

12-7-2022

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Jiahe Chen

*School of Business, Western Sydney University, Jiahe.Chen@westernsydney.edu.au*

Yi-Chen Lan

*School of Business, Western Sydney University, Y.Lan@westernsydney.edu.au*

Yu-Wei Chang

*Department of Business Management, National Taichung University of Science and Technology, nickychang@nutc.edu.tw*

Premaratne Samaranayake

*School of Business, Western Sydney University, P.Samaranayake@westernsydney.edu.au*

Kuan-Chun Chen

*Department of Business Management, National Taichung University of Science and Technology, new310025@gmail.com*

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### **Recommended Citation**

Chen, Jiahe; Lan, Yi-Chen; Chang, Yu-Wei; Samaranayake, Premaratne; and Chen, Kuan-Chun, "Buyers' psychological situations in cross-border electronic commerce" (2022). *ACIS 2022 Proceedings*. 30. <https://aisel.aisnet.org/acis2022/30>

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# Buyers' Psychological Situations in Cross-Border Electronic Commerce

## Full research paper

### Jiahe (Joe) Chen

School of Business  
Western Sydney University  
Sydney, Australia  
Email: [Jiahe.Chen@westernsydney.edu.au](mailto:Jiahe.Chen@westernsydney.edu.au)

### Yi-Chen Lan

School of Business  
Western Sydney University  
Sydney, Australia  
Email: [Y.Lan@westernsydney.edu.au](mailto:Y.Lan@westernsydney.edu.au)

### Yu-Wei Chang

Department of Business Management  
National Taichung University of Science and Technology  
Taichung, Taiwan  
Email: [nickychang@nutc.edu.tw](mailto:nickychang@nutc.edu.tw)

### Premaratne Samaranayake

School of Business  
Western Sydney University  
Sydney, Australia  
Email: [P.Samaranayake@westernsydney.edu.au](mailto:P.Samaranayake@westernsydney.edu.au)

### Kuan-Chun Chen

Department of Business Management  
National Taichung University of Science and Technology  
Taichung, Taiwan  
Email: [new310025@gmail.com](mailto:new310025@gmail.com)

## Abstract

Cross-border electronic commerce (CBEC) has emerged as an innovative business model that transforms consumer behaviour and mindsets, in the era of digitalization and globalization. Buyer situations in CBEC are complex due to the separation of global sellers and buyers in terms of geographic distance, language and cultural differences, and buyer preferences. However, few studies have explored buyers' shopping decisions from a situational perspective. Drawing on the stimulus–organism–response framework, this study conceptualizes a CBEC buyer shopping model that theorizes four psychological situational factors (i.e., CBEC platform design, user–platform interaction, logistics evaluation, and task orientation) as stimuli, cognitive and affective states as organisms, and shopping intention as a response. The model was empirically tested using 241 data through structural equation modelling. The results indicate that all situational factors positively affect two evaluative states, which in turn positively affect shopping intention. Implications for theory and practice are discussed.

**Keywords** Cross-border electronic commerce, psychological situation, consumer behaviour, S–O–R model, cognitive and affective states

## 1 Introduction

Cross-border electronic commerce (CBEC) has gained momentum in the new era of digital globalization. It is considered an ideal entry mode for vendors in pursuit of foreign market expansion (Qi et al. 2020) and an advantageous shopping channel for buyers in search of merchandise beyond borders (Huang and Chang 2019). There are various CBEC dedicated platforms offering a one-stop digital platform to global traders. As indicated in an industrial report, the global CBEC market size was valued at approximately USD 580 billion in 2019 and will reach approximately USD 2.25 trillion by 2026, with a compound annual growth rate of 17.4% (All The Research 2021).

Nevertheless, the main challenge for CBEC buyer decisions is the more complex buyer situation compared to other alternative shopping channels. It is attributed to that CBEC buyers and sellers are typically separated in terms of geography, cultures, languages, institutions, societies, and custom (Qi et al. 2020). Technological vehicles (e.g., CBEC dedicated platforms) indeed somehow narrow such divides, still, they pose multi-faceted hurdles that intensify uncertainty and dynamics of buyer situation encompassed by information comprehension, buyer-seller communications, international logistics, and shopping task orientation.

