

Antecedents of consumer purchase intentions on foreign multi-sided B2C e-commerce digital platforms

Abstract

Purpose – The paper investigates e-shopping quality, foreign multi-sided digital platform (MSP) image and legal protection of e-purchases on beliefs and attitudes towards e-shopping, and influence of these beliefs/attitudes on consumer's intentions to purchase on foreign MSPs.

Design/methodology – A survey on a representative sample of 810 Poles and PLS-SEM for data analysis were applied.

Findings – Results confirm that both beliefs trust (having critical role) and ease of use of a foreign MSP significantly impact consumers' purchase intentions, being shaped by e-shopping quality, foreign MSP image and legal protection.

Originality/value – This paper develops international marketing literature by examining new antecedents of e-consumer behavior, relevant to e-shopping on foreign MSPs.

Key words – Multi-sided digital platforms (MSPs), cross-border e-shopping, TAM

Introduction

MSPs which connect buyers and suppliers (Hagiu and Wright, 2015) offering products of multiple suppliers/brands, enabling shopping by consumers from various countries, and facilitating transactions between actors (e.g. Amazon, AliExpress), play an increasingly important role (Rangaswamy *et al.*, 2020). There is an increase in number of e-consumers, also from European Union (EU), shopping on foreign MSPs also outside EU, e.g. in China. Previous findings do not determine, which antecedents, also e-shopping attributes, influence consumer intentions to purchase on foreign MSPs. Only single studies take the perspective of cross-border e-commerce, its legal aspects (Huang and Chang, 2017), and specificity of MSPs (Qin *et al.*, 2019). Only a few studies investigate e-consumer purchase intentions integrating theory of planned behavior (TPB) and technology acceptance model (TAM). Answering this research gap, this study aims to verify, unlike many others on a nationally representative sample: 1) influence of such antecedents as e-shopping quality, foreign MSP image and legal protection of online purchases on beliefs and attitudes towards e-shopping on foreign MSPs; and 2) impact of these beliefs and attitudes on consumer's intentions to purchase on foreign MSPs. This paper brings knowledge useful to MSPs' managers by: identifying which MSPs' attributes influence consumers' beliefs about e-purchases; understanding the impact of legal protection of cross-border e-commerce, and influence of e-consumer beliefs about purchases on foreign MSPs on attitudes and purchase intentions; taking the perspective of cross-border e-commerce, especially online purchases on foreign MSPs; and adding to the international marketing literature by incorporating and investigating new antecedents, relevant to e-shopping on foreign MSPs.

Literature review

Within studies on consumers' online purchases and their determinants, both the theory of reasoned action (TRA), TPB and TAM serve as theoretical frameworks (Ha 2020). TPB is formulated at the very general level and widely used to explain people's behavior, e.g. drug use, marketing issues (Ajzen, 2020). TAM adopts constructs from the TPB to develop a model of technology acceptance, i.e. the one applied within technological issues exclusively, e.g. MSPs. It assumes that the beliefs about the ease of use of a technology (degree to which one believes that using technology will be effort-less) determine attitudes towards it (perceived usefulness), its acceptance and subsequent use (Davis *et al.*, 1989). TAM has some limitations. Variables are „better suited to decisions involving few technology usage choices than to situations involving user's voluntary choices”, e.g. e-shopping (Ha and Stoel 2009, p. 566), and may not capture all the beliefs determining consumers' attitudes towards e-shopping and their antecedents, e.g. reliability or perceived quality. So, drawing from TAM, beliefs and

attitudes are considered. As Ajzen recently states within TPB (2020, p. 318), other „background factors” (antecedents) are also included: foreign MSP image: its reputation, image of products/brands sold, and prices/costs (Oghazi *et al.*, 2018) and e-shopping quality (Ha and Stoel, 2009): quality of information on MSP, payment security and consumer service. Legal protection is considered too – it may impact cross-boarder transactions (Witek-Hajduk and Targański, 2018) and consumer`s trust in e-shopping (Kooli *et al.*, 2015). Also perceived value is included as a factor resulting e.g. from e-shopping quality or online seller`s image and influencing purchase intentions (Sullivan and Kim, 2018). Extending TPB and TAM is a common practice in studies, also with reference to MSPs (Oliviera *et al.*, 2020).

