

Cognitive-Affective Trust Towards International E-Commerce Platforms: A Study of Polish Young Consumers

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Abstract

This study explores the cognitive-affective foundations of trust in international e-commerce among 218 young adult Polish consumers under 35 years of age. Data was collected through a computer-assisted web interview (CAWI). Three composite indices were developed to capture cognitive trust (COG_INDEX), affective trust (AFF_INDEX), and overall trust (TRUST_SCORE). Descriptive statistics, quadrant segmentation, and hierarchical regression analysis were applied to examine the relative weight of cognitive and affective factors. The results show that cognitive trust explains nearly half of the variance in overall trust, while affective factors add only marginal predictive value. Quadrant analysis further revealed that frequent purchasing clustered among respondents with high cognitive trust, whereas affective cues mainly played a supportive role. These findings confirm a sequencing model of trust formation, where rational assurances provide the baseline and emotional features reinforce engagement and loyalty. The study was limited by a small and non-random sample size, while the focus on young adults in Poland restricts its generalisability.

Key words

young consumers, e-commerce, trust, cross-border shopping.

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Introduction

In recent times, e-commerce platforms have become increasingly entrenched in global retail, reshaping how people connect with brands, make purchases, and experience shopping. International platforms have expanded access to products and services across borders, which, in many cases, has reshaped long-standing retail patterns (Han et al., 2023). At the same time, the growth of this model raises an important issue of trust. Trust in a platform is still a prerequisite for consumer participation and long-term loyalty (Chiang et al., 2018). When there is a lack of such confidence, consumers tend to withhold personal data or abandon online transactions, making trust a recurring theme in both scholarly debate and everyday business practice.

Trust in the e-commerce domain is generally understood as a multidimensional construct that combines cognitive and affective elements (Punyatoya, 2019). Cognitive trust reflects a rational

evaluation of a platform's reliability, competence, and security, expressed for instance through transparent pricing, clear privacy policies, or positive prior experiences. Affective trust, on the other hand, develops from emotional attachment and favourable impressions generated by visual design, interactive features, and marketing communication (Fang et al., 2016). Although both dimensions are widely acknowledged, their importance among younger, digitally native consumers remain fairly uncaptured and may evolve with changing expectations and technological innovation (McIntosh et al., 2021).

In a wider global context, cross-border e-commerce stands out as one of the most prominent segments of online retail. Estimates place its value at about USD 1.14 trillion in 2024 and USD 1.21 trillion in 2025, representing roughly 18.8 to 20 per cent of all global online sales (Capital One Shopping, 2025). Among firms that already operate internationally, cross-border transactions account for around 28 per cent of total online sales (Avalara, 2024). Projections suggest continued expansion at a compound annual growth rate (CAGR) of 15.44 per cent through 2034 (Precedence Research, 2025), yet domestic shopping still dominates, with approximately 80 per cent of purchases occurring within national markets. A closer look at recent reports reveals marked regional differences. In the Asia-Pacific region, 80 per cent of consumers anticipate further international growth, and in China 99 per cent report comfort with cross-border purchases (Airwallex, 2025). Taken together, these figures arguably show the rising importance of cross-border e-commerce while also indicating the continued dominance of domestic preferences in shaping online consumption patterns.

International e-commerce platforms such as Amazon, Alibaba, eBay, and Zalando have become key actors in global online retail. They aggregate products from a wide range of vendors, allowing consumers to compare offers, prices, and reviews on an international scale (Mou et al., 2020). For younger generations, who are technologically adept and receptive to cross-border shopping, these platforms combine convenience with a broad assortment and attractive pricing. At the same time, international transactions heighten perceived risks surrounding product authenticity, delivery reliability, and the enforcement of consumer rights (Anastasiadou et al., 2019). Building on this point, platforms allocate substantial resources to trust-building measures, including security certifications, transparent policies, and localised user experiences (Maniam et al., 2012). Çevik and Koç (2022) show that these mechanisms involve third-party security seals, clear communication of procedures, and high-quality website design with region-specific features to distinguish reliable providers from dishonest ones and strengthen customer trust. By extension, Zheng et al. (2025) argue that platforms should adopt comprehensive trust strategies combining advanced security measures, transparent policies, secure payment systems, and localised customer support to address the distinctive challenges of international transactions.

Research indicates varying age-related horizons of trust in the online sphere. Studies suggest that younger users, usually more comfortable with digital technologies, are more open to online shopping than older adults, who may be more hesitant due to limited experience with digital tools (McIntosh et al., 2021). Surprisingly, however, even though young people use the Internet far more often, they do not seem to fully make use of more advanced online services, such as e-commerce features or e-government platforms (Serrano-Cinca et al., 2018). Young consumers are therefore an exceptionally appealing social group that is worth paying attention to in the context of online shopping behaviour and the trust associated with it. However, to date, it has been exceedingly difficult to find scientific studies that comprehensively address the trust levels of young consumers in the sphere of e-commerce and that are not meta-analyses or review articles. For example, a study by Bylok (2022), although it concerns the trust of young consumers in e-commerce, does not take into account platform internationality and the duality of the construct of trust, which can be divided into cognitive and affective trust. This division is commonly found in studies on trust (including in the context of e-commerce) and accurately reflects the comprehensiveness of this subject (Pahrudin et al., 2025; Foroutan et al., 2022; Punyatoya, 2019). There are also studies such as that by Kizák et al. (2024), which concern the behaviour of young e-consumers of the Visegrad Group, but without addressing

the context of their trust. ElSayad and Mamdouh (2024), on the other hand, focused exclusively on aspects related to trust in AI in online stores among young shoppers. It can therefore be concluded that there is a research gap in that no study has yet been conducted on young e-consumers that would address their trust in e-commerce, taking into account the duality of the concept of digital trust and cross-border shopping.

How these investments translate into young consumers' factual trust, and which platform features are most decisive for this group, remains a question worth investigating. With international e-commerce expanding rapidly and young consumers gaining greater purchasing power, there is a growing need to identify not only what shapes the very trust in the online sphere, but also which factors hold the most relevance for this demographic. Building on this concern, the present study addresses two key questions: What determinants shape young consumers' propensity to trust international e-commerce platforms? Which category of determinants – cognitive or affective – exerts a stronger influence on that trust?

Accordingly, this paper aims to identify and measure the influence of cognitive and affective factors on consumer trust in international e-commerce platforms and to compare their relative strength. By doing so, it seeks to enrich theoretical discussions of consumer trust (with particular focus on the younger adult generations) and provide a more practical foundation for businesses operating online. Research hypotheses will be presented in the course of reasoning based on a literature review.