In this regard, buyers may make a purchase contingent on the comprehensive interpretations of their situations. The relevant components of the CBEC buyer situation include 1) an informative and aesthetic situation wherein buyers can acquire credible and attractive information to make informed and enjoyable decisions, 2) an interactive situation wherein buyers can freely interact with platforms, as well as consult with sellers, when necessary, in a responsive manner, 3) a temporal situation wherein they can have a positive evaluation of long-time and uncertain wait for products delivery, and 4) a task-oriented situation wherein buyers are guided by certain purchasing goals that are fit to fulfill in CBEC.

The extant CBEC literature has accumulated an array of factors, ranging from technology to seller, buyer, and logistics aspects, that explain CBEC buyer behaviour (Kim et al. 2017; Koh et al. 2012; Mou et al. 2020). All the different aspects of the factors that can affect buyer behaviour are implicitly associated with buyer situations, including physical surroundings (manifested in CBEC platform elements), social surroundings (manifested in buyer-seller communications), temporal perspective (manifested in CBEC logistics), and task definition (manifested in buyer needs). Consumer situation, therefore, is likely the overriding explanation of shopping behaviour. The situationist, Belk (1977, p. 3) has claimed that “there are few products purchased which are devoid of consumer situation influences”, indicating the necessity of inclusion of a situational perspective in the consumer shopping scenarios.

From the perspective of consumer behaviour, although distance in kilometre or in delivery time were found to negatively affect the CBEC sales (Kim et al. 2017), this viewpoint smoothed out the differences of individual situations and provided limited understandings of consumer behaviour as one’s shopping decision is more likely triggered by their tolerable situation of logistics efficiency than objective buyer-seller distances. This study believes that the ascription of the situational influence on buyer behaviour is likely a “psychological situations” (Lutz and Kakkar 1975), instead of a purely “objective situation.” Moreover, the consumer situation is also transient and dynamic; one can tolerate the expected long-time delivery this time, but the same condition might be unacceptable next time under time constraints. It is imperative to develop a situational framework that is able to identify general situations relevant to CBEC buyers and capture the individual specificity and dynamics in CBEC shopping.

The concept of psychological situation is instrumental to understanding how buyers’ internal psychological processes react to the behavioural milieu. Situational stimuli will be initially internalized by the buyer organism before making a final shopping decision in response to the stimuli (Mehrabian and Russell 1974). From the viewpoint of neuroscientists, the internal organism embodies two evaluative systems working together in human brains, that is, cognitive and affective states (Chaiken and Trope 1999). Psychological situation and the dual evaluative process thus are worthwhile to assimilate into CBEC consumer research to tap into situational influence on purchase.

The present study attempts to depict a CBEC buyers’ shopping behaviour model. The Stimulus–Organism–Response (S–O–R) model (Mehrabian and Russell 1974) is adopted as the overarching framework that theorizes situational factors (as stimuli) and cognitive and affective states (as organisms) to explain shopping intention (as a response).

The article is structured as follows: the next section reviews relevant literature and develops hypotheses. Section 3 presents the research methodology, followed by the preliminary results in Section 4. Then, Section 5 discusses the findings and theoretical and practical contributions. Finally, conclusions and limitations are presented in Section 6.

## 2 Literature Review and Hypotheses

### 2.1 Cross-Border E-Commerce

Based on the systematic literature review on consumer behaviour in CBEC, this study refers to CBEC as *the online transaction between sellers and buyers from different countries, customs areas, or jurisdictions through e-commerce platforms, which is fulfilled by both domestic and cross-border logistics and may entail online cross-border financial transfers* (Gomez-Herrera et al. 2014; Huang and Chang 2019; Mou et al. 2020).

Past studies have attributed CBEC consumer adoption and purchase to various facets ranging from platforms to products, logistics, buyers' traits, and so forth. Some researchers argued that behavioural intentions in CBEC result from a series of cognitive reasoning motivated by these factors. For example, preceding shopping decision, cognitive trust is the most emphasized one to internalize product information (Zhu et al. 2019), institutional factors (Huang and Chang 2019), geographic cues (Baek et al. 2020), and psychological distance (Cui et al. 2020). Perceived value, resulting from a cost-benefit analysis, has also been treated as rational thinking of CBEC buyers (Mou et al. 2020). In contrast, some studies claimed that emotional gratification is another influential evaluative system, such as delight, positive affect, and arousal (Ramkumar and Jin 2019).