For beliefs` antecedents, various dimensions of e-shopping quality are considered: quality of information on a website, payment security, consumer service (Hagiu, 2015) as all these factors positively impact consumer`s trust and perceived ease of use of e-shopping resulting in higher purchase intentions. Another antecedent is foreign MSP image, with reputation considered to be one of the most relevant factor to e-shopping, whilst products/brands sold – e.g. reliability of products, their originality (Özen and Kaya, 2013). Prices and costs reflect whether all the costs are worth purchases (Oghazi *et al.*, 2018). All of the above have positive impact on consumer`s trust in an online vendor (Kim *et al.*, 2008). Legal protection, e.g. sufficient legislations protecting online consumer privacy, impact one`s evaluations of online transactions by shaping his confidence (Lwin, *et al.*, 2007) as the institutional-based trust in legal protection is transferred into trust and online purchase intentions (Kooli *et al.*, 2015).

Trust – a subjective belief that others will fulfill obligations towards a consumer (Kim *et al.*, 2008) is a crucial factor positively affecting perceived usefulness of e-shopping (Ha and Stoel, 2009), perceived value (Özen and Kaya, 2013) and purchase intentions (Silva *et al.*, 2019). Ease of use is a degree to which one believes that using technology is free of effort, e.g. is it easy to find information on an online store`s website (Ashraf *et al.*, 2014). It has direct impact on perceived usefulness, and thus on intentions (Abdullah *et al.*, 2016). Such a positive impact with reference to e-shopping is supported by others (Ying *et al.*, 2021).

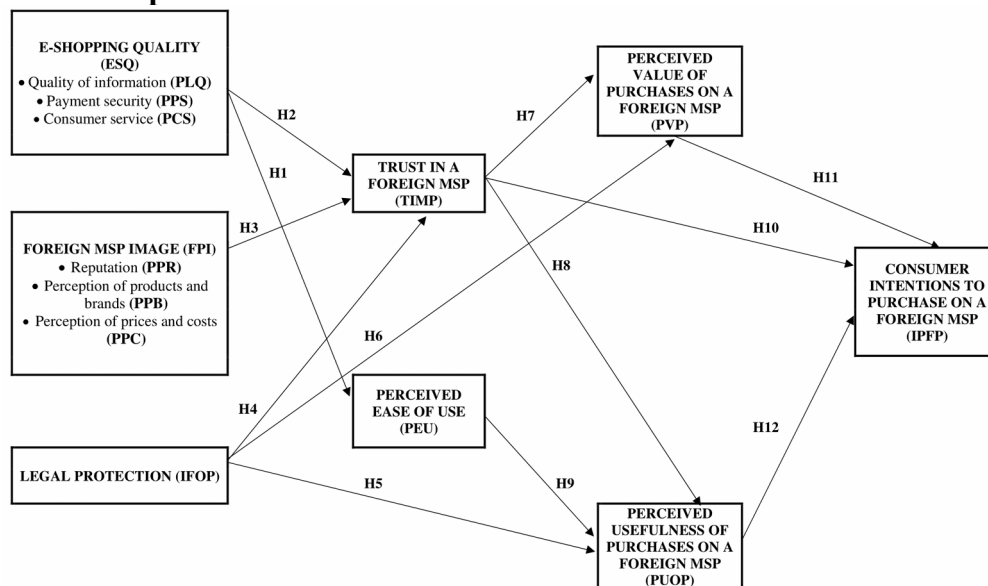
Perceived value boils down to a subjective tradeoff between perceived quality/utility (benefits) and all the costs to acquire a given product, and is identified with one`s attitude (Fang *et al.*, 2016). It has positive, strong impact on e-shopping intentions (Peng *et al.*, 2019). Similarly, perceived usefulness of e-shopping considered as one`s belief that using a given technology (e.g. MSP) will improve his performance and facilitate purchases, allows to save time etc. (Sullivan and Kim, 2018). The body of literature on e-consumers` behavior is considerable, with just single papers on MSPs and cross-border e-purchases (Qin *et al.*, 2019), and research on e-shopping intentions refer mainly to Asians or Americans, whilst cultural differences are raised (Alsaleh *et al.*, 2019). Legal issues and online vendor`s image are rarely included in previous research, although may be important determinants of consumers` purchase intentions on foreign MSPs originating from both developed and emerging countries.