The paper is structured as follows: Section 1 reviews the literature on cognitive and affective perspectives of digital trust in an international context, and on this basis the research hypotheses are drawn. Section 2 outlines the methodology. Section 3 presents the results. Section 4 discusses the findings. Final section of this paper closes with the conclusions, limitations and possible directions for future research

1. Literature review

1.1 *The importance of trust in digital commerce*

Trust is a multifaceted concept whose meaning varies across academic traditions. In social psychology it is often viewed as an expectation embedded in human behaviour and personality (Paliszkievicz, 2013). Economics conceptualizes it as a form of social capital that supports the functioning of markets and exchange (Nessel, 2022). Management studies interpret trust as the trustor's belief in the trustee's competence and goodwill, which in turn facilitates stable and effective business relationships (Blomqvist, 1997). In online contexts, trust gains even more importance as it underpins consumer confidence on e-commerce platforms. Launer et al. (2022) capture this shift by defining digital trust as "the general belief that technology, people and processes act or are aligned in ways that will fulfil people's digital expectations, such as a sense of confidence, security or control to support the creation of a secure digital environment."

Within e-commerce, trust acts as a key determinant of consumer behaviour and as an enabler of successful transactions (Bylok et al., 2019; Pietrzak & Takala, 2021). Confidence in online vendors was recognized early as essential for the success of e-commerce firms (Liu & Tang, 2018). Hendricks and Mwapwele (2024) argue that trust remains indispensable for e-commerce firms' adoption, as a confidence deficit discourages consumers from engaging in online shopping. It is also widely accepted that trust provides the foundation for stable customer relationships and loyalty (Foroutan et al., 2022). Younger consumers, such as Millennials and Generation Z, show distinct patterns of online trust formation, where optimism, innovativeness and discomfort influence perceived trust and usefulness, which in turn predict purchase intention (ElSayad & Mamdouh, 2024). Bylok (2022) further observes that positive experiences during earlier online interactions increase the likelihood of future transactions, and that trust attributes exert a particularly strong influence on the purchasing decisions of younger consumers.

The importance of trust in digital commerce can also be linked to its role in reducing perceived uncertainty and risk. Providing transparent information about product quality and its guarantees, as well as vendor credibility, are particularly important for both students and young adults, who treat these factors as primary trust signals (Kocot et al., 2025). Online transactions, by their nature, lack the direct interaction between buyer and seller that traditionally provides reassurance. This absence amplifies perceived risks such as financial loss, data breaches and doubts about product quality. Trust serves as a mitigating force to these concerns, offering consumers a sense of security in an environment often associated with uncertainty. Apprehensions about identity theft, fraud and privacy violations remain widespread, yet well-designed security measures can moderate these anxieties (Netshirando et al., 2024). Foroutan et al. (2022) also highlight that the inability to physically examine products intensifies perceived risk, thereby increasing the importance of trust in online purchasing decisions.

Trust reaches beyond risk reduction into the establishment and maintenance of enduring business relationships. Without a baseline of confidence, the formation and sustainability of contracts or long-term partnerships between buyers and sellers become difficult to achieve (Silitonga et al., 2020). Trust supports productive exchanges, enabling transactions to unfold smoothly and reliably, which is crucial for the long-term viability of online ventures (Bui Thanh, 2023). It also influences not only first-time interactions with a platform but the development of loyalty, repeat purchases and other behaviours that define the ongoing success of e-commerce companies (Aslam et al., 2020). Expectations and emotional responses towards service providers also appear to mediate this relationship, with trust acting as a bridge that converts first-time buyers into returning customers and thereby shaping retention and profitability (Wang et al., 2019).

The rapid growth of the e-commerce sector, accelerated by the COVID-19 pandemic (Hadasik & Kubiczek, 2022; Pollák et al., 2021), has increased the urgency of these issues. As consumers move more of their habits online (Markovič et al., 2022), they face growing threats such as phishing, fraud, and misinformation. Against this backdrop, maintaining consumer confidence is a pressing challenge (Şcheau et al., 2016). Companies arguably need to invest continuously in trust-building practices so that consumers feel secure and confident in their online interactions, which may also improve the overall shopping experience (Meskaran & Ismail, 2012). Strzelecki (2019) echoes this point, finding that security certificates function as basic trust signals in cross-border commerce, with shops lacking them at risk of losing customer confidence. Jeon et al. (2021) add that trust transfer significantly shapes consumers' repeat purchase intention. In this way, trust operates as a dynamic mechanism underpinning both immediate transactions and ongoing loyalty.

Trust also helps to address the information asymmetry that characterizes many online transactions. In traditional retail settings, consumers can directly inspect goods, whereas in digital commerce vendors typically hold more information about the products they offer. This imbalance can produce dissatisfaction and uncertainty (Hadasik, 2024; Pandey et al., 2024). By assuring consumers that a vendor's intentions align with their interests, trust narrows this gap and encourages more confident purchasing decisions.

1.2 Cognitive and affective factors affecting digital trust

Recent research increasingly distinguishes between two complementary dimensions of trust in digital commerce: cognitive trust and affective trust. Cognitive trust rests on reasoned evaluations of a platform's competence, reliability and honesty (Mayer et al., 1995). It involves a deliberate appraisal of observable attributes, with consumers judging the trustworthiness of an e-commerce provider by considering its operational transparency, consistency in fulfilling promises and perceived ability to meet commitments. This dimension of trust is essentially performance-based and largely objective, relying on rational processes to determine whether the other party in a transaction can be relied upon (Mayer et al., 1995). For younger online shoppers, satisfaction emerges as a key mechanism bridging trust, shopping experience, and word-of-mouth intentions. In this context, elements such as personalized service and transparent data protection appear to reinforce the indirect influence of trust

on repurchase behaviour, even when consumers perceive transactions as relatively high-risk (Amado-Mateus et al., 2025). In the e-commerce context, Wang et al. (2023) describe cognitive trust as consumers' belief in the reliability, competence and trustworthiness of online platforms, especially regarding transaction processes, privacy and service delivery. Punyatoya (2018) likewise notes that cognitive trust reflects perceived website quality, privacy and security policies and prior experience with the retailer. Strzelecki (2020) adds that website performance decisively shapes consumer behaviour in cross-border e-commerce: slow load times reduce conversion rates, while faster response times enhance confidence and willingness to complete transactions.

Where cognitive trust relies on rational evaluation, affective trust grows from emotional bonds and interpersonal connections. It reflects the attachment and empathy that consumers develop toward an online vendor, often shaped by the perceived sincerity of its interactions and the overall emotional experience it provides (McAllister, 1995). Evidence from studies on younger consumer groups indicates that affective trust is strongly influenced by social cues and technological infrastructure, which together drive their engagement with e-commerce platforms (Gupta et al., 2023). Sha (2021) observes that affective trust in online settings emerges from the emotional connection a customer feels toward a platform, shaped by the quality of prior interactions and by how closely the platform's values align with the consumer's personal beliefs and preferences. This emotional dimension is less tangible and more subjective than cognitive trust, yet it arguably plays a decisive role in sustaining long-term engagement and loyalty. Strengthening affective trust involves personalized communication, responsive customer service and visible demonstrations of shared values or social responsibility. These practices help to build an emotional bond between consumer and vendor. Corporate social responsibility initiatives that align with consumer values can, for instance, enhance trust and engagement by signalling a company's commitment to ethical practices and community well-being (Macca et al., 2024). Shah and Jan (2021) complements that personalized and customer-oriented communication, combined with empathy and social responsibility, cultivates stronger emotional connections and deepens affective trust.

