호텔관광경영 교육 중 동료효과에 대한 연구

Identifying Peer Effects in the Hospitality and Tourism Management Classroom

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Abstract

교육활동 중 발생하는 동료효과는 학습자의 성과에 유의미한 영향을 미칠 수 있으며, 또한 이러한 동료효과의 강도와 지속은 학습자 및 관계자의 사회적 연결망 (social multiplier)에 따라 그 크기와 정도를 달리할 수 있다. 이러한 관점에서 교육 활동 중 동료효과에 대한 연구가 지속되어 왔으며 그 결과가 교육전략 및 정책에 적극적으로 반영되어 왔다. 하지만 연구의 환경이나 맥락에 따라 연구결과 및 그 한계효과의 범위가 다양하게 나타나고 있으며, 아직까지 호텔관광 분야의 교육에서의 동료효과에 대한 연구는 이루어진 적이 없다. 이에 따라 본 연구는 실제 호텔관광경영 강의실 내에서의 준실험 (quasi-experiment)을 통해 얻은 데이터를 이용해 집단 및 개인 단위에서의 동료효과를 추정하였다. 공간시차모형 (spatial lag model)을 통해 데이터를 분석한 결과 유의미한 동료효과가 호텔관광경영 학습에서 개별효과와 별개로 이루어지는 결과를 볼 수 있었다. 이러한 결과는 호텔관광경영 교육 관점에서 교육을 할 때 집단 구성에 대한 고려 및 학습 환경에 대한 시사점을 제시한다.

주제어: 사회연결망(social network), 사회승수(social multiplier), 연결강도(tie strength), 사회상호작용모형(social interaction model), 공간계량경제학(spatial econometrics)

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I. INTRODUCTION

Social effects are everywhere: as a social being, an individual is influenced by others, and simultaneously and reciprocally influences them and the environment. The social network is the milieu in which a relationship is initiated and social effects are generated. Although it is universally recognized that social relationships can be a great source of benefits, their significance is magnified in the field of hospitality and tourism. Unlike manufactured goods, the core feature of any hospitality or tourism commodity is experienced as service, which is characterized by heterogeneity and inseparability (Chi & Gursoy, 2009; Edvardsson, Gustafsson, & Roos, 2005; Zeithaml, Parasuraman, & Berry, 1985).

Ensuring quality performance requires both quality human resources and its surrounding social environment. Given the pressured complexity and competitiveness of the service environment, excellent service performance resulting in customer delight requires actively engaged teams (Hu & Randel, 2014; Kim, Lee, Paek, & Lee, 2013). Accordingly, many hospitality and tourism companies such as hotels, airlines, and restaurants provide service in team basis and in such situations where intra-team interaction and collaboration determine the quality of performance, the significance of peers and peer effects are magnified (Ashness & Lashley, 1995; Babbar & Koufteros, 2008; Liu, Chen, & Holley, 2017; Teare, 1993). Peers affect not only individual but also overall team performance, and their impacts are multiplied given the reciprocity of individuals and the environment.

As a consequence, social effects have been one of the major interests in hospitality and tourism studies. As hospitality and tourism represent an essentially people-oriented industry, how to improve service quality and customer satisfaction have been major questions on the social theme. Abundant findings have focused on psychological factors leading to certain behaviors, suggesting implications for marketing, organizational behavior, and human resource management. On the other hand, identifying and quantifying peer effects have drawn little interest so far in the field of research. Endogenous peer effects are

likely to exist when group of individuals form networks and work toward a certain common goal while not necessarily working together. This, however, have been of major interest in the educational context for optimizing the effect of educational intervention.

Hospitality and tourism education is well known for its vocationalism and specificity, a curriculum developed in response to the field's unique needs for simultaneous vocational competence and theoretical basis that determine employment and job performance post-graduation (Hsu, Xiao, & Chen, 2017). Therefore, studying peer effects in the hospitality and tourism classroom is not limited to the educational context but is expandable to wider applicability in the field, raising implications for both students and HR in organizations. Studies of peer effects on academic performance agree that the effect varies by context and field of the study (Brunello, De Paola, & Scoppa, 2010; Carrell, Fullerton & West, 2009; Hoxby, 2000). Such utility and variability are the rationale for scrutinizing peer effects and comprise the mechanism in this dissertation. Given their self-selection and contextual correlations, social effects have proved confounding for traditional statistical methods, but methodological advances, as exemplified by spatial econometric techniques, have further enabled research into the social space (e.g., Ajilore, Amialchuk, Xiong, & Ye, 2014; Lee, 2007; Lin, 2010; Burke & Sass, 2013).