However, prior studies neither have considered cognitive and affective evaluations of buyers simultaneously nor have considered situational effects on buyer behaviours. Cognitive and affective evaluations are two concurrent human decision-making systems for comprehensive assessments. Situational factors are relevant and nontrivial in evaluating CBEC purchases as buyer behaviours depend on their individual shopping situation surrounding them. IS researchers have long downplayed the role of situational factors, and decontextualizing buyer behaviours may lead to inconsistent, or even contradictory, empirical findings (Kroenung and Eckhardt 2015). It is necessary and imperative to shift research focus to modelling CBEC buyers' shopping intention formation mechanism that can capture situational impact as well as the dual evaluative systems.

### 2.2 Stimulus–Organism–Response Model

S–O–R model is initially grounded in environmental psychology (Mehrabian and Russell 1974), and it provides a three-staged theoretical framework of the factors that influence buyers' shopping behaviours. Specifically, heterogeneous stimuli (S) embedded in a buyer's shopping environment are the triggers of this chain effect and arouse the human internal organism (O), which in turn shapes behaviours as the response (R).

In physical stores, stimuli are frequently referred to as the store environment including design (e.g., decoration, colour, product displays, and signs), social (e.g., salesman support), and ambient factors (e.g., music, lighting, and scent; Baker et al. 1994); in contrast, stimuli in the e-commerce context evolve to the attributes of the technology-mediated environment that users intensively interact with (Xu et al. 2014). For instance, website design, such as layout, colour scheme, content, information presentation (Chang and Chen 2008), and human-computer interactions (Xu et al. 2014).

The organism (O) phase is related to buyers' internal fulfillment assessment of the stimuli being received. Scholars have suggested two parallel internalization processes, that is, cognitive and affective states (Eroglu et al. 2001). This dichotomy of the organism is also consistent with discoveries in cognitive neuroscience (Chaiken and Trope 1999) and has demonstrated ecological validity as well (Bateson and Hui 1992). Coupling with rational and emotional evaluation processes, a buyer eventually makes a response (e.g., purchase) to the environmental stimuli surrounding them. As the organism factors, the two types of states are posited to positively influence CBEC buyers' shopping intention via the dual evaluative systems. This study, therefore, proposes the following hypotheses:

**H1a:** Cognitive state positively affects shopping intention.

**H1b:** Affective state positively affects shopping intention.

### 2.3 Psychological Situation

Psychological situation is defined as *“an individual's internal responses to, or interpretations of, all factors particular to a time and place of observation which are not stable intra-individual characteristics or stable environmental characteristics, and which have a demonstrable and systematic effect on individual's psychological processes and/or his overt behaviour* (Lutz and Kakkar 1975, p. 441).” A situation embodies a buyer's momentary encounters at a particular place and time,

e.g., at the moment of purchase, instead of long-lasting and stable personal characteristics, such as personality traits. Buyer behaviours depend on the individual situation that they currently engage in and perceive, and it makes every shopping decision by every customer each time potentially unique (Chocarro et al. 2013). Especially in CBEC, consumer shopping decisions involve a complex and erratic evaluative process that may be more likely to be subject to buyer situations than in other shopping contexts given the aforementioned multifaceted hurdles regarding geographical distance, languages, culture, and consumer preferences.

Belk (1975) further divided buyer situation into five classes, physical surroundings, social surroundings, temporal perspective, task definition, and antecedent states. Because antecedent states are generally referred to as personal mood and feelings, which is similar to affective state (i.e., organism factor) in this study, only the other four dimensions in Belk's situational taxonomy are adopted.

