

“Platform Stress”: Exploring a New Type of Stress in the Sharing Economy

Abstract

In global P2P accommodation platform operations, hosts can experience severe stress from the platform company, customers, and technological complexity. Applying sociotechnical theory, this study aims to explore platform stress in the sharing economy and verify the stressor-strain-outcome (SSO) framework. A survey of Airbnb hosts demonstrates that ‘conflict with headquarters,’ ‘negative reviews from customers,’ and ‘technological complexity’ influence the ‘strain’ of hosts. Furthermore, we verify the role of financial performance, as an antecedent that negatively affects switching intention and serves as a moderator, in the relationship between strain and switching intention. Focusing on platform stress, this study evaluates the concept and definition of platform stress and provides useful insights for platform business operators.

Keywords – Platform, Stress, P2P platform business, Sociotechnical theory, Technostress, Stressor-strain-outcome framework

1. Introduction

The development of information communication technologies (ICTs) in recent decades has fueled new types of business models, such as platform business. The peer-to-peer (P2P) online platform matches individual suppliers and consumers so that they can interact and complete transactions easily (Lee & Kim, 2019). Global for-profit sharing economy startups have feasibly fulfilled a range of customer needs (Hall & Williams, 2020), as represented by the development of Airbnb for accommodations. Compared to globally operating large platform companies, service providers (i.e., hosts) are scattered, self-employed individuals running a smaller local business in many cases. For the success of a P2P accommodation platform, hosts play a critical role; the platform itself does not own a single room. Unless there is a stable supply of qualified rooms, then, this peer-to-peer network cannot be sustained.

As the role of hosts has become crucial, there have been a considerable number of studies addressing the building of relationships between hosts and guests on a platform (e.g., Lin *et al.*, 2019; So *et al.*, 2018). The literature emphasized the importance of interaction with hosts for the business dynamics of a P2P platform from the guests’ perspective. However, not only guests but also hosts complain of negative experiences in complex business environments (Moon *et al.*, 2019). Xu *et al.* (2021) have identified stressors (i.e., economic stressors, uncertainty, operation-related stressors, and social stressors) and coping strategies (i.e., problem- and emotion-focused coping strategies) among hosts of P2P accommodations after the outbreak of COVID-19.

Obviously, hosts within global platform companies have different working environments than traditional accommodations (Cheng *et al.*, 2022). Hosts may have issues in the triadic relationship with headquarters, guests, and the local community which can cause heavy negative emotions toward the platform (Dogru *et al.*, 2022; Lu *et al.*, 2020; Lutz & Newlands, 2018). However, if hosts, especially good performers, leave their current platform operator, it will have a damaging impact on the long-run sustainability of that platform. Accordingly, understanding ‘platform stress’ from the hosts’ perspective and ultimately retaining high-quality hosts is critical to sustaining the growth of the platform business. Nevertheless, to our knowledge, no studies have yet explored the hosts’ stressors with a platform-specific multilateral framework or delved into their relationship with hosts’ switching intention. Responding to this call, we identify these stressors from sociotechnical perspectives and conceptualize platform stress as ‘the specific type of strain that occurs in P2P platform business, arising from stressors of both relational and technological issues, resulting in negative outcomes’, based on the stressor-strain-

outcome (SSO) framework. In doing so, we provide a conceptual evolution that connects stress, technostress, and platform stress.

Therefore, this study aims to understand the stressors of platform hosts from triadic relationships (with headquarters, customers, and competitors). We investigate the consequences of platform stress in terms of a switching decision. Furthermore, recognizing the importance of the financial performance for both the hosts and platform headquarters, we additionally examine the role of financial performance in the relationship between hosts' stressors and switching intention. Specifically, we (1) present the concept of 'platform stress' and define the strain occurring in the P2P platform business, (2) empirically examine the influence of four stressors and the relevant outcomes, and (3) examine the moderating effect of financial performance on the relationship between the stressor and behavioral intention.

2. Literature review

2.1. Sociotechnical theory in the P2P platform business

Formalizing the concept of a 'sociotechnical' system, the sociotechnical theory postulates the presence of the social subsystem and technical subsystem in every organization (Bostrom & Heinen, 1977; Trist, 1981). The social subsystem focuses on the human perspective, such as social rapport and interaction, and the technology subsystem emphasizes the processes, tools, and technologies that enable transactions between stakeholders (Bostrom & Heinen, 1977). The sociotechnical theory has been applied in various fields of study. At the organizational level, Lin and Lee (2006) reported that IT support alone does not support the knowledge-sharing intention and that the balance between these two dimensions is crucial. At the individual level, Li *et al.* (2021) verified that both social and technical factors affect users' stickiness to a live streaming platform through their attachment to the platform.

