

Economic Conditions as an Environmental Moderator of E-Purchase Intention: A Meta-Analysis

Sam Zaza, Middle Tennessee State University, USA

Michael A. Erskine, Middle Tennessee State University, USA*

 <https://orcid.org/0000-0002-8802-7624>

ABSTRACT

Purchasing through e-commerce continues to expand rapidly and is expected to reach \$18.89 trillion by 2027. After two decades of e-commerce research, little is known about the effects of economic conditions (developed vs. developing). The authors synthesize prior e-purchase intention literature from multiple business disciplines (e.g., information systems, marketing) through a meta-analysis and use economic condition as an environmental moderator to explore this gap. They discuss the consolidated effects of the antecedents of e-purchase intention and explore research trends. They reveal that trust is the most studied antecedent, economic conditions of countries moderate some of the antecedents, and that this important research stream continues to evolve.

KEYWORDS

Developed Economy, Developing Economy, E-Commerce, E-Purchase Intention, Economic Conditions, Meta-Analysis

1. INTRODUCTION

Since the 1990s, organizations have developed and implemented business models and processes to foster the benefits of e-commerce. Initially, organizations invested in e-commerce to a) operate more efficiently by not carrying unnecessary inventory, b) eliminate the need for often-expensive retail facilities, c) foster greater transparency through well-documented records of transactions, d) avoid higher insurance premiums typically incurred with physical retail locations, and e) remain competitive and relevant to consumers (e.g., Wu & Chang, 2016; Synup, 2019). However, as e-commerce evolved, so did the consumer expectations of the e-purchasing process. While e-purchasing was novel just two decades ago, tremendous efficiencies and intense competition have led to shifting consumer expectations (Vakulenko, Hellström, & Hjort, 2018). For instance, online shoppers expect nominal delivery costs, doorstep delivery, traceability solutions, and convenient reverse logistics (Abdul-Muhmin, 2010; Aziz & Wahid, 2018).

However, e-commerce operations may not be able to meet these expectations everywhere. Differing consumer contexts may explain why e-commerce is more successful in some countries. For instance, in the United States, online sales increased from 128.1 billion USD in 2007 (Rose, Hair, & Clark, 2011) to 365.2 billion USD by 2019 and are projected to reach 600 billion USD by 2024. Meanwhile, the e-commerce market of the entire African continent will reach just 22 billion USD

DOI: 10.4018/JECO.298644

*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

by 2022 (Clement, 2020). This represents just a small portion of the rapidly expanding e-commerce market expected to reach \$18.89 trillion globally by 2027 (Flow, 2020). If the entire African continent can only reach a fraction of the online sales in the United States, perhaps the e-commerce strategies applied in developing economies are mismatched to their unique needs. These different economic contexts may help explain why some empirical research – in this widely studied area – continues to reveal inconsistent findings (e.g., Lim, Sia, Lee, & Benbasat, 2006; Kim, Ferrin, & Rao, 2009; Wells, Valacich, & Hess, 2011; Benlian, Titah, & Hess, 2012; Thatcher, Carter, Li, & Rong, 2012; Verhagen & Bloemers, 2017). In response, this study aims to 1) consolidate the factors studied in prior literature to reveal the most impactful factors, and 2) examine the potential moderating effects of economic condition between developed (higher economic condition) and developing countries (lower economic condition).

Next, we present a background discussion on e-purchase intention. Following this, we explain how we used a meta-analysis of the consolidated effects of the factors to derive our results. Moreover, we explain why economic conditions are a likely potential moderator between e-purchase intention and many of its antecedents. Finally, we provide a discussion of our findings along with implications for theory and practice.

2. BACKGROUND ON E-PURCHASE INTENTION

In our study, we define e-purchasing as an online transaction between organizations (also referred to as businesses, vendors, service providers, retailers, and venues) and consumers (sometimes referred to as users, customers, and clients). Often guided by technology adoption and consumer behavior perspectives (Davis, 1989; Fishbein & Ajzen, 1975), researchers have identified several major factors that drive e-purchase intentions. Early research addressed broad research questions related to consumers switching to online shopping and focused on consumers' willingness to purchase online. While trust, perceived risk, and perceived usefulness are perhaps the most commonly studied antecedents, scholars have found that other factors drive or limit e-purchase intentions. However, e-purchasing is a dynamic behavior, therefore some of the antecedents once considered critical predictors of e-purchase intention may no longer be relevant (Escobar-Rodríguez & Bonsón-Fernández, 2017). These no-longer critical antecedents include individual characteristics (Kim & Kim, 2004), motivations (Martins, Costa, Oliveira, Gonçalves, & Branco, 2019), and design choices (Liang & Lai, 2002; Shukla, 2014). A comprehensive list of antecedents of e-purchase intention examined in this study and their corresponding definitions can be found in Appendix Table A1.

While early e-purchase intention research focused on factors that led consumers to purchase online, modern consumers frequently purchase online and have widely different expectations than just 10 years ago. For instance, while one-week delivery was once novel, expectations regarding the shipment of goods purchased online have shifted dramatically due to enhanced logistics networks (Shukla, 2014). Today's consumers demand quick delivery (e.g., prepared meals delivered in less than an hour, fresh groceries delivered in less than two hours, and non-perishable products delivered in two days or less). Customers expect efficient return services with immediate, no-hassle refunds in the case of purchases that require a physical evaluation (e.g., clothing and shoes). Similarly, consumers expect immediate scheduling or confirmation when purchasing services and experiences, such as electronic tickets to an event.

Modern consumers also have expectations regarding e-commerce platform design and performance (Kim & Kim, 2004; Shukla, 2014). Most consumers expect that online purchases can be made using a mobile device through a platform with a high-quality yet straightforward design (Kim & Kim, 2004; Shukla, 2014; Kim & Park, 2013). Although many e-commerce organizations provide trust mechanisms, consumers in most developed economies are further protected by fraud prevention and fraud mitigation services through their digital payment providers. Furthermore, online

purchases can occur through various platforms with diverse consumer relationships and strategies, as summarized in Appendix Table A2.

3. EXPLORING THE MODERATING ROLE OF COUNTRY ECONOMIC CONDITION

As developed economies have heavily invested in physical infrastructure, telecommunication capabilities, and workforce development, these economies can now reap the benefits of these investments through advances in e-commerce efficiency and growing profit. Alternately, as developing countries have not had opportunities to make similar investments, they struggle to make e-commerce commonplace, efficient, and profitable. For instance, in countries with limited road infrastructure, goods are often shipped using air transport, which reduces profits for organizations or increases prices for consumers¹. Further differences between developed and developing contexts include advances in digital payment mechanisms, technology-friendly legislation, and robust consumer protection mechanisms. The growth of e-commerce operations in developing economies has occurred at a slower pace than in developed economies.

Furthermore, consumer expectations about purchasing online have diverged between developed and developing economies. For example, the effect of website design has shown varying effect sizes (Kim & Kim, 2004; Kim & Lennon, 2013). Differences in consumer expectations may explain inconsistent findings in academic research that has explored e-purchase intention and its influencing factors. Due to the economic condition influencing both the e-commerce infrastructure and consumer behavior, it may be a critical moderator of e-purchase intention.

Recent literature from the e-purchase intention stream identified moderators such as cues (Stouthuysen, Teunis, Reusen, & Slabbinck, 2018), perceived privacy risk and perceived performance risk (Chen & Huang, 2017), food safety consciousness (Zhao, Deng, & Zhou, 2017), religiosity (Agag & El-Masry, 2016), and perceived financial risk (Chang & Tseng, 2013). However, we could not identify a significant stream focused on the moderating role of economic condition. Therefore, based on the influence of economic condition on various aspects of e-commerce and differences in consumer expectations identified through empirical research, we investigate the potential moderating effect of economic condition on e-purchase intention through a meta-analysis.