The integration of cognitive and affective trust can be further understood through the lens of the Cognitive-Affective-Behaviour (CAB) theory, which posits that human behaviour is shaped by the dynamic interplay of cognitive processes, emotional responses, and behavioural tendencies (Mischel & Shoda, 1995). According to this theory, individuals assess situations based on both rational evaluations (cognitive trust) and emotional connections (affective trust), with each influencing how they perceive risk, form relationships, and make decisions in digital environments. This framework helps explain why both trust dimensions are essential for building robust consumer relationships online, as they reflect the dual nature of human decision-making, rooted in both logic and emotion (Uttenthal, 2024). The CAB theory thus provides a theoretical foundation for understanding how cognitive and affective trust jointly shape consumer behaviour in e-commerce contexts.

Cognitive and affective trust interact rather than operate in isolation, hence influencing consumer decision-making in intricate yet synergistic ways. Cognitive trust anchors the initial engagement by assuring consumers of a platform's reliability, while affective trust strengthens the emotional connection that fosters loyalty and long-term relationships (Punyatoya, 2019; Foroutan et al., 2022). Fang et al. (2016), as well as Shang et al. (2023) show that both dimensions influence online behaviour, particularly with regard to website design and user experience. Together these two dimensions offer a framework for understanding the full spectrum of consumer decision-making, from initial interest to post-purchase satisfaction (Punyatoya, 2019). Cognitive trust reduces perceived risks by signalling that the platform is dependable and capable of meeting expectations. Affective trust strengthens the emotional engagement that drives loyalty and sustains long-term customer relationships. This dual character arguably equips businesses to address both the rational and emotional sides of consumption, generating stronger and more enduring connections (Nghia et al., 2020).

Balancing these dimensions also provides a broader strategic advantage. Cognitive and affective trust together help reduce uncertainty, increase customer retention and allow firms to adapt more

effectively to the changing patterns of digital consumer behaviour (Fang et al., 2016; Jeon et al., 2021). A closer look at these findings suggests that e-commerce practitioners may build rational trust through transparency and reliable services while simultaneously fostering emotional connections that reinforce retention and satisfaction.

1.3 Trust in international e-commerce platforms

International e-commerce platforms have developed into global marketplaces connecting consumers and sellers across national borders. Amazon, Alibaba and eBay exemplify this expansion, which accelerated in the aftermath of the COVID-19 pandemic as online shopping became more firmly established (Pollák et al., 2021). In this context, the concepts of trust and digital literacy converge. Individuals who are more experienced and confident in online environments, often younger and digitally active consumers, tend to report higher satisfaction and show a stronger propensity for future repurchases (Rybak, 2018). Cross-border e-commerce, understood as the international sale of goods in the digital domain, remains one of the fastest growing segments of online retail and allows consumers to access products from a wide range of global markets (Aichner & Shaltoni, 2018).

Trust operates as a cornerstone in what kind of approaches do consumers undertake to interact with these platforms. In international contexts it entails confidence in a platform's capacity to handle complex logistics, protect payments and personal data, and comply with regulatory frameworks that are frequently less familiar than domestic laws (Xu et al., 2024). Compared with national markets, this form of trust ought to bridge broader contextual gaps involving legal jurisdiction uncertainty, cultural differences and the difficulty of evaluating the credibility of foreign sellers (Witek-Hajduk & Grudecka, 2024). In practice, consumers rely on a constellation of cues such as international reputation, third-party certifications, localized customer service and clear information about customs, taxes and delivery. Liu (2024) notes that trust in international e-commerce is both multidimensional and more fragile because information asymmetry and perceived risks are typically greater than in domestic commerce.

Several determinants guide how consumers assess the trustworthiness of international platforms. Concerns about product quality, safety and reliability are especially prominent. Goods originating from the European Union, for example, are often perceived as safer and more dependable, which enhances consumer confidence (Aichner & Shaltoni, 2018). Country of origin (COO) has emerged as a particularly salient cue. Transparent communication about a product's COO can improve perceptions of quality and safety and, in turn, reinforce trust in the platform itself (Bhattacharya et al., 2023). This transparency supports consumer rights and strengthens confidence, which has a direct influence on purchase intentions (Strzelecki & Rizun, 2022). Nevertheless, despite its prominence in marketing practice, the influence of COO on cognitive and affective trust remains insufficiently studied, which signals a useful direction for further research.

Cultural context also shapes how trust develops and is maintained on international platforms. Consumers from different cultural backgrounds bring distinct frames of reference to online purchasing that reflect enduring social values. Hofstede (1984) observed that individuals from collectivist cultures tend to emphasize social proof and peer recommendations, whereas those from more individualistic cultures place greater importance on autonomy and personal choice (Rosillo-Díaz et al., 2020). This divergence affects perceptions of trust, risk and value. Jiang and Jones (2014) emphasize that cultural perceptions directly influence international shopping behaviour. Hallikainen and Laukkanen (2018) similarly argue that cultural background is instrumental in shaping a consumer's willingness to trust online platforms. Among younger consumers, social proof, technology readiness and cultural norms appear to interact with cognitive and affective trust mechanisms, pointing to areas where platforms (i.e., e-vendors) might make investments to build stronger trust (Gupta et al., 2023).

Individual attitudes toward online shopping further influence the formation of and development of trust. These attitudes are shaped by prior experiences, marketing communication and social

influence (Zhang & Benyoucef, 2016). Perceived risks such as data security, product authenticity and the reliability of third-party service providers also weigh heavily in the formation of confidence (Glover & Benbasat, 2010). Information asymmetry between consumers and vendors adds another layer of difficulty. When consumers feel inadequately informed about a product, particularly in the online domain, a lack of transparency and sense of uncertainty can erode their trust in the platform (Hadasik, 2024).

These studies suggest that trust is central to the success of international e-commerce. Addressing both cognitive and affective dimensions of trust while taking into account cultural and technological diversity can reduce perceived risks, foster loyalty and support sustained growth in global markets.

1.4. Hypotheses formation

The following subsection moves directly to hypothesis formulation, building on the previously established premises regarding the role of trust and its dual (cognitive-affective) nature in online commerce sphere. On this theoretical basis, the expected relationships between trust dimensions and young consumers' shopping behaviours on foreign and domestic platforms are outlined.

The first hypothesis concerns platform choice and shopping frequency. Prior work shows that young consumers often use international platforms such as AliExpress, Amazon, and Temu (Witek-Hajduk and Grudecka, 2024). Frequent use, however, does not align with higher trust. The same study reports lower trust in international platforms than in Polish ones, and Foroutan et al. (2022) note that consumers place stronger trust in platforms supported by domestic presence and regulatory oversight. This contrast between engagement and confidence underpins the proposed hypotheses, which read as follows:

- H1a. Young consumers use international shopping platforms more frequently than those originating from Poland.
- H1b. Young consumers place less trust in international shopping platforms than those originating from Poland.