P2P platform businesses can also be understood as sociotechnical systems (Wang *et al.*, 2020). Here, the social dimension consists of the platform itself (e.g., Airbnb headquarters), product/service providers (e.g., Airbnb hosts), and consumers (e.g., Airbnb guests), which form a triadic relationship. The social dimension is particularly important in P2P platforms in the hospitality industry, where business is conducted through interactions with strangers requesting and allowing accommodations (Wang *et al.*, 2020). On the other hand, the technology dimension is the foundation of a platform that facilitates business and transactions. It includes the ease of use and design features that are important elements for both service providers (hosts) and consumers (guests) (Wang *et al.*, 2020).

Meanwhile, one of the critiques of the sociotechnical system is that it may oversimplify the complexity of human beings and organizations (Siawsh *et al.*, 2019). Scholars pointed out that sociotechnical theory can be extended to incorporate organizational structures where conflicts, politics, and power issues arise (Dhillon & Backhouse, 2001). Reflecting this point to the socio-technical system in the platform business, this study incorporated the conflicts that may arise between the hosts and the big global platform headquarters and explored the hosts' stress.

2.2. Stressors in the social dimension

Focusing on the social relationship of hosts in the platform business, the social dimension of sociotechnical theory, this study utilizes the 3C (company, customer, and competitor) model, also called the strategic triangle, in analyzing the sources of stress. The 3C model integrates the three most critical elements in a market that should be focused on when initiating strategy (Ohmae, 1982). Hosts should pay attention to each C, which therefore can be a stressor. Thus, we analyze the social dimension of the stressors that hosts perceive in terms of the 3C model of the strategic triangle.

The first C, company, refers to the global headquarters of a platform company. Between the global platform company and local hosts, conflicts may arise from differences in their business procedures, diversities in language and culture, time gaps, and physical distances (Lee *et al.*, 2019). Another source of conflict is power asymmetries, including the platform company's unilateral governance and management controls in terms of changing policies or rules (von Richthofen, & von Wangenheim, 2021). Nonetheless, the hosts, as small micro-entrepreneur cannot effectively negotiate with the company, which increases stress. Obstacles such as longer time-consuming communication or even miscommunication problems appear, causing conflicts between global headquarters and local hosts (Moon *et al.*, 2019). Platform companies encourage emotional labor practices of hosts (Bucher *et al.*, 2020), which may also increase their stress levels. Hence, we focus on the *conflict between a global headquarters as a local hosts' stressor*.

The second component, customer, indicates guests in the P2P accommodation platform. Addressing the reviews of customers, especially the negative ones, left on the platform can cause stress (Weber *et al.*, 2017). Unlike hotel chains, the accommodations listed on a P2P platform do not have a brand; thus, online reviews by guests play an important role in influencing potential consumers' purchasing decisions (Sparks & Browning, 2011). Negative reviews have detrimental effects on consumer-based brand equity (Bambauer-Sachse & Mangold, 2011). While there are other common social stressors, such as complaints from guests regarding a cancellation refund policy (Xu *et al.*, 2021) or emotional labor (Ek *et al.*, 2020), this study focuses on customers' negative reviews, which appear to be critical specifically for the platform stress, as a stressor of the hosts.

Regarding the last C, competitor, as the number of competitors increases, so does the competitive intensity. Competition works as a stressor that places pressure on employees in the workplace, although it sometimes motivates them to expend greater effort (Yang & Lau, 2019). In the context of P2P platform businesses, those who are already in the market will be wary of new participants and potentially serious competition (Martin, 2016). Hence, competitor acts as *competitive intensity* and becomes a stressor.

2.3. Stressors in the technology dimension (technostress) and the SSO framework

The platform business heavily depends on technology and highlights the importance of the technology dimension. Stakeholders in the platform business must understand how to utilize technology (Tarafdar *et al.*, 2007). In particular, hosts in the P2P platform business are required to be skilled in handling technology, since there is no supporting internal organization. Nevertheless, some hosts experience difficulty while operating this technology, which may be stressful. Stress in this context has been defined as 'technostress', which refers to the negative emotion an individual experiences while learning to handle evolving technology (Ayyagari *et al.*, 2011).

The antecedents and consequences of stress can be explained with the 'SSO framework', which was first proposed by Koeske and Koeske (1993) to demonstrate the phased links among stress-causing factors (stressor), negative emotions (strain), and negative behaviors (outcome). A stressor is an environmental stimulus regarded as a stress creator (Ayyagari *et al.*, 2011), whereas strain and outcome are psychological and behavioral reactions to stressors, respectively (Shi *et al.*, 2020). The technostress falls under 'strain' in the SSO framework because it refers to the psychological and physical symptoms of a continuously stressful work environment (Cherniss & Cherniss, 1980). Extending this framework to P2P platform businesses, platform stress falls under 'strain' as well because it is attributed to stress factors in the social dimension (*conflict with headquarters, customer negative review, and competitive intensity*) and technology dimension (*technological complexity*) and results in negative behavioral intentions, verifying the structural relationship among the three phases. Figure 1 elaborates on the evolution of stress and the background of platform stress.