Research model and research method

Based on literature, the conceptual model (Figure 1) and following hypotheses are proposed: H1: E-shopping quality (ESQ): quality of information on a foreign MSP (PLQ) (H1a), payment security (PPS) (H1b), consumer service (PCS) (H1c), has positive influence on perceived ease of use of a foreign MSP (PEU); H2: E-shopping quality (ESQ): quality of information on a foreign MSP (PLQ) (H2a), payment security (PPS) (H2b), consumer service (PCS) (H2c), has positive influence on trust in a foreign MSP (TIMP); H3: Foreign MSP image (FPI): its reputation (PPR) (H3a), perception of products and brands (PPB) (H3b), and perception of prices and costs (PPC) (H3c), has positive influence on trust in a foreign MSP (TIMP); H4: Legal protection of online purchases (IFOP) has positive influence on trust in a foreign MSP (TIMP); H5: Legal protection of online purchases (IFOP) has positive influence

on perceived usefulness of purchases on a foreign MSP (PUOP); H6: Legal protection of online purchases (IFOP) has positive influence on perceived value of purchases on a foreign MSP (PVP); H7: Trust in a foreign MSP (TIMP) has positive influence on perceived value of purchases on a foreign MSP (PVP); H8: Trust in a foreign MSP (TIMP) has positive influence on perceived usefulness of purchases on a foreign MSP (PUOP); H9: Ease of use of MSP (PEU) has positive influence on perceived usefulness of purchases on a foreign MSP (PUOP); H10: Trust in a foreign MSP (TIMP) has positive influence on consumer intentions to purchase on a foreign MSP (IPFP); H11: Perceived value of purchases on a foreign MSP (PVP) has positive influence on consumer intentions to purchase on a foreign MSP (IPFP); H12: Perceived usefulness of purchases on a foreign MSP (PUOP) has positive influence on consumer intentions to purchase on a foreign MSP (IPFP).

FIGURE 1. Conceptual model



Source: own elaboration

A CAWI survey in June-July 2020 on a representative sample of 810 Poles aged 18-65, (online panel of 70000 Poles) with structure adequate to the Polish population by age and gender, was applied to verify the hypotheses. Questionnaire included filtering question (respondents' purchases on foreign MSPs), metric questions, closed ones (7-point Likert scale). To analyze data, PLS-SEM and SmartPLS 3 software was applied. To estimate the distribution of estimation errors and determine statistical significance of regression paths, authors applied bootstrapping method. Estimation of estimation errors distribution and determination of the statistical significance of regression paths was proceeded by the assessment of the model quality: 1) composite reliability – CR (acceptable level 0.7-0.95) (Netemeyer *et al.*, 2003, p. 153); 2) accuracy of measurement using a) average variance extracted - AVE coefficient (level equal to/higher than 0.5) (Hair *et al.*, 2014, p. 104), and b) discriminant validity – Fornell-Larcker criterion. Measurement model is acceptable if: 1) measurable variables do not have too low values of factor loadings that describe their correlations with hidden variable (min. value 0.3); 2) hidden variables explain min. 50% of the variance of their measurable variables (AVE cannot be below 0.5); and 3) CR for all constructs min. 0.7 (Netemeyer *et al.*, 2003, p. 153). Using the bootstrapping method, path coefficients were estimated, and the significance of the difference in path coefficients against zero were examined.

Findings

The quality of the measurement model is assessed based on the assessment of AVE, total reliability – TR (Table 1) and divergent validity.