Affective trust appears more fundamental than cognitive trust for young consumers in online purchases. While cognitive trust relies on competence and reliability, younger buyers are strongly influenced by emotional cues, social signals, and personalized experiences. Prior studies support this emphasis: affective trust significantly shapes behavioural intentions (Punyatoya, 2019), drives purchase intentions more effectively than cognitive trust among younger users (Wang et al., 2023), and aligns with young consumers' preference for emotional connection (Bartosik-Purgat & Rakowska, 2024). Notably, online shopping enjoyment, reflecting an affective aspect of online behaviour, is the strongest predictor of young consumers' involvement (Gautam & Sharma, 2020). Therefore, the study proposes the following wording of hypothesis H2:

- H2. Affective trust plays a more fundamental role for young consumers when purchasing online.

Whereas H2 emphasizes the purchasing relevance of affective mechanisms, H3 focuses on how cognitive trust shapes overall trust. Trust involves a willingness to accept vulnerability based on expected performance, which in digital commerce relates to beliefs about reliability, information integrity, and confidentiality. Research shows that cognitive trust exerts independent effects: Foroutan et al. (2022) find it significantly predicts satisfaction and loyalty even when affective trust is controlled; Wang et al. (2023) confirm that rational assessments of reliability and security independently shape consumer outcomes; and Witek-Hajduk and Grudecka (2024) highlight the importance of competence, payment security, and information accuracy for purchase intentions. Thus, the study proposes:

- H3. Higher levels of young consumers' cognitive trust in international e-commerce are associated with stronger overall trust, independently of affective trust.

Building on prior evidence linking trust to behavioural outcomes, the next hypothesis argues that the joint presence of high cognitive and affective trust is a strong predictor of shopping intensity. Research shows that on the one hand cognitive trust fosters reliability expectations and on the other:

affective trust strengthens emotional attachment. That both forms jointly promote loyalty and repeat purchasing (Foroutan et al., 2022; Suyanto et al., 2025). Consumers who experience both rational assurance and emotional comfort are therefore the most likely to engage in frequent shopping. In view of this, the next hypothesis reads as follows:

- H4. Young consumers with high cognitive and high affective trust constitute the largest share of high-frequency shoppers.

Finally, H5 specifies an expectation about which set of antecedents exerts a stronger effect on overall trust. While affective trust is important for purchase intention, overall trust in international e-commerce depends more on cognitive cues due to heightened risk and the need for reliable safeguards. Empirical research shows that security-related beliefs, such as integrity and confidentiality, strongly influence trusting beliefs. Punyatoya (2019) finds that cognitive trust has the biggest influence on behavioural intentions, even when affective trust is controlled. Witek-Hajduk and Grudecka (2024) show that cognitive antecedents (e.g. platform quality, payment security, information transparency, and legal protection) exert stronger effects on trust and purchase intentions than emotional factors. Foroutan et al. (2022) confirm that website quality, security policies, and reputation (cognitive antecedents) predict trust more strongly than emotional factors, especially in uncertain contexts. Therefore, the study proposes:

- H5. Cognitive antecedents have a stronger effect on overall trust than affective features.

2. Methodology

2.1. Techniques and instruments used in the study

The research employed a quantitative approach and applied the Computer-Assisted Web Interviewing (CAWI) technique. The data were obtained between 23 and 29 May 2025. The target group consisted of young adult consumers residing in Poland who had purchased goods from international e-commerce platforms within the preceding twelve months.

A purposive, criterion-based sampling strategy was applied to ensure that all respondents met clearly defined inclusion criteria: (1) being between 18 and 34 years of age, (2) living in Poland at the time of data collection, and (3) having completed at least one purchase from a foreign online retailer in the last year. Recruitment was conducted via online channels oriented toward young adults, with an explicit screening question at the start of the survey to exclude individuals who did not fulfil these criteria. Survey links were distributed to individuals meeting specific criteria, selected based on their relevance to the research context, with screening questions used to ensure eligibility. This procedure ensured that respondents were selected for their recent, relevant cross-border shopping experience rather than mere ease of access, yielding a purposive sample of experienced young online shoppers in Poland.

The questionnaire, provided as a supplementary file, was structured to move from background variables toward more specific constructs and was informed by established measures of online trust and e-commerce behaviour (e.g., Punyatoya, 2019; Pietrzak & Takala, 2021). Alongside demographic information such as gender, age, education, household size, place of residence and self-assessed financial situation, the survey included segmented items to explore how respondents interact with international e-commerce platforms and how such interactions influence their cognitive-affective trust. Respondents were asked to report their shopping preferences, including the frequency and nature of purchases made on international platforms, which served to establish patterns of cross-border consumption. This was followed by items assessing general trust (i.e., overall sense of security in online shopping, confidence in payment systems, trust in sellers and perceived legal protection), which were adapted from existing scales of online trust in e-commerce contexts (Kumar et al., 2020; Bianchi & Andrews, 2012; Soleimani, 2022).

Cognitive trust was explored through questions about platform security (including security certificates and privacy policies), transparency of pricing, clarity and usability of website interfaces, trust in the platform's country of origin and positive prior experiences with online vendors, drawing

on prior operationalizations of cognitive-based trust in digital environments (Tambunan et al., 2018; Rane & Meshram, 2012; Chiang et al., 2018; Falahat et al., 2019; Engriani & Novaris, 2020; Lo et al., 2013; Piroth et al., 2020; Bhattacharya et al., 2023; Bylok et al., 2019). Affective trust, in turn, was captured through items probing emotional responses to platform aesthetics, the attractiveness of product imagery, reactions to advertising content, perceived price attractiveness as distinct from price transparency, and the influence of social and interactive features such as live chat, customer reviews, recommendations from friends or family, and perceptions of community or pro-environmental engagement by the platform. Interpersonal influence, encompassing both electronic (eWOM) and traditional verbal feedback, plays a crucial role in shaping impulsive buying behaviour (Zheng et al., 2025). Gaining insights into sellers' opinions broadens consumers' knowledge, influencing their reasoning and decision-making processes (Obiedat, 2013). As a result, this factor contributes to both the affective and cognitive components of trust in e-commerce. Items pertaining affective trust were adapted from studies on affective trust and emotional responses to online retail interfaces (Blagoeva et al., 2023; Aichner & Shaltoni, 2017; Yin & Han, 2021; Hsieh et al., 2014; Bartók, 2018). To provide a broader context, the questionnaire also examined respondents' evaluations of the overall quality of international e-commerce market operations, including the perceived reliability and efficiency of these platforms.

The allocation of individual questionnaire items to broader analytical categories, including general trust, cognitive and affective trust factors and perceived quality of market operations, was guided by an extensive review of relevant literature and established measurement scales. This approach ensured that each area of inquiry was theoretically grounded, and that the multidimensional nature of e-consumer trust was captured in a conceptually consistent way.

2.2. Developed measures

Based on the items related to cognitive and affective trust, the respective composite indices were constructed by calculating the arithmetic mean of relevant items, i.e. the Cognitive Index (COG_INDEX) and Affective Index (AFF_INDEX). Additionally, the Overall Trust Score (TRUST_SCORE) was derived from general trust items.