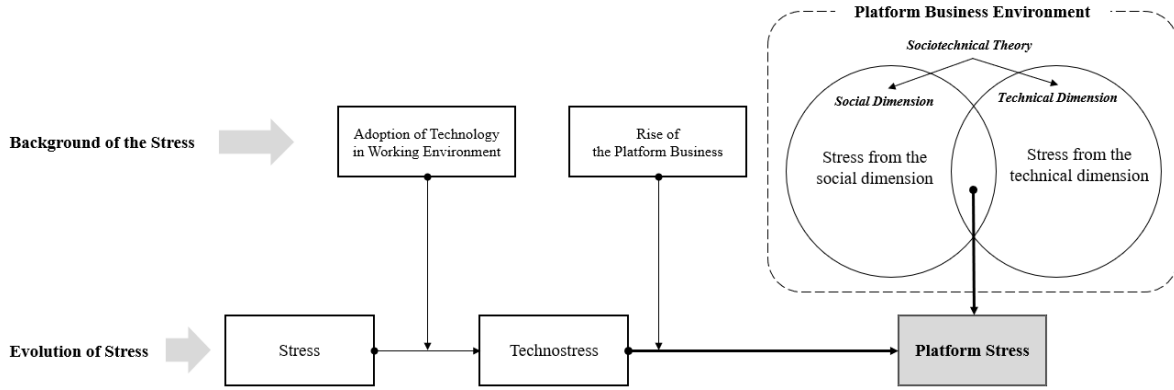


Figure 1. Background of Platform Stress

3. Research model and hypotheses

The purpose of this research is to test the impact of the four stressors that represent the social and technology dimensions on the strain and switching intention. We also investigate the moderating role of financial performance to gauge the strength of the stress effect and switching intention. Based on stress theory and the SSO framework, we illustrate our research model and hypotheses in Figure 2.

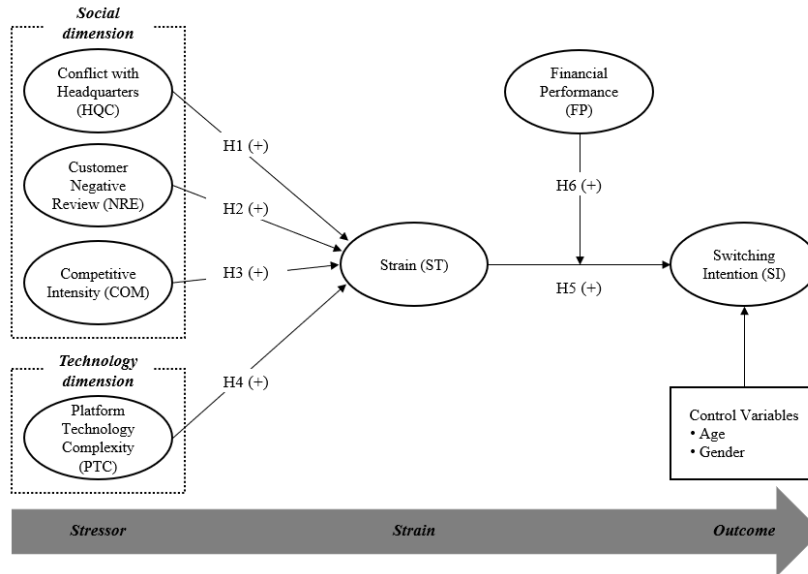


Figure 2. Research Model

Conflict with headquarters

Relationship conflict means disagreements among group members about the content of their decisions, viewpoints, ideas, or opinions (Jehn, 1995). In the P2P platform business, such conflict arises because local hosts need to assimilate and acculturate to headquarters' organizational norms and practices that are inconsistent with theirs (Lee *et al.*, 2019). The local hosts have to adjust to headquarters, which influences the causes of their strain

(Shaukat *et al.*, 2017). Country managers working at subsidiaries of a multinational company were found to experience psychological difficulty from cultural incongruence, which causes stress and weakens work engagement (Lee *et al.*, 2019). Language barriers also have a problematic emotional impact on a multinational team (Tenzer & Pudelko, 2015).

The above studies suggest that conflicts with headquarters negatively affect hosts in the P2P platform business. Complaints are easily found on the 'Host Stories' section of the third-party website for anonymous Airbnb hosts and guests "airbnbhell.com" (Chen & Tussyadiah, 2021). Passive or one-way communications stemming from cultural differences are common among complaints of hosts regarding headquarters. Hence, we hypothesize the following:

Hypothesis 1: *Conflicts with headquarters* are positively related to platform stress (i.e., *strain*).