TABLE 1. Reflective constructs with AVE, TR and sources

Reflective constructs	AVE	TR	Sources
IFOP	0.726	0.949	Lwin <i>et al.</i> , 2007; Own elaboration
PCS	0.746	0.946	Ha and Stoel, 2009; Oghazi <i>et al.</i> , 2018
PEUOP	0.872	0.965	Asharaf <i>et al.</i> , 2014
PLQ	0.753	0.948	Mc Knight <i>et al.</i> , 2002; Ha and Stoel, 2009; Kim <i>et al.</i> , 2008
PPB	0.722	0.911	Özen and Kaya, 2013; Kim and Niehm, 2009
PPC	0.753	0.938	Oghazi <i>et al.</i> , 2018; Shang <i>et al.</i> , 2005; Delafrooz <i>et al.</i> , 2009; Own elaboration
PPR	0.779	0.933	Kim <i>et al.</i> , 2008
PPS	0.853	0.946	Kim <i>et al.</i> , 2008
PUOP	0.749	0.937	Asharaf <i>et al.</i> , 2014; Shang <i>et al.</i> , 2005; Kim <i>et al.</i> , 2007
PVP	0.777	0.946	Kim <i>et al.</i> , 2007
TIMP	0.852	0.966	Kim <i>et al.</i> , 2008; Own elaboration
IPFP	0.771	0.944	Kim <i>et al.</i> , 2007

Source: own elaboration (SmartPLS).

The interpretation of the extracted constructs is allowed and measurement model is acceptable due to its reliability and convergent validity as: 1) values of all factor loadings are higher than the min. required of 0.3; 2) CR for all constructs are above 0.7 – high level of correlation of measurable variables required for measures of reflexive constructs, and lower than 0.95 – model is internally consistent; 3) AVE values for all hidden variables are above 0.5. The model satisfies the discriminant validity criterion – square roots of the AVE of all latent variables are higher than the correlations of these constructs with others. A structural model meets the “10 times rule” (Hair *et al.*, 2014, p. 23). The most important element in the structural model, to which all regression paths directly or indirectly lead, is endogenous variable “Consumer intentions to purchase on a foreign MSP”. According to the estimation of coefficient of determination (R^2) for each endogenous hidden variable that enables to assess the predictive value of the structural model, it allows for accurate prediction of IPFP as 76.7% of the variable’s variance is explained (R^2 : 0.767). IFOP, TIMP and PEU explain 59.6% of the variance of the endogenous construct PUOP (R^2 : 0.596), while IFOP and TIMP explain 55.2% of the variance of the construct PVP (R^2 : 0.525). In turn, IFOP, FPI and ESQ explain 78.3% of the variance of the construct TIMP (R^2 : 0.783), ESQ explains only 31.1% of the variance of the construct PEU (R^2 : 0.311). The path coefficients estimated using the bootstrapping procedure, representing hypothetical relationships between hidden variables and statistical significance of relations between constructs were verified (Table 2). Direct effects may not fully reflect relationships between constructs, so hypotheses’ verification was based on the significance of total effects.

TABLE 2. Path coefficients and significance of relations between constructs (total effects)

H	Regression paths	Path coefficients	p values	Hypothesis verification
H1a	PLQ -> PEU	0.508	0.000***	S
H1b	PPS -> PEU	0.145	0.012**	S
H1c	PCS -> PEU	-0.077	0.194	ns
H2a	PLQ -> TIMP	0.107	0.126	ns
H2b	PPS -> TIMP	0.183	0.000***	S
H2c	PCS -> TIMP	0.212	0.000***	S
H3a	PPR -> TIMP	0.273	0.000***	S
H3b	PPB -> TIMP	0.146	0.000***	S
H3c	PPC -> TIMP	0.069	0.040**	S
H4	IFOP -> TIMP	0.072	0.004**	S
H5	IFOP -> PUOP	0.147	0.000***	S
H6	IFOP -> PVP	0.143	0.000***	S
H7	TIMP -> PVP	0.691	0.000***	S
H8	TIMP -> PUOP	0.058	0.076*	S

H9	PEU -> PUOP	0.667	0.000***	S
H10	TIMP -> IPFP	0.828	0.000***	S
H11	PVP -> IPFP	0.225	0.000***	S
H12	PUOP -> IPFP	0.057	0.014*	S

*p<0,10, **p <.0,05, ***p<0,01; α =0,10; s – hypothesis supported; ns –not supported

Source: own elaboration (SmartPLS).