Each index drew on the following groups of items:

- COG_INDEX – included visible security certificates, privacy policy clarity, transparency of content and pricing, ease of navigation, trust in country of origin, and prior positive experiences (questionnaire items Q15a-Q15g).
- AFF_INDEX – comprised attractive design, product galleries, positive advertising emotions, emotionally attractive pricing, interactive and social features, community/ecological engagement, and recommendations (questionnaire items Q16a-Q16h).
- TRUST_SCORE – captured attitude towards online shopping, as well as overall trust in online shops, sellers, legal protection, and online payments (questionnaire items Q14a-Q14e).

Table 1 presents the basic descriptive statistics for these three composite indices.

Table 1. Descriptive statistics and internal consistency of the cognitive, affective and overall trust indices (N=187)*.

Variables	COG_INDEX (7 items)	AFF_INDEX (8 items)	TRUST_SCORE (5 items)
Mean **	7.22	6.12	7.10
Standard deviation	1.54	1.89	1.56
Skewness	-1.12 (moderate left-skewness)	-0.44 (slight left-skewness)	-0.80 (slight left-skewness)
Kurtosis	+3.15 (highly leptokurtic)	+0.56 (mildly leptokurtic)	+1.4 (moderately leptokurtic)
Cronbach's alpha	0.86	0.88	0.83

Note: * All indices were calculated for the group of 187 respondents who indicated purchasing goods from international online platforms; ** For all the above indices, an 11-point (0-10) rating scale was used, whereby: for COG_INDEX and AFF_INDEX "0" means "does not increase my trust at all" and "10" means "completely increases my trust," while for TRUST_SCORE "0" means "strongly disagree" and 10 means "strongly agree."

Source: own elaboration

The internal consistency and reliability of these indices were confirmed using Cronbach's alpha, with values indicating high reliability: $\alpha = 0.86$ for COG_INDEX, $\alpha = 0.88$ for AFF_INDEX, and $\alpha = 0.83$ for TRUST_SCORE. Descriptive statistics indicate relatively high mean values across all three indices, with cognitive trust ($M = 7.22$, $SD = 1.54$) and overall trust ($M = 7.10$, $SD = 1.56$) slightly exceeding affective trust ($M = 6.12$, $SD = 1.89$). Distributions show moderate to slight left-skewness, suggesting a general tendency of respondents to assign higher ratings. Kurtosis values point to varying degrees of concentration around the mean, ranging from highly leptokurtic in the cognitive index to more moderate levels in the affective and overall trust indices. Figure 1 shows a comparison of histograms of COG_INDEX and AFF_INDEX.

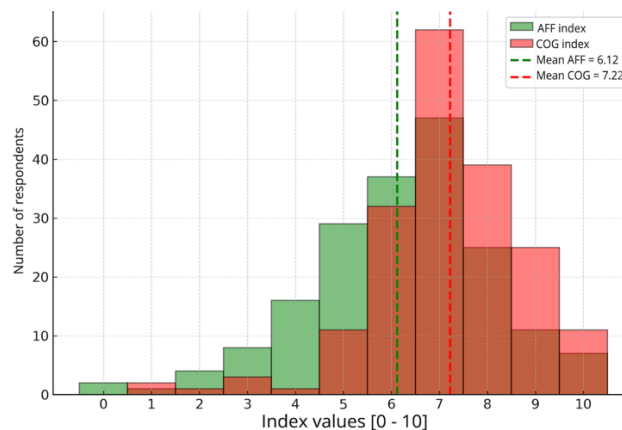


Figure 1. Histograms of the Cognitive Index (COG_INDEX) and the Affective Index (AFF_INDEX). Source: own elaboration.

A direct comparison of the indices (see Figure 1) showed that cognitive trust was generally higher and less varying than affective trust. Both indices, however, were shifted toward higher values, reflecting an overall positive disposition toward international e-commerce among young Polish consumers.

2.3. Sample characteristics

The final research sample consisted of 218 valid responses. This sample size meets the recommended threshold for quantitative survey studies, as suggested by Kock (2018), who indicates that 100–200 cases are sufficient for statistical validity. A similar number of participants was used in recent studies on digital behaviour (e.g., Ziemba et al., 2025). Therefore, the sample can be considered robust and suitable for drawing inferences about young, digitally active consumers in Poland. Following the APA Dictionary of Psychology (VandenBos, 2020), the study included participants who were adults but had not yet reached 35 years of age, thereby aligning the sample with this developmental stage.

The sample comprised young adult consumers, predominantly aged 18–24 years (89.9%), with a slight majority of female respondents (53.2%). Most participants had completed secondary education (91.3%) and resided in urban areas. The majority reported a good or very good financial situation, and most lived in households of three or four people. Detailed characteristics of respondents are illustrated in Table 2.

Descriptive statistics were used to summarize respondent characteristics and distribution of trust indices. Hierarchical quadrant analysis was applied to segment respondents based on their cognitive and affective trust scores, and to explore the relationship between these dimensions and online shopping intensity. Hierarchical regression analyses were subsequently performed to assess the relative predictive strength of cognitive and affective factors on overall trust toward international e-commerce platforms. All statistical analyses were conducted using IBM SPSS Statistics v29.0, and significance was assessed at the 0.05 level.

Table 2. Sample characteristics (N = 218).

Variable	Category	N	%	Variable	Category	N	%
Gender	Woman	116	53.2	Place of residence	City up to 200,000 inhabitants	90	41.3
	Man	101	46.3		City over 200,000 inhabitants	62	28.4
	Non-binary	1	0.5		1–2 persons	77	35.3
Age	18–24	196	89.9	Household size	3–4 persons	106	48.6
	25–34	22	10.1		5 persons or more	35	16.1
Education	Secondary	199	91.3		Poor or no response	6	2.7
	Higher	19	8.7	Self-assessed financial situation	Average	27	12.4
Place of residence	Village	36	16.5		Good	129	59.2
	Town up to 50,000 inhabitants	30	13.8		Very good	56	25.7

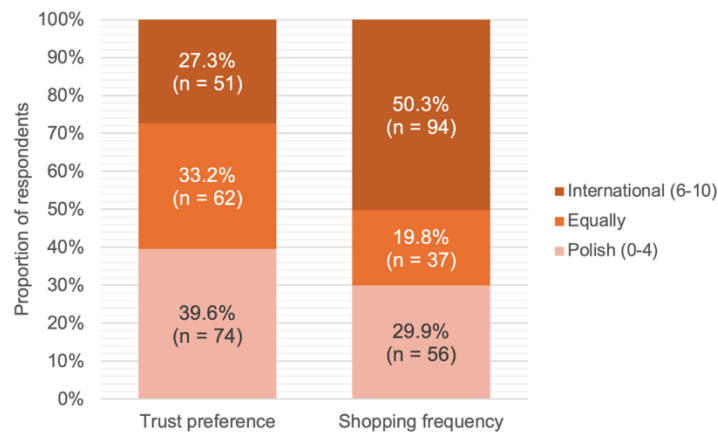
Source: own elaboration.