Customer negative review

People share their assessments of both good and bad experiences as a form of review. In the P2P platform business, as in other businesses, hosts have to react to feedback from guests, especially negative reviews. This electronic word-of-mouth (e-WOM) influence on customers (Ullrich & Brunner, 2015), especially that of negative reviews, makes potential customers hesitate in purchase decision-making, which eventually causes hosts to undergo stress (Johnson *et al.*, 2013). Hosts express their complaints and hardships through the Airbnb community website saying, "I quit my successful Airbnb rental because of the review system". This also applies to hosts who have to react to customers and experience strain (Ishii & Markman, 2016). For this reason, in the P2P platform business, responding to customer negative reviews will impact platform stress. Accordingly, we posit the following:

Hypothesis 2: *Customer negative reviews* are positively related to platform stress (i.e., *strain*).

Competitive intensity

Competitive intensity refers to a situation where too many competitors struggle to make a profit in their market (Auh & Menguc, 2005). Such competition also creates the fear of self-devaluation, which brings further pressure (Buunk *et al.*, 2001). Turel and Gaudio (2018) verified the impact of a competitive climate on distress, and Sharma (2017) found that a competitive climate rather than trait competitiveness is associated with stress. This confirms that a competitive climate is a stressor causing distress among employees. A competitive environment intensifies comparison, which further arouses emotional distress. Thus, competitive intensity exacerbates hosts' sense of strain. Hence, in the same vein, we hypothesize the following:

Hypothesis 3: *Competitive intensity* is positively related to platform stress (i.e., *strain*).

Technology complexity

Techno-complexity refers to the time and effort needed to understand information systems (IS) (Tarafdar *et al.*, 2007). Techno-complexity may make hosts feel uncomfortable, as it forces them to put more time and effort into learning and understanding various aspects of ICTs (Tarafdar *et al.*, 2007). People who do not truly understand the salient variety of applications feel fear and anxiety in their usage of this technology. Techno-complexity has been found to be an antecedent of technostress among salespersons using ICT, which becomes a causal factor for work exhaustion (Fieseler *et al.*, 2014).

Some countries (e.g., South Korea) are known for their advanced ICT infrastructure (ITU, 2020). Nonetheless, individual hosts, as microentrepreneurs typically working from home, may have intrinsic fears about

technologies and deal with technical issues without a technology center in an office (Cooper, 2005). Nevertheless, using this technology is inevitable for their business from accepting/declining reservations, and managing guest services, to administrative work. Thus, if a technology system is not host-friendly, *technology complexity* can become a stressor that causes hosts to have negative emotions and behavioral intentions. Similarly, accounting professionals were found to suffer from the stress caused by their use of technology, which creates job turnover intention (Boyer-Davis, 2019). For this reason, we hypothesize the following:

Hypothesis 4: *Technology complexity* is positively related to platform stress (i.e., *strain*).

Platform stress and switching intention

Past studies verified the relationship between exhaustion and turnover intention based on the role stress theory (Kahn *et al.*, 1964). Turnover indicates the probability that an employee will leave his or her job within a certain time period (Lu *et al.*, 2017). In our study, turnover concerning the platform implies the probability of switching from one business platform to another. Thus, the variable is labeled switching intention rather than turnover intention. When employees feel a sense of strain, they no longer want to stay in the organization and hope to leave, implying that employees' strain affects their switching intention. Hence, people who work in stressful conditions are more likely to develop strain, which mediates between their stressors and outcome behavior, i.e., switching intention (Sonnentag & Fritz, 2007). Lending support, a significant relationship has been found between the social and technical dimensions of strain, emotional exhaustion, and depersonalization, and their turnover intentions among frontline hotel employees (Raza *et al.*, 2021). Similar results were found for teachers (Califf & Brooks, 2020) and civil servants and executives (Tran *et al.*, 2020). Therefore, we hypothesize the following:

Hypothesis 5: Platform stress (i.e., *strain*) is positively related to *switching intention*.

Financial performance and switching intention

Economic value is an essential motivation for hosting in the P2P platform business (Wirtz *et al.*, 2019). There are two opposing perspectives on financial value. First, if the financial performance is high enough, hosts maintain loyalty to their platform, and their switching intention decreases (Lee & Kim, 2019). Second, in response to job dissatisfaction, high performers are more likely to leave than lower performers because the former are ready for and capable of taking action to release negative feelings (Jackofsky, 1984). Parker *et al.* (2011) have also reported that high-performing accounting professionals are more likely to leave their firms due to their perception of promotion fairness. In the context of Airbnb, then, hosts with high financial performance may think they can achieve the same performance on other platforms, and thus, their switching intention increases. Hence, based on these previous studies, we developed the following hypothesis:

Hypothesis 6: *Financial performance* has a positive moderating effect between platform stress (i.e., *strain*) and *switching intention*.