Physical surroundings refer to "the most readily apparent features of a situation" (Belk 1975). In physical stores, this dimension usually entails the features (e.g., decorations, sounds, aromas, tastes, and textures) arousing the five sense appeals of human beings. In a virtual shopping environment, e-commerce enables rich visible surroundings through various IT artifacts, ranging from task-relevant designs (e.g., product information and presentation) to atmospheric designs (e.g., colour scheme, music, and website layout; Eroglu et al. 2001). Thus, physical surroundings of e-commerce usage situations can be mostly carried by CBEC platform design in terms of information and aesthetics. Platform design, as essential IT artifact-enabled physical surroundings, has been validated as a strong predictor of users' cognitive and affective evaluation across studies with different cultural contexts (Cyr 2008). This study, therefore, proposes the following hypotheses:

**H2a:** CBEC platform design is positively related to cognitive state.

**H2b:** CBEC platform design is positively related to affective state.

Social surroundings are social dimensions of a situation, such as the presence of others, the characteristics of these persons, and interpersonal interactions in offline encounters (Belk 1975). Unlike brick-and-mortar settings, the social surroundings of click-only shopping situations are usually derived from conducive communications enabled by various IT artifacts intended for online social interactions with e-commerce platforms. These elements become virtual shopping companions influencing shopping decisions along the buyer shopping journey. Arguably, the social surroundings of CBEC buyer situations should be largely mediated by user–platform interaction. The literature has documented that human–computer interaction is conducive to online experiences by enhancing buyer cognitive and affective states (Xu et al. 2014). This study, therefore, proposes the following hypotheses:

**H3a:** User–platform interaction is positively related to cognitive state.

**H3b:** User–platform interaction is positively related to affective state.

Temporal perspective cannot only be objectively specified in units spanning from the time of day to season of the year (Belk 1975) but also reflects on individuals' perceptions of a series of temporal factors at the time point of a purchase (Chocarro et al. 2013), such as time pressure for shopping, time available for awaiting goods being delivered, and perceived waiting time (Dabholkar and Bagozzi 2002). In CBEC, a relevant temporal factor most likely to deter potential shoppers is the waiting time for good delivery given complex logistics procedures (Kim et al. 2017). This study proposes that logistics evaluation, which refers to "the extent of a buyer's willingness to wait for goods delivery in CBEC", is represented as a proper temporal perspective of the buyer situation in CBEC. Arguably, people who can stand longer wait for good delivery will be more inclined to believe shopping with CBEC is worthwhile and pleasant. This study, therefore, proposes the following hypotheses:

**H4a:** Logistics evaluation is positively related to cognitive state.

**H4b:** Logistics evaluation is positively related to affective state.

Task definition refers to "an intent or requirement to select, shop for, or obtain information about a general or specific purchase (Belk, 1975)" and is usually operationalized as motivational shopping tasks. Simply put, consumer behaviours are task-oriented (Collier et al. 2015). Venkatesh et al. (2022) have validated that buyers clearly have preconceptions of the appropriateness of purchasing products/services online. Similarly, CBEC buyers may also have a certain inclination of when or what is appropriate of purchasing in CBEC. Both academic and anecdotal evidence indicates that CBEC purchases are generally motivated by buyer considerations of competitive prices, superior quality, wide assortments, and the need for authentic products. These elements may represent the main components of CBEC buyers' shopping tasks. Buyers with such task orientation may feel fit and have positive

cognitive and affective states during the shopping. This study, therefore, proposes the following hypotheses:

**H5a:** Task orientation is positively related to cognitive state.

**H5b:** Task orientation is positively related to affective state.

In addition, socioeconomic factors comprised of age, gender, monthly income, and education are considered as control variables. Figure 1 presents the overall conceptual research model.

