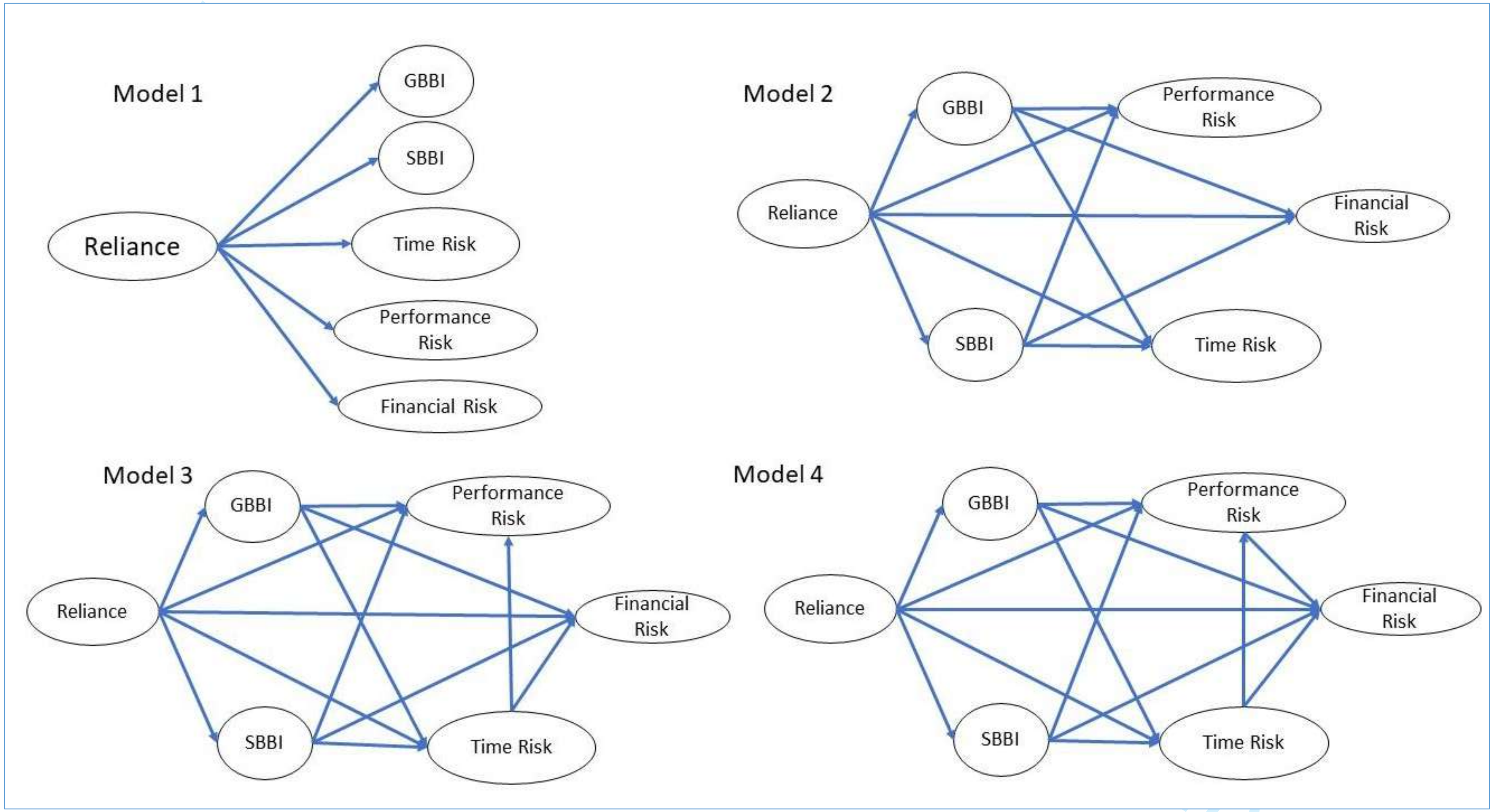

TABLE 1: Comparative position of the current research gap with extant literature on the perceived risk in B2B