4. Methodology

4.1. Sampling and data collection

Data were collected from February 23rd to March 7th, 2021, through Qualtrics among members of an Airbnb hosts' online community named 'Airbnb Hosts', which is the largest Airbnb online community with approximately 4,200 active members and around 46,000 total members including both hosts and guests (Airbnb Hosts Naver Café, 2021) via Naver, one of South Korea's major online portal services. The survey was posted on a bulletin board on the community website so that hosts could find and participate in the survey. Although the sampling period

was during the influence of COVID-19, there had been an increase in the number of domestic travel guests due to restrictions on overseas travel, which offset the impact of the decrease in international guests in many cases.

Respondents who completed the questionnaire were rewarded with a coffee coupon. To ensure the clarity of the questionnaire, a pilot survey was conducted among Korea Guesthouse Association board members. According to G*Power (Faul *et al.*, 2009), the proposed model in this study required a minimum sample of 110 individuals for a statistical power of 0.95. Therefore, the sample size (157) was deemed adequate for the purposes of our study.

4.2. Descriptive statistics

Descriptive analysis (Table 1) shows that of the 157 respondents, approximately 2/3 run their businesses part-time. Most of them run only one property, but some maintain more than 2 businesses. Almost half of the respondents have listed their properties on a single platform, and the other half on 2~3 platforms. The gender composition of men and women is similar, at approximately 50% level. The majority of respondents are in their 30s (51.0%). Almost half of the respondents have run their business for 6 months~2 years, i.e., 22.9% and 24.2% for 6 months~1 year, and 1~2 years, respectively. More than half of the focal businesses are in Seoul (51.6%).

Table 1. Descriptive statistics

Characteristics		N (%)	Characteristics		N (%)
Working Type	Full-Time	55 (35)	Gender*	Male	74 (47.13)
	Part-Time	102 (64)		Female	83 (52.87)
Number of properties	1	106 (67.5)	Age*	23~30	21 (13.4)
	2	34 (21.7)		31~35	38 (24.2)
	3	10 (6.4)		36~40	42 (26.8)
	4 or more	7 (4.5)		41~45	21 (13.4)
Number of platforms using	1	74 (47.1)		46~50	27 (17.2)
	2~3	69 (43.9)		51~55	5 (3.2)
	4 or more	14 (8.9)		56~60	3 (1.9)

Note *: Used as a control variable

4.3. Measurement Development

To reduce measurement error, several steps were taken. Survey items were drawn from prior literature after checking content validity. For variables without prior research, namely, conflict with headquarters and customer negative review, the items were self-developed, and exploratory factor analysis was conducted. The focal measurements, especially the independent variables, are used to determine whether a component acts as a stressor rather than measuring the degree of stress. Regarding the dependent variable, switching intention, we primarily tested hosts' organizational commitment. This is an essential indicator for determining potential business sustainability (N'Goala, 2007). Thus, we utilized a measurement item for continued usage and reversed it to measure platform switching intention, and all the variables met each standard for convergent validity, α , CR, and AVE (Appendix).

4.4. Model assessment

For both measurement and structural models, we used partial least squares SEM (PLS-SEM) analysis, a variance-based approach based on a set of nonparametric evaluation criteria and procedures, such as bootstrapping, via SmartPLS 3.0 software. The first step examined indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. Confirming the reliability of all the measures, their Cronbach's alphas exceeded the recommended threshold value of 0.70, and the composite reliabilities were all above the 0.70 cutoffs. All indicator loadings exceeded the recommended threshold value of 0.60 (Henseler *et al.*, 2009).

Supporting convergent validity, all constructs' average variance extracted (AVEs) was above the 0.50 cutoff. Discriminant validity was attested by the square root of every construct's AVE, which was higher than the correlations between the constructs (Table 2).

