

The Impact of the Exogenous Shock on Transaction Costs in B2C Relationship: A Survey Study in Poland *

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Abstract

This study investigates how exogenous shocks, specifically pandemic, affect transaction costs in B2C relationships within the Polish market. The motivation stems from a growing need to understand consumer behavior shifts under crisis conditions and how institutions mediate these responses. Utilizing the lens of institutional economics and transaction cost theory, the research examines how key behavioral factors—trust, opportunism, and information asymmetry—influence consumer decisions during disruptions. A quantitative research design was employed, using a structural equation modeling (SEM) approach. Data were gathered through a CAWI survey of 578 Polish consumers in March 2021, focusing on their e-commerce behavior during the pandemic. The model incorporated six latent variables, including exogenous shock (PAN), trust (HON), opportunism (INT), information asymmetry (INF), transaction costs (COST), and online purchasing behavior (BUY). The findings demonstrate that opportunism and trust significantly mediate the relationship between exogenous shocks and online purchasing behavior. In contrast, information asymmetry showed no significant direct effect. Transaction costs emerged as a key outcome variable influenced by both opportunism and trust, subsequently affecting purchase behavior. The pandemic enhanced digital engagement by lowering perceived transaction costs and accelerating consumers' transition to online platforms. The study highlights the resilience of B2C market relationships during crises and emphasizes the importance of trust-building mechanisms and transparency in reducing transaction costs. These insights offer practical guidance for businesses and policymakers aiming to foster consumer confidence and strengthen institutional stability in times of disruption.

Keywords: Exogenous Shocks, Transaction Costs, Consumer Trust, E-commerce Behavior

Introduction

Exogenic shocks are increasingly becoming the subject of interest for various scientific disciplines and socioeconomic practices. This is associated with the frequent occurrence of events of a global nature, which are perceived by entities as surprising and have negative consequences for them. As evidenced by the 2008 financial crisis, the COVID19 pandemic, and the war in Ukraine, these events increasingly lead to international chain-reaction consequences, undoubtedly attributable to the deepening globalization of production and exchange processes. The term "shock" is often used to describe the sudden and unexpected effects of these events, typically pointing to their exogenous sources. However, among scientists, there is an ongoing discussion about what defines the exogeneity or endogeneity of a shock (*UNU-WIDER*, 2020). In this article, it is assumed that an exogenic shock is considered the abrupt response of a distinct socioeconomic subsystem to unforeseen factors originating outside of it.

Initially, the concept of shock in scientific theories had an individual and personalized character. It was related to psychological and physical state, as well as the reactions of individuals to various unforeseen factors emanating from the natural and social environment. These shocks are still perceived as expressions of an individual's adaptability. Such shocks typically have a medical context in contemporary understanding. (Manji et al., 2009). Shocks are induced by various situations resulting from the impact of exogenous factors originating from both

the natural environment, such as catastrophes, and pandemics, and the social environment, such as wars and social conflicts. However, it is increasingly emphasized that some of them do not have a probabilistic nature but are the result of human activity. The growing knowledge about such events suggests that the concern is not so much about the possibility of the events occurring per se, but rather about the consequences of their impact. Endogenous shocks arise from the characteristics of the analyzed subsystems and processes that are their autonomous properties, such as structural, systemic, and genetic errors, etc. The existence of autonomous and autarkic subsystems on a broader scale in the modern world is essentially impossible. The degree of their autonomy is determined by the degree of dependence on factors from their environment, openness, and resistance to external influences. (Hosseini et al., 2016). After repeated in latest years a shock situation appears the need to measure the consequences of it and find out the way to be more resilient. An institutional approach is one of many ways to measure not only the touchable costs but also the invisible costs that are usually named as transaction costs. The inspiration for this was the common opinion that shocks disturb first the relationships among the entities. Trust lowering and uncertainty causes the entities to refrain from doing the most risk activity. The nature of shocks needs systematic research because this phenomenon is multi-layered in touch with many spheres of human life.