4. METHOD

We apply a meta-analysis, a quantitative statistical method often used to summarize a large set of empirical studies that ask similar research questions. A meta-analysis is appropriate for our investigation for three reasons. First, a quantitative review of e-purchase intention can empirically resolve inconsistent findings across studies (Hunter & Schmidt, 2004). Thus, we can help explain the correlation between the antecedents (e.g., trust, perceived risk) and e-purchase intention. Second, a meta-analysis corrects the reported effect sizes by accounting for sampling and measurement errors (Schmidt & Hunter, 2014). We can, therefore, provide a more precise estimate of the effect size and direction of the relationships between constructs. Third, meta-analyses can also examine attenuations attributed to research designs, methodological factors, or contextual factors (Schmidt & Hunter, 2014).

4.1 Literature Search and Inclusion Criteria

To ensure that our literature search included sufficient numbers of articles examining e-purchase intention in the context of developed and developing economies, we utilized the SCOPUS index. SCOPUS includes nearly twice as many journals as Web of Science, and most of the journals are from outside the USA. Furthermore, SCOPUS includes 860 journals representing the Middle East and Africa, 790 journals representing Latin America, 2,230 representing the Asia Pacific region, 6,600 representing the United States, and 13,000 representing European outlets (SCOPUS, 2020).

Including journals from various economic contexts is essential to our study as we plan to compare findings between developed and developing economies (Burnham, 2006).

The inclusion criteria consisted of empirical studies 1) designed to reflect the antecedent to e-purchase intention relationship with a unit of analysis at an individual level, 2) reporting the minimum necessary information to conduct a meta-analysis such as the correlation between an antecedent and e-purchase intention, 3) reported the sample size, and 4) where the e-purchase intention is not limited to specific product types. To retrieve articles, combinations of different keywords were searched, including “electronic commerce,” “internet purchase,” “purchase over the Internet,” “e-purchase,” “e-purchase intention,” “intention to online purchase,” “intention to e-purchase,” “online purchase,” “online purchase intention,” “e-commerce purchase intention,” “online shopping,” and “e-commerce purchase.” We retrieved only the articles 1) written in English, 2) where the ultimate dependent variable was e-purchase intention, and 3) where the study description adequately described the location of the research subjects (e.g., country of their study population). This step was necessary to ensure that we could include their findings into our classifications for developed and developing economic contexts. Our search resulted in a sample of 231 relevant articles published from January 2002 through October 2021.

While we did not constrain the literature by publication outlet, we did remove studies published in questionable journals or those operated by for-profit organizations. Jeffrey Beal’s, now anonymously maintained, list of predatory journals was used to eliminate questionable publications². We also removed Master’s theses, qualitative studies, conceptual papers, and studies with very large N outliers. To strengthen the consistency of findings, we only report results where the total number of studies for a specific antecedent is equal or greater than six (i.e., $k \geq 6$). These further restrictions led us to exclude an additional 106 articles, resulting in 121 relevant articles.

4.2 Meta-Analytic Approach

The sample size, the correlation between e-purchase intention and the antecedents, reliability statistics of the antecedent(s) and e-purchase intention, the average age of the sample, percentage of males to represent gender, the country of origin of the sample, economic condition (developed and developing), and the scales used were coded to perform our qualitative analysis. The Word Bank classifications were used to sort countries as having developed or developing economies. Two authors and one research assistant coded the studies that passed all inclusion criteria. Hunter and Schmidt’s (2004) psychometric approach examines sample size and reliability estimates to correct the effect size for sampling and measurement errors. As the sample sizes varied drastically between studies, a random-effects meta-analysis was performed (Hunter & Schmidt, 2000).

In cases when the mean reliability was missing, we used the Spearman-Brown formula to impute the mean reliability. A 95% confidence interval was used to determine the significance of the effect sizes whenever the interval does not include the zero point (Whitener, 1990). Papers were separated based on the context of the study participants (e.g., located in developed or developing economies), facilitating an examination of economic conditions as a potential environmental level moderator. The Q homogeneity statistics were used to identify the potential presence of moderators. A significant Q value implies that the reported effect sizes are significantly different across the studies.

5. RESULTS

While we identified 138 unique antecedents in our meta-analysis of 121 relevant articles. However, we present only the 23 antecedents where the total sample size is equal or greater to six ($k \geq 6$) and at least one study was performed in either a developed or developing context for comparison. Achieving this sample (k) size is essential to facilitate effective clustering based on the country economic condition. The most studied antecedents are trust ($k = 49$), perceived usefulness ($k = 23$), perceived risk ($k = 22$), and perceived ease of use ($k = 19$).

By evaluating the bivariate relationship between trust and e-purchase intention, as shown in Table 1, we found the following. The first row for each antecedent indicates the overall effects regardless of the country economic condition. In the case of the trust antecedent, we identified 49 articles with a combined sample size of 19,494 across all studies. Trust has a weighted correlation (r) of 0.51 and a corrected population correlation (ρ) of 0.58 (with an SD of 0.16 and SE of 0.02). The 95% confidence interval does not include zero, indicating significance. We can establish an enduring relationship between trust and e-purchase intention through the SE, and the failsafe N. A small SE (less than .08) denotes limited variability in rho values, indicating an enduring effect. In addition, we calculate the failsafe N, indicating that 191 studies are needed to nullify the effect of trust on e-purchase intention (Borenstein, Hedges, Higgins, & Rothstein, 2009). Based on these findings, researchers no longer need to consider trust as an antecedent of e-purchase intention. Instead, this variable should be retired or relegated to a control variable. The following two rows concerning the trust antecedent present the values for developed and developing country economic conditions, respectively. Here too, enduring effects are established. The t-test reveals that there are significant differences based on country economic condition for this relationship. Therefore, country economic condition is a likely moderator.

In addition to trust, the following variables exhibit an enduring effect based on the SE being less than .08: perceived usefulness, perceived risk, perceived ease of use, attitude toward online purchasing, subjective norms, reputation, information quality, perceived value, consumer satisfaction, security concerns, familiarity, hedonic value, price, enjoyment, control, personal innovativeness, and privacy concerns. On the other hand, the following variables are not yet enduring and require additional investigation: service quality, flow, interactivity, playfulness, and purchase frequency. As the rho values are unstable for these variables, these studies must be interpreted with caution. Indeed, more studies are needed for these variables.

The analysis further revealed that country economic condition has statistically significant (at t-test values of 1.96 or greater) moderating effects on e-purchase intentions from the following antecedents: trust, perceived usefulness, perceived risk, perceived ease-of-use, perceived value, familiarity, service quality, and personal innovativeness. Conversely, attitude toward online purchasing, subjective norms, reputation, information quality, consumer satisfaction, security concerns, hedonic value, flow, price, interactivity, enjoyment, control, playfulness, purchase frequency, and privacy concerns do not appear to have a potential moderator (i.e., Q is nonsignificant). However, for many of these variables, the SE is greater than 0.08, indicating high variability and signifying a need for additional research to identify precise effects. Table 1 shows the full results of our bivariate analysis.

6. DISCUSSION AND IMPLICATIONS

This study provides one of the first steps toward consolidating the stream of e-purchasing research and highlighting the generalizability and the contextual factors of e-purchase intention, hence creating a benchmark for researchers comparing antecedents of e-purchase intention. Our quantitative review aims to: 1) consolidate the factors studied in prior literature and reveal the most impactful factors and 2) determine if economic conditions are a potential source of variations in the reported results. See Table 2 for an overview of our findings.