3. Research results

3.1. Online shopping preferences

All participants met the inclusion criterion of having experience with international online shopping during the previous year. This activity, however, did not form a daily routine. None of the respondents reported shopping every day and only 9% reported doing so several times per week. Most respondents stated that they had purchased from international e-commerce platforms (N = 187; 86.2%), while a smaller group had not engaged in cross-border online shopping (N = 31; 13.8%). This distribution indicates that the sample reflects a population of digitally active consumers familiar with global marketplaces. Consequently, the subsequent analyses are based on the 187 respondents who reported making purchases on international e-commerce platforms.

Respondents were further asked to indicate whether they purchase more frequently on Polish or international platforms, as well as to specify which type of platform they consider more trustworthy (Fig. 2).

**Figure 2.** Side-by-side comparison between trust preference and shopping frequency for international and Polish e-commerce platforms among younger adults.

Source: own elaboration.

In terms of purchasing behaviour, half of the respondents reported shopping more often on international platforms (50.3%), while only around thirty per cent reported a preference for Polish platforms. Trust, however, follows a different pattern: 39.6% expressed greater confidence in Polish platforms, roughly one third reported equal trust in both types, and just over 27% declared higher trust in international platforms. This discrepancy suggests that international platforms attract a larger

share of transactions despite relatively lower declared trust. Hence, both H1a and H1b hypotheses are confirmed.

3.2. Determinants of trust in international e-commerce platforms

Respondents were asked to evaluate a series of factors influencing their trust in international e-commerce platforms on a 0–10 scale. Table 3 presents the mean ratings, standard deviations, and the share of high scores (8–10) for all cognitive and affective trust factors included in the study, with cognitive factors highlighted in blue and affective factors in red.

Table 3. Mean ratings of cognitive and affective trust factors.

Factor	Mean	Std. dev.	% 8-10	Factor	Mean	Std. dev.	% 8-10
Positive experiences with the platform	8.55	1.65	78.1	Trust in the platform's country of origin	6.45	2.49	36.4
Favourable reviews from other users	7.8	1.8	61.0	Visible security certificates	6.37	2.35	33.7
Clear and understandable pricing	7.74	1.95	58.8	Attractive pricing	5.98	2.64	31.6
User-friendly website navigation	7.47	2.15	54.0	Positive emotional response to advertising	5.89	2.72	30.5
Transparent and comprehensible content	7.45	1.85	55.1	Social features, e.g., chat and reviews	5.86	2.68	28.9
Attractive and aesthetically pleasing website design	6.87	2.27	44.4	Engagement in social and environmental initiatives	5.7	2.64	25.1
Appealing product image galleries	6.6	2.49	45.5	Interactive features, e.g., AR or lotteries	4.27	2.96	15.0
Clear privacy policy	6.53	2.1	33.7				

Note. Affective factors have been marked with colour red; cognitive factors have been marked with colour blue. Sorted by highest mean values.

Source: own elaboration.

Table 2 differentiates cognitive factors (blue) from affective factors (red), making clear how the two domains diverge in their importance for trust formation. Organized in descending order from the highest to the lowest mean values, the table places the strongest ratings and largest share of top scores in the upper section, which is dominated by blue rows. Previous positive experiences with the platform (mean = 8.55, SD = 1.65; 78.1% scoring 8-10) ranks first, while favourable reviews from other users (mean = 7.80; 61%) stands out as the only affective factor among the top items. Other blue-coded indicators, including clear and understandable pricing (7.74), user-friendly navigation (7.47) and transparent content (7.45), also cluster that exceeds a mean rating of seven and suggest that reliability, transparency and accumulated experience underpin trust more strongly than any other category.

Red-coded affective factors form a middle-to-lower band. Aesthetic design (mean = 6.87) and product galleries (6.60) show moderate salience but far fewer high ratings (about 44-45%), while emotional responses to advertising (5.89), attractive pricing in emotional terms (5.98), social or interactive features (5.86) and engagement in social or environmental initiatives (5.70) register lower still. Interactive or gamified features such as lotteries or augmented reality rank last (mean = 4.27; 15% scoring 8-10), underlining their marginal relevance.

Four of the five top positions are cognitive, pointing to a hierarchy in which performance- and information-oriented cues outweigh design aesthetics or emotional engagement in shaping trust. Hence, the H2 hypothesis has to be rejected.

3.3. Quadrant analysis of cognitive-affective trust

To better understand the interplay between the cognitive (COG) and affective (AFF) dimensions of trust, a hierarchical quadrant analysis was performed. The sample was split using the median values of COG_INDEX (7.29) and AFF_INDEX (6.25), resulting in four distinct quadrants (Figure 3).

The analysis identified four distinct segments. The largest and most active group combined high cognitive and high affective scores ($n = 67$), representing the most engaged and trusting users who purchase regularly on international platforms. Another segment showed high cognitive but low affective scores ($n = 33$), indicating that strong cognitive trust may develop even without affective reinforcement. A third group, with both low cognitive and low affective scores ($n = 57$), revealed minimal trust and limited engagement in online shopping. Finally, the last segment with high affective but low cognitive scores ($n = 30$) suggests that, e.g., positive emotions and aesthetics rarely compensate for weak cognitive trust in this context.

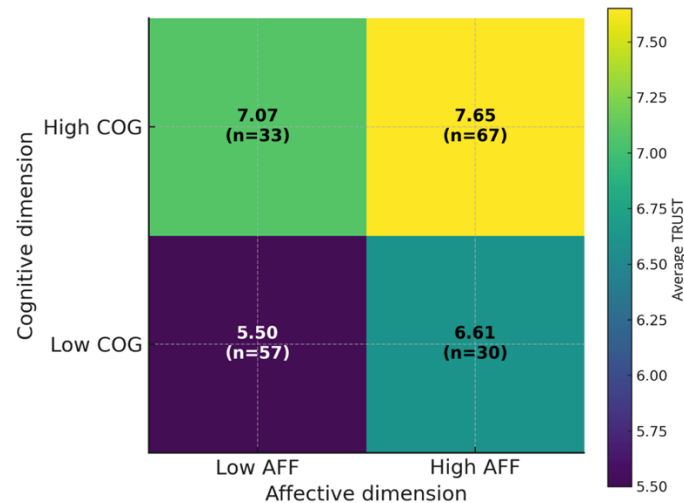


Figure 3. Hierarchical quadrant analysis between the cognitive (COG) and affective (AFF) trust dimensions.

Source: own elaboration.

Respondents with low scores on both dimensions (Low COG + Low AFF) displayed the lowest overall trust levels (mean = 5.50), confirming that the absence of both rational and emotional enablers is associated with disengagement from international platforms. Moving from Low to High COG while holding AFF constant at its lower level produced a 1.6-point increase in TRUST (5.50 $\rightarrow$ 7.07), indicating that cognitive trust is the stronger determinant. A similar shift along the affective axis (Low $\rightarrow$ High AFF, with low COG) produced a smaller, but still positive, effect (+1.1 points).

The highest trust levels were observed in the High COG + High AFF quadrant (mean = 7.65), where rational assurances and affective appeal reinforce each other. This group comprised 36% of respondents, representing the most trustful and engaged consumers. Notably, adding affective trust on top of already high cognitive trust produced a further 0.6-point increase in TRUST, suggesting a complementary effect of emotions once cognitive preconditions are met. Thus, hypothesis H3 is confirmed.