This study aims to explore the contingent externalities of individual social networks, by investigating endogenous peer effects on academic performance in the hospitality and tourism classroom. The objectives are twofold: (1) achieve an in-depth understanding of peer-effect mechanisms and (2) identify robust peer effects distinct from contextual effects. In order to achieve these goals, this study further refines peer effects into the effect conformed to the peer group and the effect aggregated from diverse individual peers, with and without consideration on tie strength. Peer effects are empirically examined with the data collected from a quasi-field experiment in hospitality and tourism classrooms, via spatial lag models estimating the respective peer effect on academic performance in the hospitality and tourism classroom. More importantly, this study integrate both personal and environmental factors into the model based on the social cognitive perspective. Applying psychological attributes in a social interaction model is

beneficial for addressing the issues associated with self-selection and reflection problems (Manski, 1993; Mouw, 2006). Expected implications of the study, therefore, will contribute to the theory and practice of hospitality and tourism education by allowing higher performance in learning experience of the students by maximizing peer effects inside the classroom and the training environment.

II. THEORETICAL BACKGROUND

1. Peer effects

Peer effect refers to the influence of other actors on an individual and is also known as neighborhood effect, propinquity effect, or spillover effect, according to context. As a source of individual and contextual variation, peers are expected to have distinct influences and functions on service performance. Peers often become the fountainhead of dynamics in motivational, cognitive, and behavioral mechanisms, especially when service workers are mentally and emotionally exhausted (Berry, Parasuraman & Zeithaml, 1994; Kim, 2008).

Given individual-versus-collective standpoints, peer effects can be further divided into the group-oriented peer effect and the individual-oriented peer effect. The former is about average spillover conforming to group average, and the latter takes the individuality of individual peers into account in the aggregation process. The peer effect primarily examined in the educational context is the former as the effects often lay the foundation of educational policies and strategies that aim to maximize externalities. The group-based peer effect is directly associated with organizational climate, culture, and norms, from which localized conformity is contemporaneously derived. Nonetheless, reinforcement by individual peers is also critical in the field of hospitality and tourism, as firsthand interactions and reciprocal exchanges between peers directly affect their performance and the group's performance ultimately affecting customer assessment as a consequence (Baek, Olya, & Lee, 2018). Therefore, peer effects of both the group and individual should be considered as crucial factors for

improving both the effectiveness and efficiency of intervention.

However, the bidirectional nature of sociality makes it difficult to separate a pure hypothesized effect from other confounding effects in any empirical study. Individuals often choose whom to interact with, especially among friends and affiliated groups, and this initial self-selection becomes the central challenge in estimating pure social effects (Akerlof, 1997; Manski, 1993; Mouw, 2006). Accordingly, methodological endeavors to unravel the entangled consequence have been pursued by researchers, such as sampling design (e.g., Burke & Sass, 2013; Sacerdote, 2001), instrumental variable estimation for measuring fixed effect (e.g., An, 2015; Evans, Oats, & Schwab, 1992), and spatial econometric techniques (e.g., Hsieh & Lee, 2016; Lin, 2010).