Table 1. Bivariate Analysis Results

Antecedents	k	N	r	ρ	SD of ρ	SE	95% CI	Q	Sig.	Fail-safe N	t-test
Trust	49	19494	0.51	0.58	0.16	0.02	.54,.63	865.54	<0.001	191	
<i>Developed</i>	15	666	0.49	0.57	0.13	0.03	.50,.63	192.47	<0.001	58	0.00
<i>Developing</i>	29	11182	0.53	0.61	0.16	0.03	.55,.67	543.2	<0.001	117	
Perceived usefulness	23	7649	0.46	0.51	0.21	0.04	.42,.60	429.86	<0.001	82	
<i>Developed</i>	6	2444	0.37	0.4	0.18	0.07	.25,.56	97.93	<0.001	18	0.04
<i>Developing</i>	13	4070	0.5	0.57	0.21	0.06	.45,.69	254.41	0.00	50	
Perceived risk	22	6361	-0.35	-0.4	0.31	0.06	-.53,.26	673.66	0.00	66	
<i>Developed</i>	7	1844	-0.42	-0.46	0.18	0.07	-.60,.32	87.49	0.00	23	0.05
<i>Developing</i>	12	3905	-0.38	-0.43	0.22	0.06	-.56,.30	221.66	0.00	38	
Perceived ease of use	19	6305	0.33	0.38	0.22	0.05	.27,.48	318.36	0.00	55	
<i>Developed</i>	4	1953	0.18	0.19	0.13	0.07	.06,.33	28.3	0.00	8	0.00
<i>Developing</i>	11	3227	0.41	0.47	0.23	0.07	.33,.62	213.72	0.00	37	
Attitude toward online purchasing	16	6959	0.49	0.57	0.22	0.05	.46,.69	543.85	0.00	62	
<i>Developed</i>	5	2922	0.41	0.49	0.27	0.12	.25,.73	249.31	0.00	17	0.20
<i>Developing</i>	10	3601	0.55	0.63	0.18	0.06	.51,.75	209.06	0.00	42	
Subjective norms	15	6758	0.41	0.46	0.17	0.04	.37,.55	281.2	0.00	50	
<i>Developed</i>	5	2592	0.32	0.36	0.17	0.08	.20,.51	90.63	0.00	14	0.12
<i>Developing</i>	8	3492	0.49	0.52	0.14	0.05	.44,.65	132.85	0.00	29	
Reputation	14	4425	0.46	0.5	0.24	0.06	.37,.63	328.95	0.00	49	
<i>Developed</i>	5	2002	0.48	0.51	0.25	0.11	.28,.73	163.61	0.00	18	0.07
<i>Developing</i>	7	2165	0.42	0.47	0.24	0.09	.29,.66	151.87	0.00	23	
Information Quality	13	6565	0.45	0.48	0.19	0.05	.37,.58	404.26	0.00	44	
<i>Developed</i>	2	884	0.57	0.62	0.18	0.13	.36,.88	68.226	0.00	8	0.15
<i>Developing</i>	11	5691	0.43	0.48	0.19	0.06	.36,.60	316.98	0.00	37	
Perceived value	11	3775	0.68	0.76	0.13	0.04	.68,.84	236.24	0.00	53	
<i>Developed</i>	5	1779	0.7	0.78	0.11	0.05	.67,.88	86.77	0.00	25	-0.04
<i>Developing</i>	5	1527	0.7	0.75	0.16	0.07	.61,.90	140.6	0.00	24	
Satisfaction	11	3554	0.47	0.53	0.22	0.07	.38,.68	350.55	0.00	40	
<i>Developed</i>	4	1374	0.4	0.47	0.68	0.04	.39,.55	15.704	0.00	13	-0.25
<i>Developing</i>	5	1922	0.54	0.6	0.77	0.13	0.33,.86	343.74	0.00	20	
Security concerns	9	3573	-0.43	-0.48	0.18	0.06	-.60,.35	174.03	0.00	31	
<i>Developed</i>	5	1671	-0.48	-0.53	0.17	0.07	-.68,.38	82.97	0.00	18	0.15
<i>Developing</i>	3	966	-0.22	-0.24	0	0.03	-.31,.18	3.67	0.16	7	
Familiarity	9	4166	0.47	0.52	0.22	0.07	.38,.67	280.93	0.00	32	
<i>Developed</i>	5	2411	0.51	0.55	0.22	0.1	.34,.75	168.25	0.00	19	0.00
<i>Developing</i>	4	1755	0.43	0.49	0.2	0.1	.28,.69	104.84	0.00	14	
Hedonic Value	9	4707	0.42	0.5	0.16	0.05	.39,.62	193.17	0.00	32	
<i>Developed</i>	1	750	0.5	0.56	0	0	.56,.56	0	n.s.	4	-0.08
<i>Developing</i>	7	3372	0.46	0.54	0.14	0.05	.43,.65	105.8	0.00	26	
Service Quality	8	3297	0.34	0.38	0.62	0.09	.07,.44	80.58	0.00	23	

Table 1 continued on the next page

Table 1 continued

Antecedents	k	N	r	ρ	SD of ρ	SE	95% CI	Q	Sig.	Fail-safe N	t-test
<i>Developed</i>	3	1094	0.29	0.32	0.57	0.13	.05,.59	61.828	0.00	8	-0.04
<i>Developing</i>	4	1690	0.31	0.35	0.59	0.14	.07,.63	117.6	0.00	11	
Flow	8	3369	0.32	0.36	0.25	0.09	.19,.54	238.97	0.00	22	
<i>Developed</i>	4	1489	0.34	0.38	0.3	0.15	.07,.68	163.86	0.00	12	0.23
<i>Developing</i>	4	1880	0.31	0.35	0.19	0.09	.16,.54	76.67	0.00	11	
Price	8	2993	-0.44	-0.48	0.17	0.06	-.60,.36	101.97	0.00	27	
<i>Developed</i>	2	1486	-0.39	-0.41	0.06	0.04	-.51,.31	5.16	0.02	6	-0.14
<i>Developing</i>	6	1507	-0.5	-0.56	0.21	0.09	-.73,.38	93.53	0.00	23	
Interactivity	7	5489	0.15	0.16	0.21	0.08	.00,.32	221.55	0.00	13	
<i>Developed</i>	1	3000	-0.01	-0.01	0	0	-.01,.01	0	n.s.	1	-0.39
<i>Developing</i>	6	2489	0.34	0.38	0.15	0.06	.25,.50	1.75	0.88	17	
Enjoyment	7	2660	0.39	0.43	0.14	0.05	.31,.54	63.09	0.00	22	
<i>Developed</i>	2	1263	0.31	0.33	0.11	0.08	.16,.50	11.55	0.00	5	0.09
<i>Developing</i>	4	1043	0.43	0.47	0.1	0.05	.36,.59	19.32	0.00	13	
Control	7	2497	0.39	0.42	0.22	0.03	.35,.50	34.73	0.00	22	
<i>Developed</i>	2	487	0.29	0.34	0	0.01	.31,.37	0.01	0.92	5	-0.15
<i>Developing</i>	4	1574	0.43	0.45	0.13	0.06	.33,.57	30.95	0.00	13	
Playfulness	7	3796	0.48	0.55	0.26	0.1	.35,.74	350.57	0.00	26	
<i>Developed</i>	2	1600	0.57	0.63	0.21	0.15	.33,.93	147.31	0.00	8	0.06
<i>Developing</i>	5	2196	0.41	0.48	0.27	0.12	.23,.72	170.87	0.00	17	
Personal innovativeness	6	2050	0.4	0.46	0.18	0.07	.31,.61	84.56	0.00	20	
<i>Developed</i>	2	623	0.26	0.32	0.08	0.07	.17,.47	10.33	0.00	5	0.02
<i>Developing</i>	2	891	0.54	0.63	0.07	0.06	.51,.75	6.73	0.01	8	
Purchase frequency	6	1737	0.58	0.64	0.31	0.12	.39,.89	274.34	0.00	25	
<i>Developed</i>	3	470	0.54	0.57	0.02	0.03	.49,.64	3.72	0.16	12	-0.35
<i>Developing</i>	3	1267	0.6	0.67	0.36	0.21	.26,1.09	284	0.00	13	
Privacy concerns	6	2792	-0.31	-0.35	0.1	0.04	-.44,.26	33.26	0.00	17	
<i>Developed</i>	2	702	-0.29	-0.33	0.15	0.11	-.56,.10	19.3	0.00	5	0.19
<i>Developing</i>	3	1577	-0.33	-0.37	0.08	0.05	-.48,.26	11.82	0.00	9	