The essence of exogenous shocks and their consequences

The issue of exogenous shock itself is analyzed across a multitude of scientific disciplines. Most frequently, the context of shock arises in psychology and medicine as an individual phenomenon or in sociology and economics as a socio-economic phenomenon. (Di Crosta et al., 2021, p. 2; Ramey, 2016). As mentioned, originally, the concept of shock was primarily medical, such as in the case of traumatic, postpartum, or thermal shock. With the development of social sciences, this concept permeated politics and economics, for example, as a sudden crisis situation, or in sociology, as in the case of cultural shock. Typically, shock refers to a state of intense psychological reaction triggered by a highly impactful and often negative event. In contemporary usage, the word has evolved in social communication and is used to express positive excitement, disbelief, or fascination with unexpected events, such as those caused by natural phenomena, wonders of nature, and works of art, but also surprising price offers, known as a "price shock." (Allegret et al., 2012). "Being in shock" can thus have an objective character, determined based on the diagnosis of behaviors, physiological reactions, etc., and can also be a subjective assessment concerning one's own emotions and feelings. Therefore, if a shock meets the conditions of an exogenous shock, diagnosing and determining the degree of its impact on individuals, social groups, or organizations requires the application of various research tools and a holistic approach. Physiological and cultural factors may overlap, for example, subjective feelings of threat and bodily discomfort can influence the assessment of the social situation. For this article, a universal definition of exogenous shock has been adopted as a sudden and severe reaction of individuals or social groups to a phenomenon caused by external factors, which do not directly influence their occurrence. (Plichta et al., 2022).

The shock caused by the COVID-19 pandemic and the financial crisis of 2008 are often compared (Tang & Aruga, 2021). Research conducted over many years on uncertainty and the factors causing it indicates a significantly smaller impact of the pandemic on uncertainty measured by stock market indices compared to the financial crisis. (Benigno et al., 2020). As indicated by the history of human development, shocks are inherently linked to the evolution of socioeconomic systems and states (Benati & Guerriero, 2022; Hodgson, 2022). It is emphasized that shocks can have both positive and negative effects. Nowadays, especially in the hypermedia space, they are often attributed to intentional and deliberate actions by political forces and associated economic interest groups, rather than being considered as purely accidental or random occurrences. (Klein et al., 2008).

Shocks, however, have a range of negative effects, primarily in the psychological and social spheres. The pandemic was unique because of its global scale, timespan and directly human health and existence-affected nature. The financial crisis was more elite and not so touchable by the majority of the population. It penetrates most social relationships. Research confirms the impact of pandemic on anxiety states, their association with behavior, and a tendency toward panic. (Nicomedes & Avila, 2020). The pandemic is also a cause of unconventional and panic-driven buying behaviors, which are symptomatic responses to the sense of panic. (Laato et al., 2020). The threat of infection in shopping places and the role of emotions in making purchases during the pandemic highlight the importance of care and customer protection measures in stores, which can alleviate customer concerns (Szymkowiak et al., 2021). The experiences of the pandemic have directed even greater research attention to the role of emotions in social studies and their impact on behaviors and attitudes (de Las Heras-Pedrosa et al., 2020; Jasper, 2014).

The issue of uncertainty in patient-doctor relationships, a topic studied for many years, has gained particular significance during the pandemic (Atherton et al., 2021; Calnan, 1984). This also pertains to the revealed issue during the pandemic concerning the scope of telemedicine applications and the direction of its development (Vidal-Alaball et al., 2020). In the face of uncertainty and anxiety, trust plays a crucial role not only between

individuals but also as institutional trust toward various entities with which people maintain relationships and conduct transactions, creating what is known as social capital (Devine et al., 2020; Nutbeam, 2020).

One of the frequently mentioned consequences of the pandemic was the disruption of global supply chains and processes related to socialization, education, healthcare, and workplace environments. Often, these disruptions have their roots in the behavioral sphere, linked to people's reactions to conditions of uncertainty. Their consequences extend to the functioning of organizations, regarded as social structures. Research conducted in many countries regarding the impact of exogenous shocks caused by random phenomena, such as natural events, primarily affects household behaviors (Noy & Nualsri, 2007). As a result, primary demand induces secondary demand and forces changes in the behavior of public institutions and economic entities.

Importance of transaction costs for the consumer's relationship in the market

Since the 19th century, scholars have highlighted several fundamental differences between processes in the spheres of consumption and production, such as the "make or buy" decision and the treatment of consumers and households as links in the value creation chain. The evolving concepts of Service-Dominant Logic (SDL) and the sharing economy shed new light on this issue (Vargo & Lusch, 2016). Consumers participate in exchange processes characterized by transaction costs, influenced by key assumptions such as information asymmetry, opportunism, and uncertainty. Specific assets in the form of relational capital, which is currently perceived as a crucial element of competitive advantage, also play a significant role (Dyer & Singh, 1998).