Table 2. Correlations among the constructs and square roots of AVEs

Construct	HQC	NRE	COM	PTC	BO	FP	SI
HQC	0.872						
NRE	0.385	0.841					
COM	0.528	0.431	0.854				
PTC	0.397	0.134	0.164	0.943			
ST	0.472	0.322	0.309	0.552	0.906		
FP	0.257	0.447	0.370	-0.104	0.081	0.920	
SI	0.069	-0.311	-0.205	0.072	0.184	-0.398	0.908

Since the survey participants were asked to respond to all the items at once, to mitigate potential common method variance issues, first, we included an explanation of the research purpose in the introduction of the survey, followed by a statement about the anonymity of all respondents. Second, the survey instructions noted that there were no right or wrong answers to the questions. Third, the operational definitions of important concepts (e.g., conflict with headquarters, consumer negative review, competitive intensity, platform technological complexity) were explained to ensure response validity. To further confirm that common method bias was not present, a post hoc statistical test was performed by combining the single factors in exploratory factor analysis. The unrotated principal component analysis, including 22 factors, accounted for 30.06% of the total variance, below the cutoff value of 50%. The first (largest) factor accounted for 30.06%, and no general factor accounted for more than 50% of the variance, indicating that common method bias may not have been a serious problem. Additionally, the heterotrait-monotrait (HTMT) ratio of correlations (Table 3) presented values below 0.75, which did not indicate extremely high correlations ($r > 0.90$).

Table 3. Heterotrait-Monotrait (HTMT) Ratio of Correlations

	HQC	NRE	COM	PTC	ST	FP	SI
HQC							
NRE	0.473						
COM	0.644	0.581					
PTC	0.428	0.164	0.190				
ST	0.533	0.341	0.358	0.602			
FP	0.309	0.544	0.423	0.105	0.091		
SI	0.084	0.393	0.240	0.087	0.199	0.424	

When evaluating the structural model, the multicollinearity of each independent variable was first diagnosed using the variance inflation factor (VIF). All the VIF values fell between 1.112 and 1.669, below the baseline of 5, indicating that multicollinearity was not an issue in this research. Next, the R^2 of variance explained for the strain was found to be 0.394, and that of switching intention 0.229, representing the accuracy of the structural framework. Furthermore, Stone-Geisser's Q^2 , which indicates the predictive relevance of a model with a positive value, was 0.318 for strain and 0.189 for switching intention, indicating acceptable predictive relevance.

We tested the structural equation model using 5,000 bootstrapping resamples in PLS-SEM to verify the structural relationships hypothesized in this research. Figure 3 shows these results. All the hypothesized relationships are supported except for H3. The coefficient between competitive intensity and strain is insignificant ($\beta = 0.060$). Conflict with headquarters ($\beta = 0.204$, $p < 0.05$), customer negative reviews ($\beta = 0.158$, $p < 0.05$), and platform technological complexity ($\beta = 0.440$, $p < 0.001$) positively influence strain, thereby validating H1, H2, and H4. Strain drives switching intention on the focal platform ($\beta = 0.147$, $p < 0.1$); thus, H5 is supported. Finally, financial performance has a moderating effect between strain and switching intention ($\beta = 0.182$, $p < 0.05$), proving that high performers are more likely to leave when the strain has an influence on switching.

Therefore, H6 is supported. In addition, our study tested age and gender, as control variables, but the relevant results show that these demographic factors are not related to switching intention. Accordingly, hosts' switching intentions do not change according to their age and gender.