Note(s): 1) To be included, antecedents must have a total sample size equal or greater to six ($k \geq 6$), and at least one of these studies was performed in either a developed or developing context. 2) When failsafe N is divided by k, ratios below 2.0 indicate publication bias is a potential problem (cf. Sabherwal et al., 2006). 3) k = number of studies; N = total number of observations across k; Rho = corrected population correlation point estimate; SD = standard deviation of rho; 95% CI = $1.96 * ((\rho / r) SD\rho / k)$ (cf. Daniel and Terrell, 1995, p. 266; Hunter and Schmidt, 2004, p. 207). 4) The formula is Failsafe N = $k[(\rho + 0.2) / 0.2]$ where 0.2 is a "small" corrected population correlation estimate increase (cf. Long, 2001). As noted in the formula, "failsafe N" refers to the k-value (i.e., the number of studies, not the number of subjects) needed to nullify an effect. (cf. Borenstein et al., 2009). 5) $Q = \sum[(Ti - Tave)^2 / vi]$

Table 2. Overview of Antecedents of e-Purchase Intention

Antecedent(k ³ 6)	Consolidated Effect (ρ)	Significance of Effect (p value)	Enduring Effect (SE < .08)	Moderating Effect (t-test)
Trust	0.58 (+)	●	●	●
Perceived Usefulness	0.51 (+)	●	●	●
Perceived Risk	0.40 (-)	●	●	●
Perceived Ease of Use	0.38 (+)	●	●	●
Attitude	0.57 (+)	●	⊖	i
Subjective Norms	0.46 (+)	●	●	i
Reputation	0.50 (+)	●	⊖	i
Information Quality	0.48 (+)	●	⊖	i
Perceived Value	0.76 (+)	●	●	●
User Satisfaction	0.53 (+)	●	⊖	i
Security Concerns	0.48 (+)	⊖	●	i
Familiarity	0.52 (+)	●	⊖	●
Hedonic Value	0.50 (+)	⊖	●	i
Service Quality	0.38 (+)	●	i	●
Flow	0.36 (+)	●	i	i
Price	0.48 (+)	●	⊖	i
Interactivity	0.16 (+)	⊖	●	i
Enjoyment	0.43 (+)	●	●	i
Control	0.42 (+)	⊖	●	i
Playfulness	0.55 (+)	●	i	i
Personal Innovativeness	0.46 (+)	●	●	●
Purchase Frequency	0.64 (+)	⊖	i	i
Privacy Concerns	0.35 (+)	●	⊖	i

Note(s):
 1) Significance of Effect (p value): ● significant, i non-significant; ⊖ significant overall & non-significant at economic context level (see Table 1 for details).
 2) Enduring Effect (SE < .08): ● detected, i not detected, ⊖ detected overall, but not detected at economic context level (see table 1 for details)
 3) Moderating Effect (t-test): ● significant, i non-significant
 4) Attitude refers to attitude toward online purchasing.

6.1 Antecedents of e-Purchase Intention

We identified trust ($k=49$), perceived usefulness ($k=23$), perceived risk ($k=22$), perceived ease-of-use ($k=19$), and attitude toward online purchasing ($k=16$) as the most studied antecedents of e-purchase intention. These antecedents borrowed heavily from the technology adoption literature and focused on determining why consumers purchased online. Moreover, e-purchase intention was viewed through the lens of various technology adoption theories, such as the Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), and the consumer variant of the Unified Theory of Acceptance and Use of Technology (UTAUT2). While this research was essential for understanding the initial transition from traditional retail channels to online retail channels, e-commerce is now a largely accepted paradigm. Accordingly, newer antecedents focus on the shopping experience (e.g., reputation, purchase frequency, price). Such antecedents are frequently borrowed from the consumer marketing literature. However, the theoretical approaches are often not updated, resulting in technology adoption models attempting to explain contemporary online consumer behavior.

Our analysis identified 99 antecedents introduced in just the past two years (e.g., perceived on/off service, perception of digital advertising, personification of AI, involvement with SNS, gender egalitarian, country of origin). The new antecedents focus on recent technological advances and are often associated with personalized shopping experiences. Examining these new antecedents presents interesting opportunities for researchers. For instance, researchers could contribute to the research stream by further testing these antecedents in empirical studies. Alternatively, researchers could examine the roles of these relationships by postulating theories. It is important to note that sometimes there would have been sufficient studies to perform a meta-analysis (e.g., website design or electronic word-of-mouth), however, the authors may have neglected to identify the location of their sample subjects. We call upon researchers to evaluate and report contextual factors when exploring new antecedents to provide additional clarity about potential moderators.

6.2 Context of Country Economic Condition (e.g., Developed vs. Developing)

Referring to Table 1, we find that perceived risk, perceived value, and familiarity were strong predictors of e-purchase intention in the *developed economy* context. Each of these relates to the consumer shopping experience with less focus on technology adoption. In the case of perceived risk, this variable has been widely used in the consumer marketing literature. It suggests that an evaluation of risk is likely to occur when consumers make a purchase decision (Bauer, 1960). Such perceived risk is broadly defined as a “perception of the riskiness associated with buying” (Dowling & Staelin, 1994, p. 126). Alternatively, perceived risk is more explicitly defined as “the subjectively determined expectation of financial, performance, psychological and time/convenience risk by an internet shopper in planning a particular online purchase” (Kim & Lennon, 2009, p. 40). Perceived risk consists of multiple risk factors, including financial risk, product risk, security risk, time risk, social risk, and psychological risk (Jacoby & Kaplan, 1972; Ariffin, Mohan, & Goh, 2018). As consumers cannot inspect the merchandise, perceived risk plays a vital role in e-commerce and e-purchase intention (Lee & Tan, 2003). Perceived risk evaluates environmental and behavioral uncertainty and related negative and positive consequences (Cox & Rich, 1964; Ring & Van de Ven, 1994). As environmental uncertainty can be derived from the infrastructure, online shoppers may perceive increased risks over a physical retail location in an online retail environment (Pavlou, 2003). Perhaps consumers in developed economies have switched to traditional consumer behaviors once they established familiarity and comfort with online shopping. In other words, online shopping is no longer a novelty.

In developing economies, trust, perceived usefulness, perceived ease of use, service quality, and personal innovativeness are strong predictors of e-purchase intention. Again, these constructs are almost immediately recognizable as essential technology adoption factors (Davis, 1989). Therefore, it is likely that the sluggish growth of e-commerce in developing economies has led to limited consumer exposure causing consumers (and researchers) to evaluate e-commerce as a novel technology. In other words, while consumers in developed economies have become familiar with online shopping,

such experiences remain novel in developing economic contexts. Therefore, perceived usefulness and perceived ease of use, well-established constructs in the technology adoption literature, explain e-purchase intention. Perceived usefulness is defined as “the individual’s perception of the act of performing a behavior to gain specific rewards as expected” (Chen & Teng, 2013, p. 6). Perceived usefulness is essential in the context of e-purchase intention in several distinct ways. For instance, based on the study design, the evaluation of perceived usefulness can capture the general opinion of e-commerce, judgment about the usefulness of a product, or even an evaluation of the platform provider’s usefulness. Exploring the consumer evaluation of the general usefulness of e-commerce is particularly important, as individuals are often skeptical of innovations. Furthermore, individuals attempt to determine value and usefulness when evaluating a product, whether a physical good or a service. Finally, the usefulness of an online platform is evaluated during the purchase process. Developed economies have become familiar with e-purchasing due to the penetration of online offerings and the abundance of digital service providers. In contrast, online retailers in developing economies may carry a limited selection of items and require substantial delivery times due to inadequate road, ship, rail, and air infrastructure.