The growing number of publications in recent years on transaction costs in the B2C market indicates the need to fill this gap in theory (Cannon et al., 2014). From today's perspective on marketing concepts, the value chain, and CRM, there are numerous reasons supporting the inclusion of transaction cost issues on the consumer side in the description and modelling of market phenomena. This aspect of exchange processes and the role of consumers has been addressed in marketing literature since the 1980s (Picot, 1986). It wasn't until the 1990s, influenced by the development of new information and communication technologies (ICT), that interest in this issue grew in both theoretical considerations and business practice (Cheng & Lee, 2011; Liang & Huang, 1998; Plichta, 2019). Referring to the assumptions of the institutional approach and exchange theory, it is difficult to ignore consumers and households in the analysis of transaction costs (Raz-Yurovich, 2012). Ignoring this would imply assuming the absence of transaction costs at this stage of the exchange process for companies, primarily trading and service enterprises engaging in transactions with consumers in retail markets. There are several theoretical reasons justifying the need to include costs on the individual buyers' side in the analysis.

Households possess resources valuable to other society members, forming the foundation of exchange theory. Many of these resources are specific, such as talents, knowledge, skills, competencies, etc. Besides resources related to labor services, social competencies that allow building relationships and consequently social structures, such as leadership or managerial skills, are crucial in exchange processes. This has been one of the leading streams in human resource management sciences for many years (De Vita et al., 2011).

In the exchange process between economic entities and individual buyers, there is a transfer of property rights to goods, some of which are for consumption. Durable goods or investment goods that protect value are the starting point for subsequent exchange processes spread over time. However, decision-making processes at the individual buyer level should not be equated with processes at the network or hierarchical structure level. Differences arise due to the following reasons (Williamson, 2010). Hierarchical organizations generally have greater capabilities to reduce bounded rationality compared to households. Purchases and sales between firms are professional, which can reduce information asymmetry between parties. Consumers rely heavily on market signals. Their decision-making requires institutions that rationalize their behaviors and reduce information asymmetry. Consumers have a low capability for consistent probabilistic choices. Environmental factors, time constraints, and situational factors, combined with limited stimulus perception ability, lead to bounded rationality in choices. However, this does not mean that consumers do not strive to make optimal (satisfactory) purchases under given conditions.

Analyzing the exchange between economic entities and consumers (households) leads to several statements contributing to the emergence of transaction costs. Specific assets exist on both sides of the transaction. Although in modern economies, the "make or buy" dilemma does not essentially occur on the consumer side, they still make timebased choices involving deferred consumption through saving or its change and shifting expenditure towards higher-order needs or investment goods, such as gold, jewelry, bonds, stocks, education, etc.

Opportunistic behaviors occur on both sides. Opportunism is not solely related to investments in specific assets. Having more comprehensive information by one party poses a risk of abuse (Williamson, 1998, p. 60). Information asymmetry exists with an advantage for economic entities having market information systems and marketing communication tools. However, sending various, sometimes conflicting information to consumers does not create a better situation but rather requires additional expenditures to understand buyer needs (searching) better and convince the client of credibility (signaling). Vertical and horizontal integration issues now occur not only on the economic entities' side but also on the consumers' side. This manifests in stimulating long-term exchange relationships with economic entities based on trust and loyalty (CRM). In the case of horizontal integration, the actions of economic entities aim to encourage consumers to consolidate purchases with other consumers. Consumer exchange processes often exhibit high degrees of behavioral uncertainty (Raz-Yurovich, 2012, p. 9).

For participants in exchange processes, consumer decisions, manifested in the selection of goods and services and purchase locations, are reference points. Consumers base their choices on the utility of benefits provided by alternative value chains (Plichta, 2007). According to transaction cost theory, consumers should prefer value chains characterized by lower transaction costs (Kirchner & Picot, 1987). One can argue that the existence of various retail trade institutional forms is based on consumer diversity and related transaction costs (Müller-Hagedorn, 1990). Trade entities internalize part of the market transaction costs in line with Coase's assumptions. In the 1980s, A. Picot attempted to identify transaction costs incurred by final buyers when choosing purchase locations (Picot et al., 2013). He emphasizes the role of preferences in selecting purchase locations and provides value.