1) Peer effects in hospitality and tourism classrooms

Studies reveal that quality peer groups increase individual academic performance, and vice versa (De Paola & Scoppa, 2010; Summers & Wolfe, 1977; Zimmerman, 2003). However, the findings are not consistent as a whole, indicating the contextual variation of peer effects should be noted. Factors such as field of study, interaction frequency, and teacher must be attributed to variations in results regarding the significance, power, and/or direction of peer effects (Brunello et al., 2010; Burke & Sass, 2013). Such variability warrants the study of peer effects on academic performance in the hospitality and tourism classroom, which will contribute to a better grasp of social effects and the mechanisms in the field. Hospitality and tourism curricula, especially in higher education, have been uniquely developed to serve the needs of stakeholders in this specialized field, including students and industry operators, by providing balanced training in both theoretical and practical activities (Hsu et al., 2017; Lee, Lee, & Kim, 2009). As graduates employ skills and knowledge acquired from the curriculum in their careers, it is common practice for organizations to consider students' academic performance in the human resources selection process (Roth & Bobko, 2000; Sulastri, Handoko, & Janssens, 2015). By allowing for the control of heterogeneity in career, workplace, and tasks, the classroom can be an ideal place to investigate peer effects among future professionals who will work at diverse organizations in the hospitality and tourism field.

2. Individual Fixed Effects on Academic Performance

Research has shown that cognitive and mental ability have strong predictive validity for later academic performance in hospitality and tourism education (Bui, So, Kwek, & Rynne, 2017; Gore, 2006; Wood & Bandura, 1989; Zimmerman, Bandura, & Martinez-Pons, 1992). Students are motivated to engage more in the coursework when they believe in their own ability and competence. Based on one's self-system, feedback from others, and direct or vicarious experiences, human beings postulate their own ability and self-belief on efficacy (Bandura, 1986). However, students' psychological calibration is not always, or necessarily, accurate (Pajares & Kranzler, 1995), and thus the determinants of academic performance should comprehend all relevant attributes including belief and actual ability and other self-motivational variables to avoid confronting bias arising from omitted components. Strong self-motivation includes one's self-regulatory skills and strategies, which exert persistence and effort control toward the task and the achievement (Bandura, 1993). Studies also suggest that students who value a task more highly are more likely to use cognitive and metacognitive strategies and self-regulated learning strategies (Neuville, Frenay, & Bourgeois, 2007; Pintrich & De Groot, 1990). Therefore, this study includes ability, efficacy belief, task value, and avoidance tendency as self-motivational factors.

Another element influencing individual behavior is environmental factors. These environmental factors consist of the presence of others, forcing the individual to keep interacting with the environment bidirectionally. Nevertheless, how the socio-structural factors operate depends on the psychological process of the agent, given that the subject of an agent's behavior is the agent him- or herself (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo 2000). The social attributes affecting academic performance outside of classroom include university-life satisfaction (Rickinson & Rutherford, 1995), club-activity involvement (Dufur, Parcel, & Troutman, 2013; Eccles & Barber, 1999; Wellman, & Wortley, 1990), study-abroad status meaning international students matriculating in Korea (Glass & Westmont, 2014; Grayson, 2008), and gender (Buchmann & DiPrete, 2006; Miller & Halpern, 2014; Voyer & Voyer, 2014).

Therefore, this study distinguishes itself from the previous study by decomposing the peer and individual effects within the social interactions among the students in the process of determining the learning outcomes. Use of quasi-experimental data and the spatial econometric model, as explained below, allows such innovative approach to the study of peer effects.

III. METHODS

1. Research model

Spatial econometrics effectively models data with spatial dependence, where the neighborhood influences the outcome. The spatial lag model enables the estimation of observed outcome Y_i in consideration of others (j) in the connected network. The spatial lag model of social interaction is described as follows:

$$Y_i = a + \rho \sum W_{ij} Y_j + \sum \beta_i X_i + \varepsilon \quad (1)$$

where Y_i on the left hand is the classroom performance of student i. On the right-hand, the second term, $\rho \sum W_{ij} Y_j$, represents the endogenous peer effect of peer performance Y_j, weighted by W_{ij}. The spatial weights matrix W_{ij} quantifies the relationship between i and j. The social adjacency matrix represents peer group network structure defined by friendship nominations of students within the classroom. X_i is the k number of independent variables, ρ and β_i are the peer effect and parameters on explanatory variables to be estimated, a is the intercept, and ε is the error term.