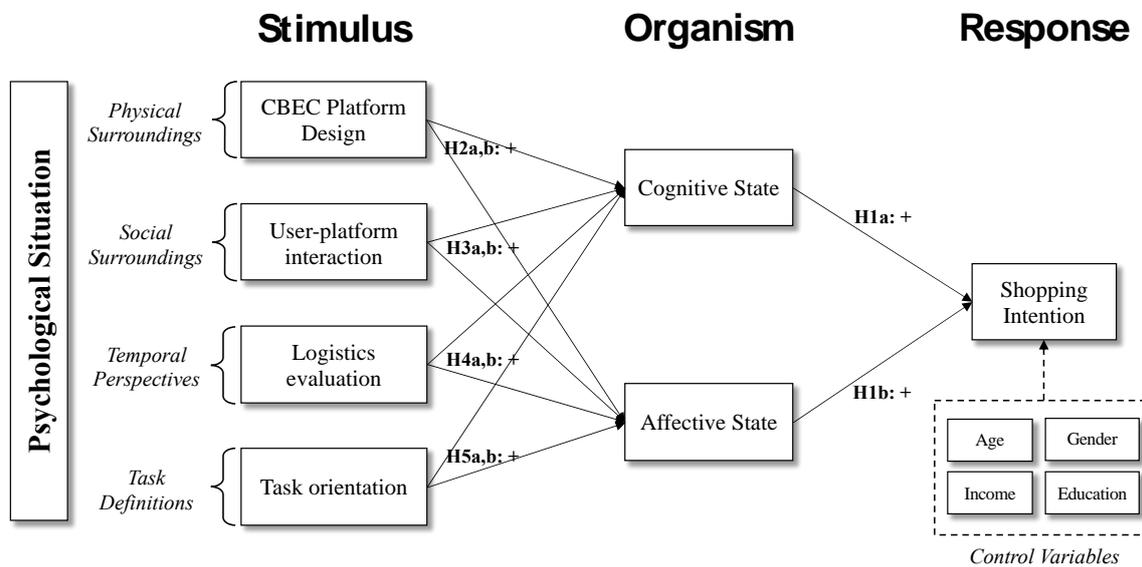


Figure 1. Conceptual research model

### 3 Methodology

#### 3.1 Instrument Development

A survey was conducted to collect research data. All questionnaire items were adapted from the extant literature with proper and appropriate modifications to fit the focal context. The modifications included 1) replacing those original scale contexts with the current CBEC setting, and 2) forming multi-item scales by combining different elements from multiple sources but reflecting the same construct (i.e., logistics evaluation). The example measurement items are presented in Appendix 1. Five items of CBEC platform design measure the CBEC characteristic design elements, including language translation, currency conversion, localized content, foreign product information, etc. Six items of user–platform interaction measure two-way communication, active control, and synchronicity of the CBEC platform. Four items of logistics evaluation measure international, domestic, and reverse logistics and customs inspection and clearance. Four items of task orientation measure buyers’ shopping need manifested in product prices, quality, variety, and authenticity. Four items of cognitive state and affective state measure satisfaction from the level of cognition and affect, respectively. Three items of shopping intention measure buyers’ future shopping inclination. All the items were designed to be scored on a seven-point Likert scale, ranging from (1) strongly disagree to (7) strongly agree.

#### 3.2 Data Collection

A US company (hereafter “the company”) was selected as the focal research subject. Founded in 1996, the company is a pure CBEC platform that is dedicated to selling various reliable and genuine cross-border products and features health and wellness products. It provides buyers with one-stop shopping services, ranging from orders to deliveries, and localized platform designs in terms of languages, currencies, units of measure, and marketing content. The company has market shares in more than 185 countries or regions and more than 11 million active buyers. All orders are fulfilled by direct shipment from overseas warehouses located in the USA, Hong Kong, and Korea.

This study conducted an online survey to collect data from the consumers of the company in Taiwan through online communities of the company on Facebook. By cooperating with the biggest community, which had a membership of more than 14,000 as of the investigation, the community manager featured our survey posters for recruiting voluntary participants. With their informed consent and confirmation

that they had purchased previously, participants were instructed to recall the most impressive product bought from the platform and indicate the time of purchase; otherwise, they were not allowed to proceed and were directed to a thank-you page. Subsequently, they were required to answer the remaining questions with reference to the recalled product.

After the two-week recruitment, 241 valid responses were collected. Among the valid samples, 193 participants were women (80.1%), and the majority were 26 to 45 years old (108, 44.8%) and had a bachelor's degree (159, 65.9%). Most respondents were women that could be attributed to this platform featuring health and well-being products, and women consumers are the main force buying such goods in the Chinese CBEC market. As the respondents recalled, most reference products were health supplements (72.1%), followed by baby care (13.4%) and beauty care (3.7%). In addition, most participants had a monthly income between TWD 25001 to 30000 (32, 13.2%), followed by less than TWD 20000 (30, 12.4%) and TWD 35001-40000 (30, 12.4%).