Consumer preferences in choosing goods and services and purchase locations are key for analyzing transaction costs. According to transaction cost theory, consumers should prefer value chains with lower transaction costs (Kirchner & Picot, 1987). Thaler and Shefrin pointed out that modelling individual choices over time can use the metaphor of an organization with a far-sighted planner and a short-sighted impulsive doer. Instead of assuming that individuals can change preferences, the model assumes that individuals have two parallel sets of preferences, causing internal conflicts of interest. In this view, a person resembles an organization, such as a firm, where the owner aims to maximize utility over the entire life cycle, while the employed manager is only interested in current profit and consumption (Thaler & Shefrin, 1981, p. 395).

Transaction costs on the consumer side play a significant role in market exchange processes. Including these costs in the economic analysis allows a better understanding of consumer behaviors and business strategies. Institutions play a crucial role in reducing uncertainty and transaction costs, while consumer preferences influence the choice of value chains with lower transaction costs.

Materials & methods

Research problem and structural model

One of the fundamental challenges in the field of institutional research at the macro and microeconomic levels is the identification of factors shaping the institutional environment, considering criteria such as efficiency and their impact on transaction costs. According to general assumptions, the existence of transaction costs is caused by the inefficiency of the market mechanism. However, the creation and operation of institutions are burdened with both benefits and costs. The establishment of informal or partially formalized institutions in the form of relational structures between participants in exchange processes is assumed to reduce costs, including transaction costs.

The emergence and development of e-commerce markets has a significant impact on global economic development. In the initial phase of e-commerce development, various drawbacks were pointed out, including concerns about participant credibility and uncertainty regarding the properties of transaction objects. The pandemic has solidified the belief, supported by a sustained increase in sales, in the benefits and values offered by e-commerce and the virtual space during physical and psychological isolation. However, it became evident that virtual communication does not resolve issues related to socialization and building lasting social relationships, causing a range of problems, especially in the younger generation. Therefore, the research addresses one aspect of the functioning of e-commerce markets, focusing on building customer relationships and considering the main factors shaping these relationships, including transaction costs.

Hypothesis: Relationships in B2C markets between market entities demonstrate resilience to the exogenous shock.

The information source used in the research was individuals using e-commerce services. Information was collected using a questionnaire administered through the CAWI method. The research was conducted through a research tool created by the team, a questionnaire, on a representative consumer panel. The study was carried out in March 2021. The research sample comprised 578 respondents, quota-sampled by gender, education, and age. Among the respondents, 46% were males and 54% were females, with 66% residing in urban areas and 34% in rural areas. The largest age group consisted of individuals aged 25 to 54, i.e., 70% of the respondents divided into three groups.

It should be noted that the problem and measurement of transaction costs in retail markets have not been a significant focus in institutional research. Quantitative or qualitative studies conducted at the microeconomic level have mainly focused on relationships between entities in the supply or sales sphere.

The research aimed to assess the impact of an exogenous shock on market relationships related to exchange processes between consumers and retail companies (B2C). The research goal was achieved through the analysis of literature, surveys, and the verification of research hypotheses regarding the impact of the exogenous shock on the main factors shaping consumer engagement in B2C markets, based on communication through modern communication and information technologies. The research considered fundamental behavioral factors influencing the level of transaction costs, such as opportunism, information asymmetry, and the level of trust. For this purpose, a structural model was proposed. Due to limitations in structural modelling, the research model was restricted to 6 variables: 1 independent and 5 dependents. The research team assumed that an exogenous shock is practically identified by citizens through the prism of specific concepts. This variable served as the independent variable and was described by conceptual descriptors defining the perception of exogenous shock. Subsequently, three mediating variables were proposed, such as trust, information asymmetry, and opportunism.