Sl. No.	**AutDetailsails**	**Model using reliance**	**Model using brand image**	**Model using multi-dimensional risks**	**Context**	**Contribution to the perceived risk literature**
1	Kaplan *et al*., (1974)	No	No	Yes	B2C	Validation of five dimensions of perceived risk.
2	Lim (2003)	No	No	Yes	B2C	Consequences of three sources of risk in B2C e-commerce: technology, vendor, and product
3	Nicolaou and McKnight, (2006)	No	No	No	B2B	Exploration of effects of perceived information quality (PIQ) and trusting beliefs on perceived risk
4	Schaupp and Crater, (2010)	No	No	No	B2B	Higher levels of perceived risk decrease the use intention to use an e-file system. Citizen trust reduces the perceived risk
5	Munukka and Jarvi, (2015)	No	No	Yes	B2B	Higher product performance and personal FRs decrease the customer's commitment to the supplier. Higher psychological risks have a positive effect on relationship commitment. Procedural control helps in managing risks. Buying situation has strong effects on risk perceptions

6	Paluch and Wunderlich, (2016)	No	No	Yes	B2B	Business customers' personal and psychological risk perceptions hamper the use of technology-based services.
7	De Matos and Krielow, (2019)	No	No	No	B2B	Perceived risk is mainly affected because of a lack of knowledge and data security in e-services. Perceived risk acts as a mediator between stimulus and purchase intentions.
8	Current Paper	Yes	Yes	Yes	B2B	The relationship between reliance and FR is serially mediated by SBBI and TR. The same is also mediated by PR. Further, PR and TR are positively related to FR.

TABLE 2: Demographics

Demographics	
Industry Type	**Percentage**
Industrial Production	17.10%
Healthcare	5.90%
Construction	7.90%
Heavy Electrical	13.20%
Automobiles	11.80%
IT	7.20%
Textiles	9.90%
Chemicals	3.30%
Hotels	10.50%
Wholesalers/retailers	13.20%
Gender	
Male	89%
Female	11%
Respondents	
Owners	23%
Purchase Managers	77%
Product/Service	
Products	59.80%
Services	40.13%
Relationship Duration	
Mean	10.09 Years
Median	7.5 Years
Standard Deviation	7.88 Years

TABLE 3: Factor loadings and reliability

Construct	Measures	Cronbach's Alpha	Composite Reliability	AVE
Reliance	We are confident with this supplier XYZ's ability to fulfill our agreements	0.89	0.93	0.76
	We are confident that this supplier XYZ is competent at what they are doing			
	The performance of this supplier XYZ can always meet our expectations			
	We have faith in the supplier XYZ's ability to fulfill their promises			
GBBI	XYZ supplies high-quality products	0.86	0.91	0.78
	XYZ supplies products that perform reliably over time			
	XYZ supplies products that fulfill our needs effectively.			
SBBI	XYZ provides useful services to support business activity	0.83	0.90	0.75
	XYZ provides timely support services to the business			
	Supplier XYZ provides reliable and responsive services as promised.			
Time Risk	I am concerned about supplier XYZ's timely delivery.	0.95	0.97	0.91
	I am concerned about supplier XYZ's timely service			
	I am concerned about supplier XYZ's timely response			
Performance Risk	I am concerned that the product/service of supplier XYZ may not be up to the mark	0.94	0.96	0.85

	I am concerned that the product/service delivered by supplier XYZ may not match expectations			
	I am concerned that the product/service delivered by XYZ may not be good			
	I am concerned that the supplier XYZ's product/service may not serve the purpose satisfactorily			
Financial Risk	I am concerned that I may suffer from monetary loss due to supplier XYZ's fraudulent acts.	0.76	0.85	0.58
	Supplier XYZ's products/services are too costly			
	There is a chance that I will stand to lose money if I buy products/services from supplier XYZ			
	I am concerned about follow up cost for supplier XYZ's product/service.			