Hypotheses tests support all postulated paths except for H1c and H2a. Based on the significance tests of the regression weights for total effects it is concluded that: (1) Such dimensions of ESQ as quality of information on a foreign MSP (PLQ) (H1a) and payment security (PPS) (H1b) have significant positive influence on ease of use of a foreign MSP (PEU), while there is no significant impact of consumer service on a foreign MSP (PCS) (H1c) on PEU - H1 is partially supported; (2) Such dimensions of ESQ as payment security on a foreign MSP (PPS) (H2b) and consumer service on a foreign MSP (PCS) (H2c) have significant positive influence on trust in a foreign MSP (TIMP), while quality of information (PLQ) (H2a) has not significant impact on TIMP - H2 is partially supported; (3) Such dimensions of FPI as reputation of a foreign MSP (PPR) (H3a), perception of products and brands (PPB) (H3b), and perception of prices and costs (PPC) (H3c) have significant positive influence on trust in a foreign MSP (TIMP); (4) Legal protection of online purchases (IFOP) has significant positive impact on trust in a foreign MSP (TIMP), perceived usefulness of purchases (PUOP), and on perceived value of purchases (PVP); (5) Trust in a foreign MSP (TIMP) has significant positive impact on perceived value of purchases on a foreign MSP (PVP) and on perceived usefulness of purchases (PUOP); (6) Ease of use of MSP (PEU) has significant positive influence on perceived usefulness of purchases on a foreign MSP (PUOP); (7) Trust in a foreign MSP (TIMP), perceived value of purchases (PVP), and perceived usefulness of purchases (PUOP) have significant positive influence on consumer intentions to purchase on a foreign MSP (IPFP).

Discussion, limitations, further research, managerial implications

This study explores factors influencing consumer acceptance of shopping on foreign MSPs. Trust and ease of use are critical beliefs, with e-shopping quality as an antecedent to these beliefs, and foreign MSP image and legal protection as antecedents to trust. It extends TAM – additional beliefs` variables (foreign MSP image, legal protection) and not only perceived usefulness, but also value of purchases as attitudes. Research confirms that dimensions of e-shopping quality on foreign MSPs: quality of information and payment security positively affect ease of use, and consumer service is insignificant. Maybe as consumer service of many MSPs do not differ. For trust (also belief), consumer service and payment security play crucial role, with no significant impact of quality of information (unlike other research). As in other studies (Hagiu, 2015), payment security on a foreign MSP matters for trust and ease of use of purchases on foreign MSPs. Study confirms significant role of foreign MSP image (reputation, image of products/brands sold, and prices/costs) in consumers` trust, and supports the rationale for adding it to the TAM. Also legal protection (Kooli *et al.*, 2015) – as it directly and positively affects both trust and perceived usefulness and value of purchases on foreign MSPs. Results of the study support other TAM research (Ha and Stoel, 2009) as beliefs positively affect attitudes towards e-shopping, with trust having direct impact on perceived value and usefulness of purchases on foreign MSPs, and ease of use – on usefulness. Similarly to other studies on e-consumer shopping behavior (Peng et al. 2019), this research identifies direct positive influence of trust on purchase intentions on foreign MSPs, as same as perceived value and usefulness of purchases on foreign MSPs, with trust being the strongest determinant.

This study is limited to Poles. Research on other nations would be valuable to consider cultural differences (Alsaleh *et al.*, 2019). Other determinants of e-consumers` purchase intentions could be taken into account, e.g. socio-demographical or psychographic factors

(ethnocentrism or materialism). To in-depth the insights and better understand consumers' behavior, qualitative studies on consumers' purchase intentions on foreign MSPs could be considered to give more comprehensive picture than resulting from quantitative research.

MSPs' managers can benefit this study as it identifies antecedents of consumers' purchase intentions on MSPs. When shaping marketing strategy, attention should be paid not only to consumers' beliefs towards e-shopping on foreign MSPs (with dominant role of trust), but also to e-shopping quality, foreign MSP image and legal protection that may significantly impact beliefs, attitudes towards purchases on foreign MPSs, and thus purchase intentions.

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