Similarly, perceived ease-of-use refers to “the extent to which an online shopper perceives the website as easy to use, and the minimum amount of effort” (Chen & Teng, 2013, p. 4). Ease-of-use is an essential construct in the technology adoption domain. Therefore, if consumers are evaluating e-commerce websites through ease-of-use, it likely indicates that 1) such websites are not providing design and features relevant to the needs of consumers of the specific economic context, or 2) that consumers are still evaluating whether to adopt e-commerce, instead of whether to make a purchase. Perhaps perceived ease-of-use has smaller effects in developed economies because e-commerce websites are mostly uniform in their design and functionality and therefore evaluated similarly by consumers. It should be noted that cultural differences have been shown to define perceptions of website quality. Therefore, design principles adopted from developed economies may not generate perceptions of ease-of-use for consumers in all contexts (Gefen, 2000).

6.3 Comparing Country Economic Condition (e.g., Developed vs. Developing)

In the context of developed economies, perceived risk (**0.46**, 0.43), perceived value (**0.78**, 0.75), familiarity (**0.55**, 0.49) were strong predictors of e-purchase intention. (Note that ρ values for developed economies are shown in bold.) These variables highlight the maturity of e-commerce in *developed* economies. Consumers in these markets seek value in online shopping, particularly when compared to traditional stores. Similarly, familiarity with the platform indicates repeat shopping and the development of preferences. In the context of *developing* economies, trust (0.57, **0.61**), perceived usefulness (0.40, **0.57**), perceived ease of use (0.19, **0.47**), service quality (0.32, **0.35**), and personal innovativeness (0.32, **0.63**) were strong predictors of e-purchase intention. (Note that ρ values for developing economies are shown in bold.) Unlike the developed economies, these variables tend to focus on variables from the technology adoption literature. Essentially, consumers in these markets utilize antecedents expected of technology adopters, which highlights greater uncertainty with online shopping in general.

6.4 Scholarly Implications

We identified several antecedents that warrant further investigation. For instance, in the context of developed economies, the effects of hedonic value perceptions, interactivity, control, and purchase frequency on e-purchase intention are nonsignificant. In the context of developing economies, security concerns, and interactivity on e-purchase intention are nonsignificant. There may be additional non-hypothesized variables at play, therefore, additional studies are warranted. Furthermore, some antecedents are influenced by economic condition (e.g., subjective norms, perceived value), while others are not (e.g., enjoyment, service quality). Researchers should apply theoretical evaluations and

empirically test these phenomena to determine why country economic condition moderates some, but not all, antecedent to e-purchase intention relationships.

Country economic condition could manifest itself in a myriad of ways, particularly regarding physical infrastructure (e.g., warehouses and road conditions), legislative support and consumer protection, electronic payment mechanisms, technology infrastructure (e.g., broadband internet). E-commerce platforms designed as rich, interactive experiences, could be a considerable limitation when viewed over low-bandwidth networks or using incompatible devices. Frustrated consumers may certainly experience less enjoyment in such situations. Similarly, the utility of online purchases may be minimal when physical retailers are located near the consumer and carry sufficient inventory. In contrast, online purchases may limit the order types and require substantial delivery times due to inadequate road, ship, rail, and air infrastructure.

Our evidence certainly supports that country economic condition is a potential moderator for many antecedents. Considering the potential of economic condition as a moderator of e-purchase intention, we encourage researchers to report the location of their sample population. While many studies examine e-purchase intentions, most could not be included as we could not identify the location of the sample population to determine the contextual economic condition. We therefore encourage researchers investigating e-purchasing to carefully sample by country and consider investigating the moderating role of country economic condition as part of their study design.

Furthermore, we found that actual purchase behavior is understudied with e-purchase intention used as a frequent proxy variable. While behavioral intention does not always lead to the actual behavior, researchers should measure actual purchase behaviors and test their research questions accordingly. Other understudied areas involving the country's economic condition relate to multi-channel integration. In such situations, consumers start the purchase process at a physical retail location but then complete the actual purchase online (Verhagen & van Dolen, 2009; Wu & Chang, 2016). Another area in need of more exploration is the use of e-commerce platforms by third-party sellers. Specifically, little is known about the concurrent evaluation of the product, seller, and e-commerce platform. In the few cases that this dynamic was explored, it was often in the context of seller reputation (Gregg & Walczak, 2008). We suggest that researchers consider ways to control for the platform type when designing their studies. See Appendix A2 for an overview of platform types.

Finally, future research can compare the antecedents of e-purchase intention in studies conducted before, during, and after the COVID-19 pandemic. We expect that with the rapid consumer adoption of e-commerce and advances in e-commerce technology due to the pandemic, the relevance of some antecedents may have been increased. In contrast, others may no longer be relevant. For instance, when most consumers were forced to switch to online shopping due to stay-at-home restrictions, many likely reevaluated the usefulness of online shopping. Through an ANOVA, researchers can determine the trajectory of how the pandemic affected the drivers of e-purchase intentions.

6.5 Practical Implications

Practitioners can find valuable insights and remedies to increase the utility of their e-commerce operations. First, we recommend that e-commerce platform providers and sellers avoid a one-size-fits-all approach to engaging current and prospective customers in countries with different economic conditions. When targeting consumers in developing countries, the marketing strategy should address consumers' perception of online purchase usefulness. Alternately, organizations focused on consumers in developed economies should develop strategies to increase familiarity, an antecedent particularly poignant in such contexts. Interestingly, as societies and economies evolve quickly, factors that influence e-purchase intention in developed economies today may soon impact developing economies. Additionally, lessons learned from research in developed economies will allow organizations operating in developing economies to prepare strategies for future changes in customer expectations.

Furthermore, our findings are particularly valuable for new market entrants. We advise platform developers to focus on tuning their offering based on modern consumer preferences and less on

convincing consumers about the benefits of shopping online. This is particularly relevant considering the COVID19 pandemic. The pandemic exposed many consumers to online shopping during social distancing, lockdowns, and store closures. Through the pandemic, existing organizations recognized the advantages of being prepared for such crises and having digital channels to reach consumers. Retailers with an online presence and an efficient supply chain were better able to overcome the many disruptions presented through the pandemic. Additionally, platform providers actively targeting a global marketplace should consider developing platforms and digital strategies that can adjust to a dynamic global market. Thereby, organizations struggling in one market could move into new markets assuming that their platform was equipped to handle global transactions (e.g., facilitate various payments, handle international logistics).

6.6 Limitations

This study has several limitations. For instance, we only included studies written in English. It is plausible that there are additional contributions in languages other than English, particularly in developing economies. A second limitation is regarding the heterogeneity of the samples and context used in the various studies. Some studies included cross-border purchases, others focused on small physical products, and others on digital media. These differences and limited control and reporting of non-behavioral attributes such as delivery speed, shipping costs, taxes, product abundance, and proximity of comparable physical retailers may have introduced non-controlled biases. Such contexts only recently received attention in the literature and often without sufficient theoretical underpinnings. A third limitation is that even with careful sampling and analysis, a publication bias may be present. This bias is regarding most formal publications favoring studies showing effects or demonstrating significant results in their findings. A fourth limitation is regarding the generalizability of some of the findings. While the effects of the economic condition revealed significant differences in multiple relationships, direct effects and the moderating effects of numerous antecedents could not be examined due to the small number of existing studies. A fifth limitation is that this study focused on the widely studied e-purchase intentions rather than actual e-purchase behavior. As researchers investigate and report the effects of antecedents on actual purchase behaviors, the antecedents' importance will be better understood. Another limitation is the dearth of research comparing the business impact of e-commerce between nations. For instance, robust data representing the impact of e-commerce in China and India could not be identified. As our literature search was limited to SCOPUS, future researchers should consider examining more exhaustive sources.