In addition, common method bias and non-response bias were examined through Harman's one-factor test (Podsakoff and Organ 1986) and Chi-square tests (Armstrong and Overton 1977), respectively. The results indicate that the research model is not likely to be distorted by these biases.

### 3.3 Data Analysis

Partial least square structural equation modelling (PLS-SEM) is used through SmartPLS 3.0 (Ringle et al. 2015) to test the proposed research model. The measurement model is examined to prove the reliability and validity of constructs and indicators, followed by the structural model that verifies the hypotheses.

## 4 Preliminary Results

### 4.1 Measurement Model

The measurement models were assessed through indicator reliability, internal consistency reliability, convergent validity, and discriminant validity (Hair et al. 2019). The factor loadings for all the indicators exceed the suggested cut-off value of 0.7. As presented in Table 1, the values of Cronbach's  $\alpha$  (CA), Dijkstra-Henseler's  $\rho A$ , and composite reliability (CR) of all constructs all exceed the suggested cut-off values of 0.7. The average variance extracted (AVE) for each construct exceeds the minimum threshold value of 0.5. Moreover, discriminant validity was evaluated through the Fornell-Larcker criterion and Heterotrait-Monotrait ratio. Table 1 shows that the square root of the AVE for each construct is greater than its correlation with the others, and the HTMT values are all lower than the threshold value of 0.9 (Henseler et al. 2015); thereby, verifying discriminant validity.

	CA	$\rho A$	CR	AVE	1	2	3	4	5	6	7
PD	0.89	0.90	0.92	0.70	0.84						
UI	0.89	0.90	0.91	0.63	0.78	0.80					
					(0.85)						
LE	0.85	0.88	0.90	0.70	0.59	0.59	0.84				
					(0.68)	(0.68)					
TO	0.73	0.73	0.84	0.56	0.46	0.41	0.37	0.75			
					(0.58)	(0.49)	(0.47)				
CS	0.88	0.89	0.92	0.74	0.61	0.62	0.56	0.45	0.86		
					(0.68)	(0.67)	(0.65)	(0.55)			
AS	0.96	0.96	0.96	0.89	0.74	0.78	0.64	0.52	0.68	0.94	
					(0.79)	(0.81)	(0.70)	(0.62)	(0.74)		
SI	0.94	0.94	0.96	0.89	0.53	0.57	0.57	0.38	0.65	0.68	0.94
					(0.57)	(0.59)	(0.63)	(0.46)	(0.71)	(0.71)	

Notes: PD is CBEC platform design; UI is user–platform interaction; LE is logistics evaluation; TO is task orientation; CS is cognitive state; AS is affective state; SI is shopping intention. Values in brackets are the HTMT indicators.

Table 1. Measurement model results

## 4.2 Structural Model

Bootstrapping with subsamples of 5,000 and the bias-corrected and accelerated method was then performed for hypothesis tests. Figure 1 shows the structural model results. The research model explains the variance of 52.4%, 47.2%, and 52.4% in shopping intention, cognitive state, and affective state, respectively; thus, indicating satisfactory explanatory power of the model.

Specifically, cognitive state ( $\beta = 0.359$ ,  $p < 0.001$ ) and affective state ( $\beta = 0.440$ ,  $p < 0.001$ ) have significant positive effects on shopping intention; hence, H1a and H1b are supported. CBEC platform design, user–platform interaction, and task orientation all have significant positive effects on cognitive state and affective state, respectively; hence, H2a-5a and H2b-5b are supported. In addition, this study did not find significant effects of age, gender, monthly income, and education on shopping intention.

Furthermore, this study also tested a competing model only involving direct situational effects on shopping intention without the mediation of internal organisms. The results indicate that only CBEC platform design has no significant impact on shopping intention.