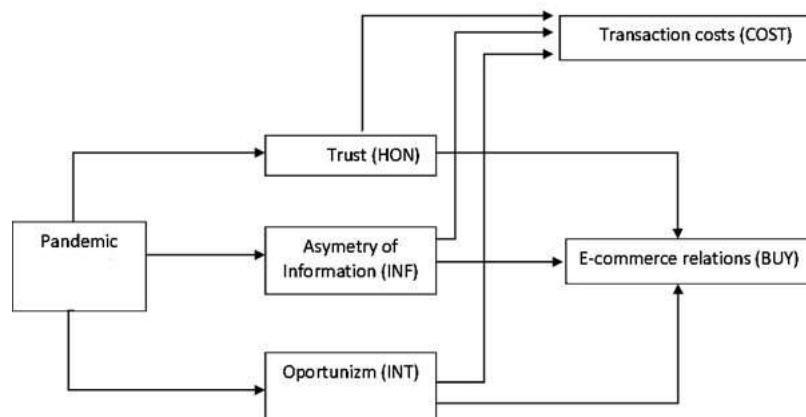


Fig. 1. Research model

To reflect respondents' opinions on statements in the formulated survey questions, a seven-point Likert scale was utilized. The applied measurement allowed, among other things, the description of respondents' perceptions and subjective, latent variables. Scaling the questions in the constructed research tool enabled the use of techniques such as factor analysis in the data analysis process. The system of mutually correlated variables was transformed into a new system of independent principal factors, introducing new substantive content.

The evaluation of the properties of the applied measurement scales and the items constituting them, as well as determining the extent to which items included in each factor are like each other and whether they measure the same theoretical construction, was conducted using Cronbach's alpha reliability analysis. It assumes values from 0 to 1, with a higher value indicating greater scale reliability (values above 0.7 denote satisfactory scale reliability). Utilising Cronbach's alpha method in the reliability analysis procedure, it was found that all scales exhibit high reliability.

Results

The credibility of the results obtained during the research depends on various factors causing research errors. To assess the dimensionality of the adopted variable levels and the reliability of measurement scales, a dimensional assessment of the scales was conducted based on Horn's parallel factor analysis method. Parallel analysis allows for the extraction of unbiased eigenvalues from the correlation matrix and, thus, determines the number of

dimensions based on the eigenvalues extracted from the data matrix and the matrix of random (uncorrelated) data with the same number of indicators. This method allows for the correction of eigenvalues for the collinearity effect of variables resulting from the random error of the sample. Table 1 depicts squared multiple correlations between latent variables. These coefficients are used to evaluate the convergent and discriminant validity of the measurement scales.

Table 1. Squared multiple correlations between constructs

Constructs	PAN	BUY	INF	INT	COST	HON
PAN	1.000					
BUY	0.188	1.000				
INF	0.006	0.009	1.000			
INT	0.225	0.237	0.092	1.000		
COST	0.244	0.383	0.019	0.262	1.000	
HON	0.071	0.108	0.003	0.051	0.097	1.000

Source: own elaboration

Table 2 presents the reliability and convergent and discriminant validity of scales used in the development of the proposed model.

Table 2. Reliability and validity indicators of scales

Construct	Cronbach's alpha	Raykov's rho	Average Variance Extracted	Convergent validity	Discriminant validity
PAN	0.927	0.923	0.584	Yes	Yes
BUY	0.937	0.938	0.644	Yes	Yes
INT	0.707	0.737	0.502	Yes	Yes
COST	0.903	0.904	0.655	Yes	Yes
HON	0.946	0.946	0.746	Yes	Yes
INF	0.855	0.859	0.550	Yes	Yes

Source: own elaboration

All measured constructs possess acceptable reliability and validity of scales. When AVE values are greater than squared correlation values there is no problem with discriminant validity and when AVE values are greater than 0.5 there is no problem with convergent validity. The results of confirmatory factor analysis suggest acceptance of the measurement model. The ML estimator for latent variables was used in the estimation of the CFA model. All models were estimated using STATA software. The model goodness of fit appears to be acceptable. The fit indices are given in Table 3.

Table 3. CFA model goodness of fit

Fit measure	Value
Chi-Square	1854.050 (p=0.000)
DF	545
Chi-Square/df	3.402
CFI	0.908
TLI	0.900
RMSEA	0.064 (0.061 - 0.068)
SRMR	0.059

Source: own elaboration

The results show a fairly acceptable model fit. Incremental fit indices are close to a threshold value of 0.95, and RMSEA approaches the approximate fit of the model population.

Assuming an acceptable fit of the CFA measurement part of the model, reliability as well as convergent and discriminant validity of scales, the full SEM model has been developed. The model is presented in Figure 2.