7. CONCLUSION

Our meta-analysis revealed a set of factors contributing to e-purchase intention while showcasing the context-sensitive nature of the country's economic condition. Our analysis reveals the consolidated effects of the antecedents of e-purchase intention and investigates economic condition as a potential contextual moderator. Our findings indicate that trust is the most studied antecedent and that economic conditions of countries (developed vs. developing) moderate some of the antecedents (e.g., trust, perceived usefulness, perceived risk, perceived ease-of-use, perceived value, familiarity, service quality, and personal innovativeness) (see Table 2). We call on researchers to move beyond technology adoption theoretical lenses when examining antecedents of e-purchase intention. While we uncovered the potential moderating effect of economic condition on e-purchase intention, researchers could follow our approach to determine other essential moderators, such as platform type (see Appendix Table A2).

FUNDING AGENCY

The publisher has waived the Open Access Processing fee for this article.

REFERENCES

- Abdul-Muhmin, A. G. (2010). Repeat purchase intentions in online shopping: The role of satisfaction, attitude, and online retailers' performance. *Journal of International Consumer Marketing*, 23(1), 5–20. doi:10.1080/08961530.2011.524571
- Agag, G., & El-Masry, A. A. (2016). Understanding consumer intention to participate in online travel community and effects on consumer intention to purchase travel online and WOM: An integration of innovation diffusion theory and TAM with trust. *Computers in Human Behavior*, 60, 97–111. doi:10.1016/j.chb.2016.02.038
- Akar, E. (2021). Customers' online purchase intention and customer segmentation during the period of COVID-19 pandemic. *Journal of Internet Commerce*, 20(3), 371–401. doi:10.1080/15332861.2021.1927435
- Algharabat, R. S. (2018). The role of telepresence and user engagement in co-creation value and purchase intention: Online retail context. *Journal of Internet Commerce*, 17(1), 1–25. doi:10.1080/15332861.2017.1422667
- Ali, F. (2016). Hotel website quality, perceived flow, customer satisfaction and purchase intention. *Journal of Hospitality and Tourism Technology*, 7(2), 213–228. doi:10.1108/JHTT-02-2016-0010
- Ariffin, S., Mohan, T., & Goh, Y.-N. (2018). Influence of consumers' perceived risk on consumers' online purchase intention. *Journal of Research in Interactive Marketing*, 12(3), 309–327. doi:10.1108/JRIM-11-2017-0100
- Aziz, N. N. A., & Wahid, N. A. (2018). Factors influencing online purchase intention among university students. *International Journal of Academic Research in Business & Social Sciences*, 8(7), 702–717. doi:10.6007/IJARBS/v8-i7/4413
- Bai, B., Law, R., & Wen, I. (2008). The impact of website quality on customer satisfaction and purchase intentions: Evidence from Chinese online visitors. *International Journal of Hospitality Management*, 27(3), 391–402. doi:10.1016/j.ijhm.2007.10.008
- Bauer, R. A. (1960). Consumer behavior as risk taking. In R. Hancock (Ed.), *Dynamic Marketing for a Changing World* (pp. 389–398). American Marketing Association.
- Bebber, S., Milan, G. S., Toni, D. D., & Eberle, L. (2017). Antecedents of Purchase Intention in the Online Context. *Journal of Relationship Marketing*, 16(1), 82–98.
- Benlian, A., Titah, R., & Hess, T. (2012). Differential effects of provider recommendations and consumer reviews in e-commerce transactions: An experimental study. *Journal of Management Information Systems*, 29(1), 237–272. doi:10.2753/MIS0742-1222290107
- Bonsón Ponte, E., Carvajal-Trujillo, E., & Escobar-Rodríguez, T. (2015). Influence of trust and perceived value on the intention to purchase travel online: Integrating the effects of assurance on trust antecedents. *Tourism Management*, 47, 286–302. doi:10.1016/j.tourman.2014.10.009
- Borenstein, M., Hedges, L., Higgins, J., & Rothstein, H. (2009). *Introduction to meta-analysis*. Wiley. doi:10.1002/9780470743386
- Burnham, J. F. (2006). Scopus database: A review. *Biomedical Digital Libraries*, 3(1), 1. Advance online publication. doi:10.1186/1742-5581-3-1 PMID:16522216
- Chang, E. C., & Tseng, Y. F. (2013). Research note: E-store image, perceived value and perceived risk. *Journal of Business Research*, 66(7), 864–870. doi:10.1016/j.jbusres.2011.06.012
- Chen, M. Y., & Teng, C. I. (2013). A comprehensive model of the effects of online store image on purchase intention in an e-commerce environment. *Electronic Commerce Research*, 13(1), 1–23. doi:10.1007/s10660-013-9104-5
- Chen, Y. S., & Huang, S. Y. B. (2017). The effect of task-technology fit on purchase intention: The moderating role of perceived risks. *Journal of Risk Research*, 20(11), 1418–1438. doi:10.1080/13669877.2016.1165281
- Chiu, C. M., Wang, E. T., Fang, Y. H., & Huang, H. Y. (2014). Understanding customers' repeat purchase intentions in B2C e-commerce: The roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal*, 24(1), 85–114. doi:10.1111/j.1365-2575.2012.00407.x

- Clement, J. (2020). *Retail e-commerce sales growth worldwide 2017-2023*. Statista. <https://www.statista.com/statistics/288487/forecast-of-global-b2c-e-commerce-growth/>
- Cox, D. F., & Rich, S. U. (1964). Perceived risk and consumer decision-making—The case of telephone shopping. *JMR, Journal of Marketing Research*, 1(4), 32–39.
- Daniel, W. W., & Terrell, J. C. (1995). *Business statistics*. Houghton Mifflin.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *Management Information Systems Quarterly*, 13(3), 319–340. doi:10.2307/249008
- Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61, 35–51.
- Dowling, G. R., & Staelin, R. (1994). A model of perceived risk and intended risk-handling activity. *The Journal of Consumer Research*, 21(1), 119–134. doi:10.1086/209386
- Escobar-Rodríguez, T., & Bonsón-Fernández, R. (2017). Analyzing online purchase intention in Spain: Fashion e-commerce. *Information Systems and e-Business Management*, 15(3), 599–622. doi:10.1007/s10257-016-0319-6
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Addison-Wesley.
- Flow. (2020). *International E-commerce: A Comprehensive Guide*. <https://www.flow.io/international-e-commerce/>
- Gefen, D. (2000). E-commerce: The role of familiarity and trust. *Omega*, 28(6), 725–737. doi:10.1016/S0305-0483(00)00021-9
- Glover, S., & Benbasat, I. (2014). A comprehensive model of perceived risk of e-commerce transactions. *International Journal of Electronic Commerce*, 15(2), 47–78. doi:10.2753/JEC1086-4415150202
- Gregg, D. G., & Walczak, S. (2008). Dressing your online auction business for success: An experiment comparing two eBay businesses. *Management Information Systems Quarterly*, 32(3), 653–670. doi:10.2307/25148860
- Hackman, D., Gundergan, S. P., Wang, P., & Daniel, K. (2006). A service perspective on modelling intentions of on-line purchasing. *Journal of Services Marketing*, 20(7), 459–470. doi:10.1108/08876040610704892
- Hunter, J. E., & Schmidt, F. L. (2000). Fixed effects vs. random effects meta-analysis models: Implications for cumulative research knowledge. *International Journal of Selection and Assessment*, 8(8), 275–292. doi:10.1111/1468-2389.00156
- Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings* (2nd ed.). Sage Publications. doi:10.4135/9781412985031
- Jacoby, J., & Kaplan, L. B. (1972). The components of perceived risk. *Proceedings of the Third Annual Conference of the Association for Consumer Research*, 382–393.
- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2009). Trust and satisfaction, two stepping stones for successful e-commerce relationships: A longitudinal exploration. *Information Systems Research*, 20(2), 237–257. doi:10.1287/isre.1080.0188
- Kim, E. Y., & Kim, Y. K. (2004). Predicting online purchase intentions for clothing products. *European Journal of Marketing*, 38(7), 883–897. doi:10.1108/03090560410539302
- Kim, H. W., & Gupta, S. (2009). A comparison of purchase decision calculus between potential and repeat customers of an online store. *Decision Support Systems*, 47(4), 477–487. doi:10.1016/j.dss.2009.04.014
- Kim, H. W., Gupta, S., & Koh, J. (2011). Investigating the intention to purchase digital items in social networking communities: A customer value perspective. *Information & Management*, 48(6), 228–234. doi:10.1016/j.im.2011.05.004
- Kim, J., & Lennon, S. J. (2013). Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention. *Journal of Research in Interactive Marketing*, 7(1), 33–56. doi:10.1108/17505931311316734