TABLE 4: Discriminant validity table

	Relationship Duration	Purchase context	Reliance	GBBI	SBBI	Time risk	Performance risk	Financial Risk
Relationship Duration	1							
Purchase context	-0.15	1						
Reliance	0.03	0.01	0.87					
GBBI	0.13	-0.02	0.79	0.88				
SBBI	0.06	-0.01	0.62	0.51	0.86			
Time risk	-0.11	-0.01	-0.33	-0.24	-0.41	0.94		
Performance risk	-0.07	-0.03	-0.46	-0.38	-0.31	0.54	0.92	
Financial Risk	-0.02	-0.03	-0.30	-0.25	-0.29	0.57	0.62	0.76

TABLE 5: HTMT values

	FR	***GBB***	***PF***	***Product /Service***	***REL***	***SBB***	***Relationship Duration***	***TIM***
FR								
GBB	*0.32*							
PF	*0.81*	*0.47*						
Product/Service	*0.05*	*0.04*	*0.02*					
REL	*0.44*	*0.89*	*0.52*	*0.04*				
SBB	*0.36*	*0.61*	*0.35*	*0.11*	*0.75*			
Relationship Duration	*0.25*	*0.15*	*0.26*	*0.04*	*0.12*	*0.21*		
TIM	*0.89*	*0.40*	*0.82*	*0.10*	*0.41*	*0.48*	*0.30*	