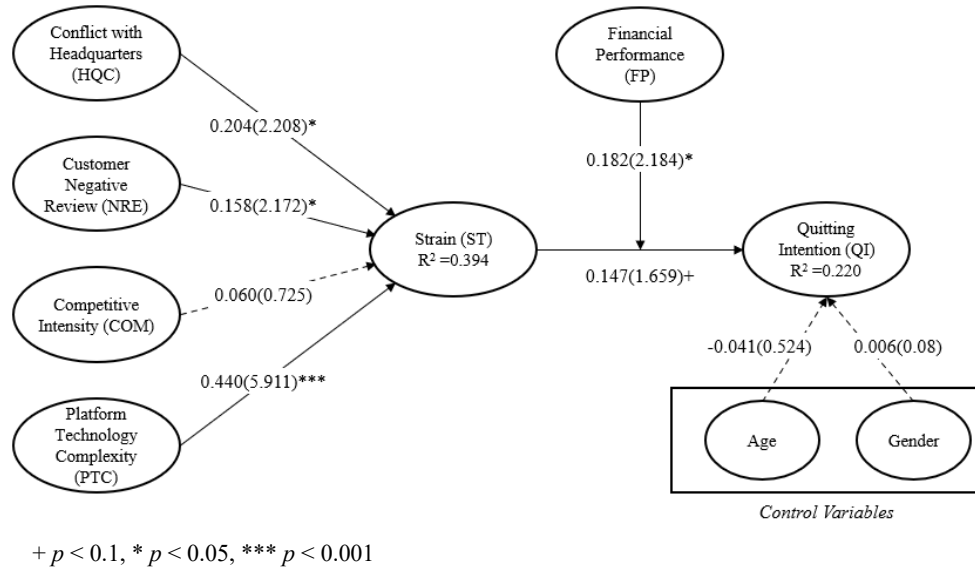


Figure 3. Results of structural modeling

5. Conclusions

5. 1. Discussion of research findings

The purpose of our study was to explore hosts' stress in the P2P accommodation platform business and identify its antecedents and consequences using the SSO framework, as well as to reveal the moderating impact of financial performance. Regarding the relationship between stressors and strain, three components of competitive intensity have a significant influence on the strain. First, discord with company headquarters aggravates hosts' platform stress (i.e., strain). Other studies have verified how incongruence with an organization causes stress, which ultimately leads to higher turnover intention (Lee *et al.*, 2019). Additionally, hosts are affected by the negative reviews guests leave on a platform. If emotional exhaustion repeatedly occurs due to these stressors, hosts may no longer want to stay on their platform. Moreover, as technology is of great importance (Pan *et al.*, 2021), there is great pressure on hosts if they are not skilled in utilizing it. Therefore, hosts will require a platform that enables them to manage their business effectively and efficiently. This is consistent with an earlier study that found system quality is the strongest determinant in hosts' trust-building toward the platform (Wang *et al.*, 2020).

Contrary to our expectations, the competitive intensity does not affect the hosts' strain. This result may be because competition is a double-edged sword, dependent on market conditions. Generally viewed negatively, competition may work in a positive way when a market can create values through well-intentioned competition, complementing competitors' strengths and weaknesses (Kim *et al.*, 2018). The relationship between hosts can be competitive and cooperative (Yang & Lau, 2019). This paradoxical situation has been called 'coopetition' (Nalebuff & Brandenburger, 1996) and is utilized in the platform business (Bilbil, 2019).

The results indicate that platform stress (i.e., strain) among the above factors further influences hosts' platform switching intention. This finding is analogous to role stress theory, which asserts that employees' strain influences their turnover intention (Jung *et al.*, 2012). Consistent with the findings in this study, the same results

have been found in the tourism and hospitality context (Cho *et al.*, 2014). Another finding in this study concerns the influence of financial performance, which confirms a positive moderating effect on the relationship between strain and switching intention. The same result was found by Parker *et al.* (2011). The result may indicate that if financial performance is sufficient, hosts may posit that they can reach the same outcome on any platform and thus leave their current platform if they experience too much strain. This finding demonstrates the crucial importance of managing platform stress in retaining the top-performing hosts on a platform system.

5. 2. Theoretical implications

Our study contributes to the theoretical foundation for platform stress research in the following ways: First, platform stress is a new social phenomenon, and this study theoretically verified it by extending stress in the field of psychology (Tachè & Selye, 1985) and technostress in the field of organizations (Ayyagari *et al.*, 2011). Specifically, this study explored the stressors experienced by hosts by integrating the 3C model and technostress and identified the catalysts of platform stress in each social and technology dimension. Our study is significant as the first theoretical study to validate hosts' emotional exhaustion on their platform with the concept of 'platform stress.' We found that headquarters/technology-related and guest-related aspects are more crucial stressors than competitor-related aspects. As mentioned, hosts believe they can cooperate with other hosts, not just compete with them. There have been studies focused on coopetition (Bilbil, 2019), but not in a consideration of hosts' stress in the platform business setting.

Second, to investigate platform stressors in-depth, we employed sociotechnical theory. Studies have applied sociotechnical theory in settings of commercial platforms in terms of attachment (Li *et al.*, 2021) or trust (Wang *et al.*, 2020). However, such a theory has not yet been extended to the platform business to investigate hosts' stress factors. Our study extended the existing understanding of this theory and applied stressors from the social and technological dimensions to platform stress.

Third, applying the SSO framework to evaluate platform stress, our study verified the structural relationship among stressor, strain, and outcome. Previous studies have applied this framework not only in the context of the working environment (Choi *et al.*, 2014) but also in other environments, such as the relationship between social media overload and academic performance (Shi *et al.*, 2020). Nonetheless, there no research has yet focused on the platform business environment and the stresses intrinsic to it. Accordingly, our study has examined platform stress by adopting the SSO framework and extending it.

5.3. Practical implications

The findings in our study provide practical, managerial implications for Airbnb and other P2P platform companies that can prevent hosts from leaving their platforms. First, the results of our study suggest that a platform company should maintain a balance between global headquarters and local partners (i.e., hosts). Since global platforms run businesses in local communities with different cultural backgrounds from those in their headquarters, global platforms should respect each of their market's characteristics, such as cultural backgrounds, language differences, time, different business practices, and physical factors. To mitigate the conflicts, platform firms may implement a coordinating group, such as a conflict management team, and employ people who can understand and correspond with both cultures.