- Kim, J. H., & Lennon, S. J. (2009). Information available on a web site: Effects on consumers' shopping outcomes. *Journal of Fashion Marketing and Management*, 14(2), 247–262. doi:10.1108/13612021011046093
- Kim, S., & Park, H. (2013). Effects of various characteristics of social commerce (s-commerce) on consumers' trust and trust performance. *International Journal of Information Management*, 33(2), 318–332. doi:10.1016/j.ijinfomgt.2012.11.006
- Law, M., Kwok, R. C. W., & Ng, M. (2016). An extended online purchase intention model for middle-aged online users. *Electronic Commerce Research and Applications*, 20, 132–146. doi:10.1016/j.elerap.2016.10.005
- Law, M., & Ng, M. (2016). Age and gender differences: Understanding mature online users with the online purchase intention model. *Journal of Global Scholars of Marketing Science*, 26(3), 248–269. doi:10.1080/21639159.2016.1174540
- Lee, K. S., & Tan, S. J. (2003). E-retailing versus physical retailing: A theoretical model and empirical test of consumer choice. *Journal of Business Research*, 56(11), 877–885. doi:10.1016/S0148-2963(01)00274-0
- Liang, T. P., & Lai, H. J. (2002). Effect of store design on consumer purchases: An empirical study of on-line bookstores. *Information & Management*, 39(6), 431–444. doi:10.1016/S0378-7206(01)00129-X
- Lien, C. H., Wen, M. J., Huang, L. C., & Wu, K. L. (2015). Online hotel booking: The effects of brand image, price, trust and value on purchase intentions. *Asia Pacific Management Review*, 20(4), 210–218. doi:10.1016/j.apmr.2015.03.005
- Lim, K. H., Sia, C. L., Lee, M. K., & Benbasat, I. (2006). Do I trust you online, and if so, will I buy? An empirical study of two trust-building strategies. *Journal of Management Information Systems*, 23(2), 233–266. doi:10.2753/MIS0742-1222230210
- Martins, J., Costa, C., Oliveira, T., Gonçalves, R., & Branco, F. (2019). How smartphone advertising influences consumers' purchase intention. *Journal of Business Research*, 94, 378–387. doi:10.1016/j.jbusres.2017.12.047
- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7(3), 101–134. doi:10.1080/10864415.2003.11044275
- Ring, P. S., & Van de Ven, A. H. (1994). Developing processes of cooperative inter-organizational relationships. *Academy of Management Review*, 19(1), 90–118. doi:10.5465/amr.1994.9410122009
- Schmidt, F. L., & Hunter, J. E. (2014). *Methods of meta-analysis: Correcting error and bias in research findings* (3rd ed.). Sage.
- SCOPUS. (2020). *Content Coverage Guide*. https://www.elsevier.com/__data/assets/pdf_file/0007/69451/Scopus_ContentCoverage_Guide_WEB.pdf
- Shukla, P. (2014). The impact of organizational efforts on consumer concerns in an online context. *Information & Management*, 51(1), 113–119. doi:10.1016/j.im.2013.11.003
- Steuer, J. S. (1992). Defining Virtual Reality: Dimensions Determining Telepresence. *Journal of Communication*, 42(4), 73–93. doi:10.1111/j.1460-2466.1992.tb00812.x
- Stouthuysen, K., Teunis, I., Reusen, E., & Slabbinck, H. (2018). Initial trust and intentions to buy: The effect of vendor-specific guarantees, customer reviews and the role of online shopping experience. *Electronic Commerce Research and Applications*, 27, 23–38. doi:10.1016/j.elerap.2017.11.002
- Synup. (2019). *The State of Retail*. <https://get.synup.com/state-retail-report-2019>
- Thatcher, J. B., Carter, M., Li, X., & Rong, G. (2012). A classification and investigation of trustees in B-to-C e-commerce: General vs. specific trust. *Communications of the Association for Information Systems*, 32(4), 107–134.
- Vakulenko, Y., Hellström, D., & Hjort, K. (2018). What's in the parcel locker? Exploring customer value in e-commerce last mile delivery. *Journal of Business Research*, 88, 421–427. doi:10.1016/j.jbusres.2017.11.033

Verhagen, T., & Bloemers, D. (2017). Exploring the cognitive and affective bases of online purchase intentions: A hierarchical test across product types. *Electronic Commerce Research, 18*(3), 537–561. doi:10.1007/s10660-017-9270-y

Verhagen, T., & van Dolen, W. (2009). Online purchase intentions: A multi-channel store image perspective. *Information & Management, 46*(2), 77–82. doi:10.1016/j.im.2008.12.001

Wells, J. D., Valacich, J. S., & Hess, T. J. (2011). What signal are you sending? How website quality influences perceptions of product quality and purchase intentions. *Management Information Systems Quarterly, 35*(2), 373–396. doi:10.2307/23044048

Whitener, E. M. (1990). Confusion of confidence intervals and credibility intervals in meta-analysis. *The Journal of Applied Psychology, 75*(3), 315–321. doi:10.1037/0021-9010.75.3.315

Wu, J. F., & Chang, Y. P. (2016). Multichannel integration quality, online perceived value and online purchase intention. *Internet Research, 26*(5), 1228–1248. doi:10.1108/IntR-04-2014-0111

Yu, T. W., & Chen, T. J. (2018). Online travel insurance purchase intention: A transaction cost perspective. *Journal of Travel & Tourism Marketing, 35*(9), 1175–1186. doi:10.1080/10548408.2018.1486781

Zhao, X., Deng, S., & Zhou, Y. (2017). The impact of reference effects on online purchase intention of agricultural products. *Internet Research, 27*(2), 233–255. doi:10.1108/IntR-03-2016-0082

ENDNOTES

¹ Evolution of e-commerce in India: Creating the bricks behind the clicks, PWC (2014) <https://www.pwc.in/assets/pdfs/publications/2014/evolution-of-e-commerce-in-india.pdf>