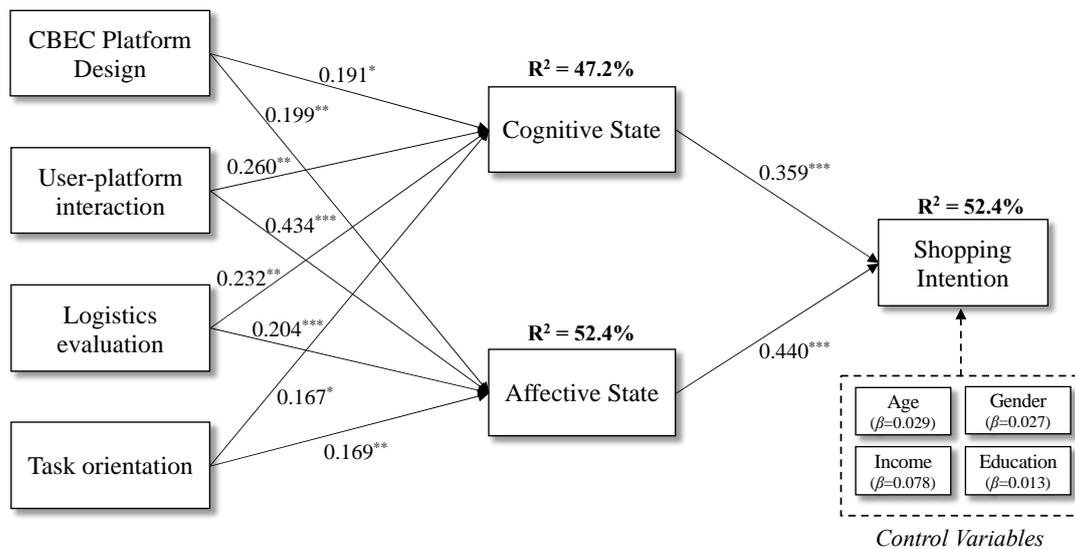


Figure 2: Preliminary results

## 5 Discussion

The present study aims to explore what and how situational factors influence buyers' shopping intention in CBEC. Drawing on buyer situations and the S–O–R model, this study elucidates the situational influence (as stimuli) on shopping intention (as the response) via cognitive state and affective state (as organisms). The research model accounts for more than fifty-percent variance in all endogenous constructs; thereby indicating the relevance and persuasion of the model conceptualization of this study.

From the perspective of psychological situations, CBEC platform design, user–platform interaction, logistics evaluation, and task orientation are identified as relevant situational factors for CBEC buyers. All these situational factors are substantiated to have significant positive effects on both cognitive and affective states. The results present potent evidence that CBEC shopping entails relevant and conducive buyer situations that comprise an informative and aesthetic situation (i.e., facilitated by a professionally designed website environment), an interactive situation (i.e., facilitated by the user–computer interactions), a temporal situation (i.e., facilitated by positive logistics evaluations), and a task definition situation (i.e., facilitated by task orientation). Differing from the prior IS research with an emphasis on objective situations (e.g., delivery distance and delivery days) in CBEC and some situationists in favour of objective situations, the findings echo the viewpoint of the situationists advocating psychological situation and have corroborated the role of psychological situations in the CBEC context. Future researchers may wish to also consider these salient psychological situations in the CBEC research context.

While confirming that situational factors are powerful determinants of buyer behaviour as claimed in the situationism literature, the findings that the roles of situational stimuli in buyer shopping intention are internalized by organisms further extend the understanding of conventional situational influential

mechanisms that directly exert on buyer behaviour. As congruent with prior scholarly validation, this study corroborates that cognitive state and affective state are potent and comprehensive factors that directly influence behavioural intentions and internalizing the perceptions induced by the object attributes under investigation (Frank et al. 2014; Rose et al. 2012). Without a holistic assessment of rational and emotional processing, direct exposure to situational factors may not necessarily conduce to purchasing as indicated in the competing model results. The necessity of the three-stage research framework modelling buyers' shopping intention thus is supported because buyers are more inclined to internalize all situational factors first before purchase. Future research may wish to also adopt the three-stage behavioural model when investigating buyer behaviours in other e-commerce settings.

## 5.1 Theoretical Implications

This study contributes to IS and marketing literature by modelling and corroborating the three-stage CBEC buyers' shopping intention formation mechanism. This model is underpinned by the S-O-R framework which integrates four situational factors as stimuli and two paralleled internalizing states as cognitive and affective organisms that have further effects on shopping intention as the response. Little research has yet explored situational influence on CBEC buyer behaviours; this study fills this gap and identifies CBEC platform design, user–platform interaction, logistics evaluation, and task orientation as situational factors relevant to CBEC buyers on a basis of Belk's (1975) situational taxonomy. Cognitive state and affective state are identified and verified as two pivotal organism factors that internalize situational stimuli and then shape ultimate shopping intention.