TABLE 6: Effects of brand image on perceived risk

	Model 1					Model 2					Model 3					Model 4				
	GBBI	SBBI	Time risk	Performance risk	Financial risk	GBBI	SBBI	Time risk	Performance risk	Financial risk	GBBI	SBBI	Time risk	Performance risk	Financial risk	GBBI	SBBI	Time risk	Performance risk	Financial risk
Relationship Duration	0.04 [-0.04, 0.15]	0.12 [-0.03, 0.29]	-0.26**[-0.39, -0.11]	-0.18* [-0.32, -0.01]	-0.19 [-0.34, 0.00]	0.04 [-0.05, 0.15]	0.13 [-0.02,0.30]	-0.22*** [-0.35, -0.09]	-0.18* [-0.31, -0.01]	-0.18 [-0.33, 0.00]	0.04 [-0.04, 0.15]	0.13 [-0.02, 0.30]	-0.22* [-0.35, -0.1]	-0.07 [-0.19, 0.06]	-0.04 [-0.18, 0.12]	0.04 [-0.05, 0.15]	0.13 [-0.03, 0.31]	-0.22* [-0.35, -0.08]	-0.07 [-0.19, 0.06]	-0.01 [-0.13, 0.13]
Purchase context	0.16 [-0.03, 0.37]	-0.15 [-0.38, 0.07]	0.12 [-0.18, 0.41]	0.02 [-0.24, 0.29]	0.048 [-0.27, 0.33]	0.16 [-0.03, 0.38]	-0.15 [-0.35, 0.08]	0.05 [-0.23, 0.35]	0.03 [-0.25, 0.32]	0.02 [-0.29, 0.36]	0.16 [-0.03, 0.37]	-0.15 [-0.35, 0.09]	0.06 [-0.23, 0.35]	-0.00 [-0.24,0.27]	-0.03 [-0.29, 0.23]	0.16 [-0.03, 0.37]	-0.15 [-0.35, 0.08]	0.06 [-0.23,0.35]	0.00 [-0.25, 0.27]	-0.03 [-0.28, 0.22]
Reliance	0.80*** [0.66, 0.89]	0.62*** [0.43, 0.79]	-0.33*** [-0.51, -0.19]	-0.46*** [-0.66, -0.32]	-0.32*** [-0.52, -0.16]	0.81*** [0.66, 0.89]	0.62*** [0.43,0.79]	-0.23 [-0.56,0.04]	-0.46**[-0.77, -0.21]	-0.28* [-0.57, -0.06]	0.81*** [0.66,0.89]	0.62*** [0.43,0.79]	-0.22 [-0.56,0.04]	-0.35* [-0.63, -0.06]	-0.12 [-0.41,0.23]	0.81*** [0.66,0.90]	0.62*** [0.43,0.79]	-0.23 [-0.56, 0.04]	-0.36* [-0.64, -0.07]	0.05 [-0.22, 0.39]
GBBI								0.09 [-0.17 ,0.43]	-0.04 [-0.31,0.31]	0.03 [-0.33,0.31]			0.09 [-0.16, 0.43]	-0.05 [-0.32,0.15]	-0.02 [-0.41,0.24]			0.09 [-0.17, 0.43]	-0.05 [-0.32, 0.16]	-0.01 [-0.34, 0.27]
SBBI								-0.30** [-0.49, -0.09]	-0.01 [-0.23,0.32]	-0.05 [-0.33,0.22]			-0.29** [-0.49, -0.05]	0.14 [-0.06, 0.43]	0.05 [-0.16, 0.34]			-0.30** [-0.49, -0.05]	-0.14 [-0.07, 0.43]	-0.02 [-0.21, 0.19]
Time risk														0.47*** [0.29, 0.62]	0.58** [0.40, 0.75]				0.47*** [0.29, 0.62]	0.31** [0.11, 0.52]
Performance risk																				0.52*** [0.36,0.67]
Adj.R²	0.61	0.43	0.17	0.25	0.14	0.65	0.42	0.23	0.25	0.14	0.66	0.42	0.23	0.25	0.52	0.66	0.42	0.23	0.42	0.52
Q² Predict	0.62	0.33	0.13	0.19	0.07	0.62	0.33	0.13	0.19	0.07	0.62	0.33	0.13	0.19	0.07	0.62	0.33	0.13	0.19	0.07
RMSE	0.64	0.83	0.93	0.91	0.97	0.64	0.83	0.93	0.91	0.97	0.64	0.83	0.93	0.91	0.97	0.64	0.83	0.93	0.91	0.97
CVPAT IA	-0.57**	-0.42	-0.48	-0.41	-0.13	-0.57**	-0.42	-0.48	-0.41	-0.13	-0.57**	-0.42	-0.48	-0.41	-0.13	-0.57**	-0.42	-0.48	-0.41	-0.13
CVPAT LM	-0.03	0.00	0.01	-0.08**	0.00	-0.03	0.00	0.01	-0.08**	0.00	-0.03	0.00	0.01	-0.08**	0.00	-0.03	0.00	0.01	-0.08**	0.00

*** means p<0.001, ** means p<0.01, * means p<0.05

Table 7: Hypotheses and Final Results

Sr. No.	**Hypothesis**	**Support**
H1	*The reliance of the B2B customer on its supplier will have a positive relationship with (a) GBBI and (b) SBBI.*	Full Support
H2	*B2B supplier's reliance will have a negative relationship with (a) time risk (b) performance risk (c) financial risk*	Full Support
H3	*B2B suppliers' GBBI will mediate the relationship between reliance and performance risk.*	No Support
H4	*B2B suppliers' SBBI will mediate the relationship between reliance and time risk.*	Full Support
H5a	*B2B suppliers' GBBI will mediate the relationship between reliance and financial risk.*	No Support
H5b	*B2B suppliers' SBBI will mediate the relationship between reliance and financial risk.*	No Support
H6	*B2B customers' perception of (a) time risk and (b) performance risk will have a positive relationship with financial risk.*	Full Support
H7	*The Relationship between reliance and financial risk will be serially mediated by GBBI and performance risk*	No Support
H8	*The Relationship between reliance and financial risk will be serially mediated by SBBI and time risk*	Full Support