3.4. Trust segments and online shopping intensity

The quadrant segmentation was further analysed in relation to self-reported purchase frequency (Figure 4). The color-coded scatterplots show that frequent purchasing clustered almost entirely among respondents with high cognitive scores, regardless of their affective levels. Affective factors appeared to have a secondary, supportive function, moving respondents from low to moderate engagement (annual to monthly shopping), yet only a small minority achieved the highest frequency (weekly purchases, 6 respondents in total).

The High COG + High AFF segment contained the largest concentration of high-frequency shoppers and thus represents the most commercially valuable group. In contrast, the Low COG + Low AFF segment ($n = 57$) showed minimal trust and near-complete disengagement from cross-border e-commerce. This pattern indicates that strengthening cognitive trust factors such as

transparency, security and reliability should take priority, while affective elements can be used to nudge users toward higher engagement. Notably, frequent international online shopping was found almost exclusively in the High COG + High AFF segment, suggesting that affective trust reinforces trust-based behaviours but cannot replace cognitive trust, which remains the principal driver. Therefore, the H4 hypothesis is confirmed.

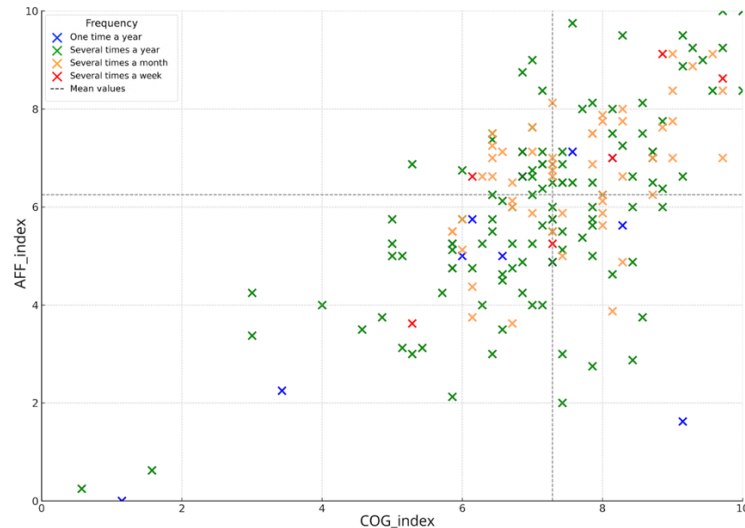


Figure 4. Self-reported purchase frequency in international e-commerce platforms vs. level of cognitive and affective trust.

Source: own elaboration.

3.5. Hierarchical regression analysis: predictors of overall trust

To assess the relative influence of cognitive and affective antecedents on overall trust, a hierarchical regression analysis was conducted (Table 4). Entering COG_INDEX first (Model 1) explained 46.5% of the variance in the overall trust score ($R^2 = 0.465$). Adding AFF_INDEX in the second step produced only a marginal, borderline-significant increase ($\Delta R^2 = 0.011$, $p = 0.056$), bringing the total to 47.5%. This suggests that cognitive factors alone capture nearly half of the variability in trust levels, with affective cues adding only a small additional share.

Table 4. Hierarchical regression results.

	Sequence (predictors)	R^2 (step 1)	R^2 (step 2)	ΔR^2	F-change	p
TRUST~	COG $\rightarrow$ +AFF	0.465	0.475	+0.011	3.689	0.056
TRUST~	AFF $\rightarrow$ +COG	0.283	0.475	+0.192	67.523	< 0.001

Source: own elaboration.

The reversed sequence yielded a contrasting picture. Entering AFF_INDEX first explained just 28.3% of the variance, but adding COG_INDEX increased explained variance by nearly 19 percentage points ($\Delta R^2 = 0.192$, $F = 67.5$, $p < 0.001$). Standardized coefficients in the full model (Table 5) confirmed that cognitive trust was roughly four times stronger as a predictor ($\beta = 0.59$, $p < 0.001$) than affective trust ($\beta = 0.14$, $p \approx 0.056$), whose effect remained only marginally significant at $\alpha = 0.10$.

Table 5. Standardized beta coefficients for predictors.

Predictor	β	p
COG_z	+0.59	<0.001
AFF_z	+0.14	0.056

Intercept ≈ 0 .

Source: own elaboration.

The model accounted for about 48% of the variance in trust scores. These results suggest that rational, information-based cues such as transparency, security assurances and website usability drive trust most strongly, while affective features such as design and emotional appeal offer only a modest supplementary contribution. In view of this, hypothesis H5 is confirmed.

3.6. Summary of hypothesis verification

Table 6 provides a cumulative overview of the verification outcomes for the proposed hypotheses. Additional insights derived from the analysis, along with the confirmation or refutation of the research hypotheses, are presented in the following Discussion section.

Table 6. Hypotheses' verification – an overview

Hypothesis		Result
H1a	Young consumers use international shopping platforms more frequently than those originating from Poland.	Confirmed ✓
H1b	Young consumers place less trust in international shopping platforms than those originating from Poland.	Confirmed ✓
H2	Affective trust factors play a more fundamental role for young consumers when purchasing online.	Rejected X
H3	Higher levels of young consumers' cognitive trust in international e-commerce are associated with their stronger overall trust, independently of affective trust.	Confirmed ✓
H4	Young consumers with high cognitive and high affective trust represent the largest proportion of high-frequency shoppers.	Confirmed ✓
H5	Cognitive antecedents have a stronger effect on overall trust than affective features.	Confirmed ✓

Source: own elaboration.

4. Discussion

This study reveals a consistent pattern in how young consumers approach trust in international e-commerce. Their evaluations concentrate first on cognitive indicators, which corresponds with a growing literature that frames online trust as a predominantly rational process, where perceived risk is reduced through cognitive evaluation and performance-based appraisal (Handoyo, 2024). In other words, for younger consumers the starting point of trust formation is not the website aesthetics but its ability to signal competence, reliability and procedural transparency. Earlier work on cognitive trust as a threshold condition in digital environments (Singh et al., 2024) ties with the empirical results presented above.

At the same time, the data also show that, while cognitive aspects are more decisive, affective features should not be overlooked, particularly for young consumers. Aesthetics, design and emotional engagement act as amplifiers, extending the reach of cognitive trust rather than replacing it. This dynamic mirrors findings that affective trust typically complements and reinforces the cognitive dimension rather than operating as an independent driver (Sha, 2021). The findings support a layered model in which participation is enabled by a rational basis of security and transparency, whereas affective elements deepen engagement after these basic conditions are met (Singh et al., 2024; McAllister, 1995).