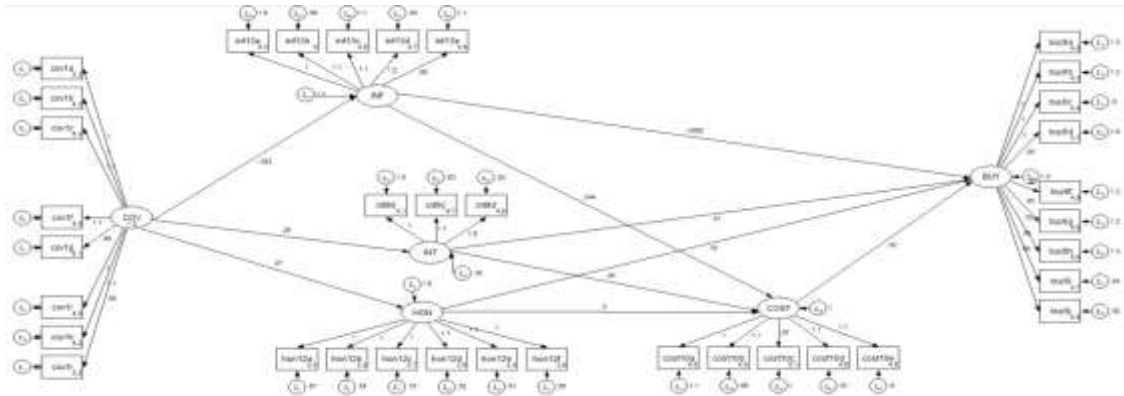


Fig. 2. SEM model

Source: own elaboration

Because both focal dependent latent variable BUY, mediators and focal exogenous latent variable PAN were measured by the same method (Likert scale) and by the same respondents, the common method bias effect was estimated. Common method bias was measured using the Harman approach. The first factor EFA explains only 12.9% of the total variance, which is below the recommended threshold of 50% of explained variance by the first single factor.

Table 4. SEM model goodness of fit

Fit measure	Value
Chi-Square	2090.175 (p=0.000)
DF	584
Chi-Square/df	3.474
CFI	0.898
TLI	0.890
RMSEA	0.067 (0.064 - 0.070)
SRMR	0.080

Source: own elaboration

The model parameters indicate the significant and positive relationship of the PAN construct with proximal mediators INT ($r = 0.288$) and HON ($r = 0.271$). HON has also a significant and positive relation to COST ($r = 0.205$) and a direct effect on BUY (0.182). COST influences BUY ($r = 0.518$). INT has a significant and positive relation with BUY ($r = 0.507$) and COST ($r = 0.840$). It indicates the role of INT and HON constructs as a mediator in the explanation of the role of PAN for BUY construct. The role of INF is insignificant along all of the paths. The all-structural parameters are presented in Table 5.

Table 5. Structural parameters of SEM model

Structural paths	Estimates	Standard errors	P-value
HON ← PAN	0.271*	0.044	0.000
INF ← PAN	-0.053	0.040	0.189
INT ← PAN	0.288*	0.037	0.000
BUY ← HON	0.182*	0.043	0.000
BUY ← INF	-0.006	0.049	0.900
BUY ← INT	0.507*	0.102	0.000
BUY ← COST	0.518*	0.162	0.000

COST ← HON	0.205*	0.039 0.045	0.000 0.333
INF	0.044	0.108	0.000
INT	0.840*		

* - significant at α -level = 0.05

Source: own elaboration

The detailed mediation analysis was undertaken using Zhao, Lynch and Chen's bootstrapping approach. The results are given in Table 6.

Table 6. Mediation analysis

Paths	Indirect effect estimate (pvalue)	Zhao, Lynch and Chen approach	Indirect-to-total effect (RIT)	Indirect-to-direct effect (RID)
PAN-INF-BUY	0.001 (0.785)	-	-	-
PAN-INT-BUY	0.152* (0.000)	-	-	-
PAN-HON-BUY	0.044* (0.000)	-	-	-
PAN-INF-COST	0.001 (0.705)	-	-	-
PAN-INT-COST	0.277 (0.000)	-	-	-
PAN-HON-COST	0.060* (0.000)	-	-	-
INF-COST-BUY	-0.008 (0.688)	No mediation B = -0.005, p = 0.900	(0.017 / 0.013) = 137 % of the effect of INF on BUY is mediated by COST	(0.017 / 0.005) = 3.7 times the mediated effect is as large as the direct effect of INF on BUY
INT-COST-BUY	0.242* (0.000)	Partial mediation B = 0.248 p = 0.000	(0.213 / 0.462) = 46% of the effect of INT on BUY is mediated by COST	(0.213 / 0.248) = 0.9 times the mediated effect is as large as the direct effect of INT on BUY
HON-COST-BUY	0.093* (0.000)	Partial mediation B = 0.159 p = 0.000	(0.093 / 0.252) = 37% of the effect of HON on BUY is mediated by COST	(0.093 / 0.159) = 0.6 times the mediated effect is as large as the direct effect of TRUST on BUY