Second, regarding customers, the results suggest that companies may consider a host protection system, such as a clean review system that blocks offensive words or personal abuse to keep hosts from exhausting their emotions. In the end, the establishment of a more sustainable platform ecosystem is necessary, i.e., managing fake or malicious online reviews within the platform and seeking ways to increase utilization to create a better space for host-guest interactions. For example, some hotels maintain a coping system to protect frontline service providers from the emotional exhaustion caused by customers' misbehaviors (Wireko-Gyebi *et al.*, 2017).

Additionally, companies should better monitor unverified assessments since these may negatively affect hosts' financial outcomes.

Third, competitive intensity is not found as a stressor influencing strain. Hosts may consider other hosts not only competitors but also partners with whom they can cooperate. By forming a community of hosts, they sometimes gather together to present a larger voice to their platform company. Therefore, forming a community for hosts so that they can cooperate in exchanging information or resolving issues collectively would help hosts build a sustainable business. This 'coopetition' will lead to a healthy ecosystem for both companies and hosts.

Last, platform technology convenience can play a critical role in facilitating hosts' perceptions of benefits (Collier & Kimes, 2013). A technological system is essential for hosts, not only for post listing or guest booking operations but also for settlement. This system should be user-friendly; however, if this cannot be achieved, providing an online/offline technology-usage guidance session can lower the barrier for hosts who have difficulty utilizing technology due to its complexity.

5.4. Limitations and future research directions

This study is not free from limitations. First, the subjects were limited to accommodation hosts on Airbnb in Korea, even though there are various other platforms globally. Second, the influence of COVID-19 may have lowered the competitive intensity to some extent. To identify the additional factors that may impact hosts' stress in a P2P platform, future research may investigate diverse platforms and countries. To account for more comprehensive factors that may influence stress on P2P platforms, however, future research will investigate other industries such as P2P car rental platforms or P2P food delivery platforms. There may be additional stressors in these other types of platforms and other stakeholders may be defined for the platform stress. For example, there are riders on the food delivery platform. Stress may be generated when dealing with unexpected issues, such as violations of house rules or excessive demands. Future research will investigate these other stressors to further generalize our results.

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Appendix. Measurement statistics of construct scale

Indicators	Item	Loadings	Reference
Conflict with Headquarter ($\alpha=0.84$; CR=0.91; AVE=0.76)			
HQC1	Conflicts with headquarters can occur because of the difference in ways of work being done or services being provided.	0.91	Lee <i>et al.</i> (2019)
HQC2	Conflicts with headquarters can occur because of the difference in cultural background.	0.90	
HQC3	Conflicts with headquarters can occur because of the time required to make decisions at headquarters.	0.81	Milekhina <i>et al.</i> (2018)
Customer Negative Review ($\alpha=0.81$; CR=0.88; AVE=0.71)			
NRE1	I am concerned that guests would say negative things about the products I provide.	0.87	Adapted from Cheng <i>et al.</i> (2006)
NRE2	I am concerned that guests would make unflatteringly comment about the products I provide.	0.86	
NRE3	I am concerned that guests would express their dissatisfaction to other people.	0.80	
Competitive Intensity ($\alpha=0.82$; CR=0.89; AVE=0.73)			
COM1	Competition in global platform business is cutthroat.	0.88	Jaworski and Kohli (1993)
COM2	There are many "promotion wars" in the global platform business.	0.81	
COM3	There are many new competitors in the global platform business.	0.87	
Platform Technology Complexity ($\alpha=0.94$; CR=0.96; AVE=0.89)			
PTC1	I do not know enough about this technology on the global platform to handle my job satisfactorily.	0.94	Tarafdar <i>et al.</i> (2007)
PTC2	I need to understand and use new technologies on the global platform.	0.95	
PTC3	I do not find enough time to improve my technology skills for operating the global platform.	0.94	
Strain ($\alpha=0.89$; CR=0.93; AVE=0.82)			
ST1	I feel strain working with the global platform all day.	0.87	Choi <i>et al.</i> (2019); Maslach <i>et al.</i> (1997)
ST2	I feel emotionally drained from the global platform.	0.93	
ST3	I feel frustrated by the global platform.	0.91	
Financial Performance ($\alpha=0.94$; CR=0.96; AVE=0.85)			
FP1	Market share is much above expectations.	0.92	Maurya <i>et al.</i> (2015); Pelham and Wilson (1995)
FP2	Operating profits are much above expectations.	0.92	
FP3	Achieving customer satisfaction is much above expectations.	0.92	
FP4	Attracting new customers is much above expectations.	0.91	
Switching Intention ($\alpha=0.89$; CR=0.93; AVE=0.82)			
SI1	I would prefer to continue working on this global platform in the future. (Reverse coding)	0.90	Bettini <i>et al.</i> (2017)
SI2	I could see myself on this global platform in the future. (Reverse coding)	0.94	
SI3	I intend to continue business on this global platform in the future. (Reverse coding)	0.88	