The quadrant-based segmentation provides a clear illustration of this layered model. Respondents who combined high cognitive and high affective evaluations represent, with no surprise, are the most active and engaged cohort. This pattern may be aligned with studies showing that engagement rises sharply when both dimensions of trust are satisfied (Gill et al., 2024; Xiao et al., 2025). Conversely, low cognitive trust was associated with minimal purchasing regardless of the platform's appearance, reflecting prior evidence that emotional marketing alone cannot compensate for deficiencies in product quality or service reliability (Zhou & Tong, 2022). Of particular note is the elevated status of favourable reviews - the only affective cue that reached the top tier. Some studies (e.g., Stouthuysen et al., 2018) suggest that customer reviews even function as a cognitive factor in shaping trust in e-commerce. This suggests that social proof functions as a hybrid mechanism bridging rational

evaluation and emotional response, consistent with Peña-García et al. (2024), who demonstrate that reviews mediate between cognitive assessment and emotional resonance in online settings.

Equally noteworthy is the gap between reported trust and actual behaviour. While respondents expressed more confidence in domestic platforms, they reported more frequent shopping on international ones. This paradox is consistent with meta-analytical findings by Handoyo (2024), as well as Alzaidi and Agag (2022), that stated trust often fails to translate directly into behaviour. Other studies also point out higher trust ratings for domestic vendors but greater cross-border purchase frequency among young consumers (Singh et al., 2024; Xiaoyan & Pertheban, 2023). The most plausible explanation lies in the transactional advantages of international platforms, such as larger assortments, competitive prices and wider availability, which appear to lower the trust threshold required to complete a purchase. This interpretation aligns with evidence that once competence and reliability signals reach an acceptable level, consumers proceed with cross-border transactions even when their overall trust remains lower than for domestic alternatives (Gill et al., 2024).

It is also important to bear in mind the differences between younger and older e-shoppers in terms of their level and formation of digital trust. Younger generations, which tend to be more comfortable using digital platforms, are more likely to engage in online shopping compared to older people, who often display greater reluctance stemming from less practice with technology (McIntosh et al., 2021). In older consumers, also, brand loyalty is driven more by affect than cognition when satisfaction is present (Kaur et al., 2018). Satisfaction strengthens the link between affect and loyalty, while disconfirmation shows no impact. Moreover, Zhang et al. (2024) in their study examined trust in metaverse shopping across age groups and revealed that affective trust dominates among “digital natives” group (younger shoppers), while cognitive trust is more influential for “digital immigrants” group (older buyers).

This study addresses a significant gap in the existing research on trust formation among young consumers in international e-commerce. Prior research has long distinguished cognitive and affective trust in e-commerce and adjacent digital settings (Punyatoya, 2019; Pahrudin et al., 2025; Zhang et al., 2024). What remains underdeveloped is evidence on how this dual structure of trust operates specifically among young e-consumers in contemporary online retail, particularly when cross-border shopping and platform internationality are part of the purchase environment. As a result, the literature offers strong conceptual tools but limited age-targeted, context-complete empirical tests of digital trust in youth-driven e-commerce behaviour. In addition, by highlighting the role of social proof as a bridge between rational and emotional aspects, the paper expands current theoretical perspectives that often examine these dimensions independently.

Taken together, these findings point toward a sequencing model of trust formation rather than two competing dimensions. Cognitive assurances such as transparency, security and verifiable reliability provide the entry point, and only then do affective cues such as aesthetics, brand personality or community engagement deepen loyalty and encourage repeat behaviour. By weaving these results with recent studies and meta-analyses, the present research moves beyond simple confirmation of earlier work and clarifies the conditions under which young consumers cross the threshold from caution to active participation. It shows how social proof, hybrid signals and emotional attachments interact with rational evaluation, producing a multi-layered process that underpins trust in international e-commerce.

Conclusions

This study provides systematic evidence that young consumers’ trust in international e-commerce platforms is anchored primarily in cognitive rather than affective assessments. Security assurances, transparency of information and favourable prior experiences emerge as the most salient and consistently endorsed signals of reliability. These cues shape a rational foundation that enables consumers to overcome the perceived risks of cross-border transactions. Affective aspects such as aesthetics, design and emotional impressions operate as complementary rather than substitutive

elements: they can enrich user experience and deepen loyalty but do not create trust in isolation. In other words, emotions and appearance support but do not replace evidence of competence and reliability.

The quadrant-based classification further clarifies this hierarchy. Respondents who combined high cognitive and high affective evaluations formed the most engaged group, reporting more frequent and confident purchasing. Low cognitive trust coincided with minimal shopping activity regardless of platform aesthetics, underscoring that emotional appeal cannot compensate for weak cognitive assurances. Among all affective cues, favourable reviews stood out as the only upper-tier item, suggesting that social proof bridges rational evaluation and emotional response and functions as a hybrid trust signal.

These findings imply a sequencing model of trust formation. Cognitive assurances (transparent pricing, security certificates, clear data policies and reliable navigation) constitute the baseline for participation. Once this baseline is in place, affective cues such as design aesthetics, community initiatives or emotionally resonant content can reinforce confidence, extend engagement and support loyalty. For managers of international e-commerce platforms, the implication is to first invest in security, transparency and reliability, and only then layer on affective or experiential features that deepen attachment.

The results also suggest that trust should be monitored as a differentiated resource, not as a single attitude. Different trust profiles imply different managerial priorities: users with strong cognitive but weak affective trust may respond better to responsive support and tailored communication, while those with low cognitive trust likely disengage regardless of emotional cues. Platform strategies should be designed per segment rather than for an assumed “average” young consumer, as trust profiles reveal distinct pathways toward commitment.

The contrast between domestic and international platforms further indicates that cross-border trust depends on the clarity of procedures. Young consumers appear willing to purchase internationally, but only when the rules of the transaction are easy to interpret. Operational clarity in areas such as delivery tracking or dispute handling does not merely reduce uncertainty; it signals how the platform behaves when expectations are tested.

Finally, the prominence of trust in predicting shopping frequency points to a managerial opportunity to treat trust as a measurable performance indicator. Rather than viewing it as a soft perception, trust can be tracked through behavioural metrics such as repeat visits, cart completion and complaint resolution time. When trust is treated as a measurable lever rather than a belief, managers gain visibility into which actions genuinely move behaviour.

Several limitations qualify these conclusions. First, the allocation of items to the cognitive and affective constructs was based on theoretical reasoning and expert judgement rather than empirical validation, which introduces a degree of subjectivity. Future research should apply exploratory and confirmatory factor analyses to test whether the observed structure aligns with theoretical expectations and to refine measurement for use in more complex models such as SEM.

Second, the focus on young adults in Poland constrains generalizability. Cross-border shopping in this setting may heighten sensitivity to transparency and legal clarity, which could strengthen the emphasis on cognitive cues. The relatively high education levels and urban residence of respondents may also tilt evaluations toward information quality. Comparative studies across age groups and cultural settings would clarify whether the same hierarchy of determinants holds elsewhere.

Third, the cross-sectional design captures trust at one point in time. Longitudinal studies could test whether affective factors become more salient as familiarity with platforms increases or as brand–consumer relationships deepen. Country-of-origin effects, although included, were not examined in depth; future work could separate their cognitive and affective pathways and examine how they interact with social proof. Also, incorporating behavioural data from platforms would provide a stronger basis for validating the observed link between trust profiles and purchase frequency.

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