## 5.2 Practical Implications

In general, fostering rational thinking and emotional gratification is the key to CBEC buyers, while managing buyers' situational perceptions is the key to these two cognitive and affective states. Some overt situational characteristics that could be observed or selected by buyers such as website design and interactivity in IS usage situations, should be emphasized by platform managers to consider providing an informative and interactive online shopping environment. The CBEC platform should especially involve professional designs to facilitate cross-culture communications, idiomaticity (i.e., content localization), cross-border payments, cost specifications (e.g., tariffs and delivery fees), and laws and regulations compliance. A supportive social surrounding for CBEC buyers may be achieved by providing interactive shopping options, such as chatbots, online reviews, seller-buyer conversations, and consumer queries. On the other hand, other situational characteristics seem likely to be unobserved. Such factors (i.e., logistics evaluation and task orientation) are relatively difficult to manipulate prior to purchase and entail subtle combined strategies by the joint endeavour of IS and marketing departments. To enhance buyers' logistics evaluation, logistics information should be transparent through the logistics tracking system, and marketing promotions including quantity discounts (e.g., free shipping on orders above a certain amount) can be leveraged to minimize buyers' negative evaluation of international logistics. Moreover, CBEC vendors are suggested to select products by aligning with the primary shopping tasks of general CBEC buyers who tend to position CBEC as a shopping channel to pursue cost-efficient and authentic products from a wide variety of cross-border products.

## 6 Conclusion and Limitations

This study is the first attempt to introduce the buyer situation into the CBEC context and theorize a three-stage shopping intention formation mechanism based on the overarching S-O-R model. The results presented in the present study are based on preliminary data analysis. The authors will collect more survey data to test the model and discover more insights. For example, more situational factors of buyer relevance will be conceptualized and tested, the role of cognitive state and affective state will be compared, and cross-culture comparisons will be conducted.

Nevertheless, the present study has the following limitations. First, the proposed model only focuses on direct effects. Scholars have also suggested that person-by-situation interactions could explain a big proportion of the variance in buyer behaviours (Belk 1975; Lutz and Kakkar 1975). Future research may wish to consider such interactions in the CBEC studies. Second, relevant situational factors may vary from platforms, products, and brands. For instance, buyers' task orientation maybe not necessarily identical across different CBEC businesses, especially, niche markets. Future research is suggested to validate the proposed or identify other situational factors in different CBEC business models. Third, this study only used cross-sectional data to test situational influence on shopping intention. Situationism researchers can provide a deeper understanding of the intention–behaviour consistency through longitudinal studies.

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## Appendix 1

Constructs	No. of items	Example items	Sources
CBEC platform design	5	Item 1. The CBEC website allowed me to efficiently tailor the information for my specific needs, e.g., language translation, local currency conversion, payment preferences, delivery modes.	Cyr (2008)
User-platform interaction	6	Item 1. I was able to get information from the CBEC platform very rapidly.	Oh et al. (2014)
Logistics evaluation	4	Item 1. The international logistics time estimated for the product was acceptable.	Ai et al. (2016); Wang et al. (2021); Giuffrida et al. (2017)
Task orientation	4	Item 1. Before this purchase, I was planning to visit the CBEC platform for products at good prices.	Chang et al. (2014)
Cognitive state	4	Item 1. My choice to use the CBEC platform to buy cross-border products was a wise one.	Kim et al. (2018)
Affective state	4	Item 1. I was delighted to use the CBEC platform to buy cross-border products.	Kim et al. (2018)
Shopping intention	3	Item 1. I plan to use the CBEC platform to make a purchase in the future.	Venkatesh et al. (2003)

Table 2. Example of specific items of the questionnaire

## Acknowledgements

The first author acknowledges the support from the School of Business Western Sydney University and China Scholarship Council (202008600004). The third author acknowledges the Endowment Fund of National Taichung University of Science and Technology.

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