² Available at: <https://beallslist.net/>

APPENDIX A - DEFINITION OF ANTECEDENTS

Table A1. Definition of Antecedents of E-purchase Intention

Antecedents	Definition
Trust	“a positive belief about the reliability and dependability of a person or an object” (Lien, Wen, Huang, & Wu, 2015, p. 211).
Perceived Usefulness	“the individual’s perception of the act of performing a behavior to gain specific rewards as expected” (Chen & Teng, 2013, p. 6).
Perceived Risk	“the subjectively determined expectation of financial, performance, psychological and time/convenience risk by an internet shopper in planning a particular online purchase” (Kim & Lennon, 2009, p. 40)
Perceived Ease of Use	“the extent to which an online shopper perceives the website as easy to use, and the minimum amount of effort” (Chen & Teng, 2013, p. 4).
Attitude toward online purchasing	“online users’ positive or negative feelings about e-purchases” (Law & Ng, 2016, p. 252).
Subjective norms	“an individual’s perception that depends on his or her friends, family, and relatives to engage or not to engage in a particular behavior” (Akar, 2021, p. 383)
Reputation	“the extent to which buyers believe that the selling organization is honest and concerned about its customers” (Doney & Cannon, 1997)
Information Quality	“the judgment and evaluation that customers have about the information, which is characterized by the degree of precision, by how much the information is capable of informing, and by the relevance (utility) of the information available from the website” (Bebber, Milan, De Toni, Eberle, & Slongo, 2017, p. 83).
Perceived Value	“the consumer’s assessment of benefits against costs when shopping with an online seller” (Bonsón Ponte, Carvajal-Trujillo, & Escobar-Rodríguez, 2015, p. 290).
Consumer Satisfaction	“customers’ evaluations of a product or service with regard to their needs and expectations” (Bai, Law, & Wen, 2008, p. 393).
Security concerns	Uncertainty in online shopping context that is attributed to potential technological errors and security gaps (Shukla, 2014).
Familiarity	“awareness or recognition, which is often based on advertising exposure” (Chen & Teng, 2013, p. 7).
Hedonic Value	“the value received from the multisensory, fantastic and emotive aspects of the shopping experience” (Chiu, Wang, Fang & Huang, 2014, p. 92)
Service Quality	“the consumer’s judgement about an online service’s overall excellence or superiority” (Hackman, Gundergan, Wang, & Daniel, 2006, p. 461)
Flow	“the experiences where customers are engaged in activity with concertation and develop a feeling of time distortion during their engagement” (Ali, 2016, p. 214).
Price	“the perceived level of (monetary) price at a vendor (i.e., objective price) in comparison with the customer’s reference price” (Kim & Gupta, 2009, p. 478)
Interactivity	“the extent to which users can participate in modifying the form and content of the mediated environment in real time” (Steuer, 1992)
Enjoyment	“an online shopper perceives fun, pleasure and attractiveness in the online store” (Chen & Teng, 2013, p. 4).
Control	“ability to control their senses to the stimulus” (Algharabat, 2018, p. 5).
Playfulness	“the perceived intrinsic enjoyment, interest, fun, or curiosity generated from engaging in absorbing interactions with a digital item” (Kim, Gupta, and Koh, 2011, p. 230)

Table A1 continued on the next page

Table A1 continued

Antecedents	Definition
Personal innovativeness	“consumer’s willingness to try a new method of consumption” (Law, Kwok, & Ng, 2016, p. 134).
Purchase frequency	“reflects customers perceived transaction costs and their willingness to purchase” (Yu & Chen, 2018, p. 1177).
Privacy concerns	“events that may result in harm for consumer” (Glover & Benbasat, 2014, p. 71)

Note(s): 1) Only the antecedents relevant to our clustering are defined (i.e., differences between developed and developing where $k \geq 6$). 2) Antecedents are ranked based on k .

Table A2. Examples and Descriptions of E-commerce Platform Types

Platform Type	Timeline (with industry examples and dates founded)	Platform Definition/Description
Product Platform (direct sellers; manufacturer direct)	2005-2015 Away, 2015; Casper, 2014; Warby Parker 2010; Everlane 2010; Harry's 2012; Dollar Shave Club, 2011; Shein, 2008; HelloFresh, 2011	A product platform facilitates the purchase of a specific product or range of products.
Store Platform (online retailer; e-tailer; virtual merchants)	1995-2010 Amazon, 1994; Zappos, 1999; Wayfair, 2002; Overstock, 1999; Shopbop, 1999; Asos, 2000; Revolve, 2003; Newegg; 2001; The Iconic, 2011; Zalando, 2012	A store platform is mainly independent of the products and services it sells. Instead, sellers provide a curated collection of items and services for sale.
Online Marketplace (third-party source)	1995-2005 Amazon Marketplace, 1994; Alibaba, 1999; Etsy, 2005; AsosMarketplace, n.a.	Online marketplaces provide a platform and a variety of existing customers to sellers. Furthermore, the online marketplace may offer fulfillment services to sellers, including managing inventory and shipping management.
Auction Platforms	1995-2010 eBay, 1995; Invaluable, 2009; Catawiki, 2008	Auction platforms allow third-party sellers to post items with dynamic, auction-based pricing.
Group Buying/Group Buying Auctions	Late 2000s Meituan, 2010; Groupon, 2008; LivingSocial, 2009	Group buying platforms may offer unique purchase opportunities or pricing that require a certain number of purchases to activate.
Classified Listing Service (consumer-to-consumer, C2C, exchange)	1995-2015 58, 2005; Craigslist, 1995; Kikiki, 2005; Letgo, 2015; Ganji, 2005; Gumtree, 2000; OLX, 2006; Wallapop, 2013; Mercari, 2013	Classified listing services provide an opportunity for consumers to post items for sale, much like traditional newspaper classified advertisements. Most platforms do not directly facilitate payment or fulfillment.
Marketing Platform (online-to-offline, O2O)	1995-2010 Yelp, 2004; Angie's List, 1995; HomeAdvisor, 1998; Hotwire, 2000; TripAdvisor, 2000; Foursquare, 2009; Dianping, 2003	Marketing platforms promote services, facilitate reviews and ratings, often rank or classify services, and handle appointment scheduling or restaurant reservations.
Add-on Service Provider (service facilitators; concierge services)	2005-2010 Instacart, 2012; Airbnb, 2008; Doordash, 2013; Deliveroo, 2013; Foodora, 2013; Zomato, 2008	Add-on service providers offer products or services, such as delivering prepared meals from various restaurants, arranging guest room lodging with concierge services, or grocery shopping services. In addition to the service, these providers differentiate through additional benefits, such as delivering food in thermal containers, or vetting lodging providers.
Online Traditional Retailer (Multichannel retailer; bricks-and-clicks)	1995-2010 Fashionnova, 2006 ^a , 2013; Walmart, 1962 ^a , 2007; Macy's, 1861 ^a , 1997; Best Buy 1966 ^a , 2000	Online traditional retailers are established retail merchants that have established an online sales channel. The online channel may be part of a multi-channel strategy.
Online Catalogue Merchant	Middle 1990s Spiegel, 1905 ^a , 1995; Otto, 1949 ^a , 1995	Online established catalog merchants are established print catalog merchants that have established an online sales channel. Frequently the intent is to pivot toward an online store business approach.

Note(s):

1) ^a Indicates formation as a non-electronic retailer.

Sam Zaza earned her Ph.D. from Florida State University and is an Assistant Professor at Middle Tennessee State University. Her research interests are social inclusion and diversity, STEM education, IT workforce, IT artifact and methodologies. Sam is an active member of the Association for Information Systems (AIS).

Michael A. Erskine received his Ph.D. in Computer Science and Information Systems from the University of Colorado Denver and is an Assistant Professor at Middle Tennessee State University. His research interests include technology governance, educational technology, location analytics, technology workforce competencies, and disaster management. Michael's research has been presented at numerous international, national, and regional conferences. Additionally, his work has been published in several journals, including Information Systems Frontiers, International Journal of Human-Computer Interaction, Computers in Human Behavior, Journal of Consumer Marketing and Journal of Computer Information Systems.