* - significant at α -level = 0.05

Source: own elaboration

The table reflects the important role of COST in explaining the relationships between INT and BUY (partial complementary mediation). It means that all direct and indirect paths are statistically significant, and their path coefficients point in the same direction. Also, COST is a partial mediator in the explanation of the relationship between HON and BUY. It results with significant both indirect paths (indirect-only mediation) and direct paths between COST and BUY.

Discussion

The results of the structural path model indicate that the pandemic shock (PAN) exerts a positive and significant influence on online purchasing behavior (BUY) through the mediating effects of opportunism (INT), trust (HON), and transaction costs (COST). In contrast, information asymmetry (INF) does not play a statistically significant role in explaining variations in online purchasing within the model. Trust (HON) proves to be an important construct, although its influence on BUY is indirect mediated in part by its effect on transaction costs (COST). This implies that individuals with a higher level of generalized trust perceive lower transaction costs, which in turn increases their likelihood of engaging in online purchasing.

A particularly strong relationship was found between opportunism (INT) and COST. The positive effect of INT on COST suggests that opportunistic consumer behavior contributes to higher perceived transaction costs, which aligns with theoretical predictions derived from transaction cost economics (Williamson, 1985). Consumers who are more cautious, less transparent, or strategically manage information tend to perceive online transactions as more complex, risky, or effortful, thus incurring greater cognitive and decision-related costs. Interestingly,

information asymmetry (INF) does not show a significant relationship with any of the key constructs leading to BUY. This finding may indicate that consumers, during the pandemic, developed or strengthened their information filtering strategies, selectively attending to credible sources and disregarding those perceived as unreliable. Despite the high volume, inconsistency, and fragmentation of information surrounding COVID-19, this did not significantly deter consumers from engaging in e-commerce. Although pandemic-related restrictions contributed to the increase in opportunistic behavior among internet users—such as withholding personal information, publishing unverified content, or intentionally misleading others, these behaviors did not translate into a reduction in online purchasing activity. On the contrary, such behaviors may be associated with greater control over the transaction process, leading some consumers to intensify their engagement in e-commerce.

Furthermore, the results suggest that trust in institutions may be stronger than interpersonal trust among internet users. This dynamic could reinforce consumer confidence in online platforms, especially when combined with structural assurances such as secure payment systems, transparent return policies, and verified customer reviews.

Conclusion

The exogenous shock induced by the COVID-19 pandemic has significantly increased the relevance of e-commerce as an alternative to traditional forms of shopping, primarily by contributing to a reduction in perceived transaction costs (COST). Consumers began to perceive online purchases as more time-efficient and cost-effective, mainly due to the ability to limit physical interactions, a factor that made digital transactions the preferred mode of exchange.

The pandemic served as a primary catalyst for the accelerated growth of e-commerce. Individuals facing restrictions on in-person shopping redirected their expenditures toward online platforms. This shift enhanced engagement and increased loyalty to digital marketplaces and online retailers, driven by the necessity of more frequent usage. Positive experiences with e-commerce during the pandemic have translated into a higher intention to continue purchasing online in the future.

Given these behavioral patterns, firms should prioritize increasing information transparency and reducing information asymmetry (INF) to mitigate the negative effects of consumer opportunism (INT) on transaction costs and purchase decisions. Building mechanisms for information verification, such as customer ratings, expert reviews, and authenticity certifications, may help reduce opportunistic behaviors and enhance consumer confidence.

Although (INF) was not a significant predictor of online purchasing behavior, strategic communication efforts based on clarity, consistency, and reliability remain crucial in reducing consumer uncertainty. Firms should rely on trustworthy sources of information, such as expert endorsements and domain-specialist reviews, to reinforce consumer decisionmaking confidence.

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