2. Setting and procedure

In order to identify peer effects apart from confounding effects in the hospitality and tourism classroom, a quasi-field experiment was conducted. The data was collected in the fall semester of 2017 from classes at a university renowned for its hospitality and tourism program in Seoul, Korea. Korea is well

known for its educational enthusiasm; it is one of the most developed countries in respect to hospitality and tourism higher education (Cho & Kang, 2006; OCallaghan, 2017), and the university operates a reputable international program in which the official language is English and the backgrounds of the students are diversified. Therefore, the results from the sample are not limited to a certain nationality but can be generalizable to the external boundaries of the classroom and the university. Information on students' motivational and environmental factors were collected through surveys in the third week after the semester's commencement, allowing some time for social interaction with minimal intervention resulting from different instructors and classroom policies. The participants were recruited from nine different classes, where the researcher visited each class during the class hour with prior consent from the instructors. The participants agreed to provide the result of their classroom performance to the researcher for analytic purposes. A voucher for free coffee was provided as a token to those who completed the survey. Out of 446 eligible students without redundancy, 384 participated in the survey (86.1%). For those who took more than two classes where the surveys were conducted, repeated participation was prevented so as not to overdo individual fixed effects by redundant individuals. The collected questionnaires were individually screened to detect and exclude any unreliable, unengaged responses. As a result, a total of 365 cases were included for further analysis. Table 1 summarizes the demographic information from the samples.

〈Table 1〉 Demographic characteristics of the sample

Characteristics	Descriptions	N	%
Gender	Female	213	58.4
	Male	152	41.6
Nationality	Korean	200	54.8
	Other Asian	148	40.5
	European	10	2.7
	Others	7	1.9

Age	Under 20 years	62	17.0
	20 to 24 years	269	73.7
	25 years and over	34	9.3
School Year	1st year	109	29.9
	2nd year	79	21.6
	3rd year	122	33.4
	4th year	55	15.1

3. Variables and measurement

The dependent variable for this study is academic performance in the classroom, proxied by the result of the course exam. Data for academic performance was obtained in the ninth week from six professors instructing the targeted courses, and the standardized score (hereafter z-score) was used for analysis. This standardization handles the noise in the performance caused by classroom fixed effects and any differences in the test instrument. To measure the explanatory variables, a self-administered questionnaire was developed on the basis of an extensive review of previous studies. Scales validated in the literature were reviewed and adapted for the study at hand.

The survey consisted of four self-motivational variables and six social/environmental variables. As an objective ability of the student, prior academic achievement was measured with a seven-point scale. The items for measuring academic self-efficacy were adopted from Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich, Smith, Garcia, & McKeachie (1991), and six items were adopted from MSLQ by Pintrich et al. (1991). For reflecting vocational utility in hospitality and tourism education, two additional items measuring the value associated with future career were integrated, adapted from College Learning Effectiveness Inventory (CLEI) by Kim, Newton, Downey, & Benton (2010). As for self-regulatory failure, avoidance tendency was measured with three items adapted from CLEI by Kim et al. (2010) and Eaton and Bean (1995).

Most importantly, the students were asked to nominate up to ten friends in the

classroom, so as to measure tie strength with each friend. A single question asking about perceived closeness with nominated friends gauged emotional intensity (Marsden & Campbell, 1984). The name of the nominee was coded into the student identification number and linked with information independently reported by the nominee. Students were also asked to report the number of friends they had present in the classroom, since variance in the number of friends in classrooms of varying size is high and cannot be fully accounted with up to 10 friend-nominees. The number was dichotomized into two groups by the midpoint. University-life satisfaction was measured with four items adopted from Diener, Emmons, Larsen, and Griffin (1985), and engagement in any social activities of personal interest was measured with three items adopted based on Zimet, Dahlem, Zimet, and Farley (1988). Students' studying-abroad status was identified by asking about engagement in the program and verified by students' nationalities. The academic year and language familiarity of the respondent and the course type were additionally measured and included as control variables. All other quantitative items used a seven-point interval scale ranging from 1 (not at all) to 7 (very much), and the survey was constructed in English. The questionnaire was pre-tested and reviewed by graduate students and academics experts. Their feedback and suggestions were fed into the final questionnaire so that content validity was safeguarded.

Through the preliminary analysis, five components were successfully divided by factor analysis into as intended: self-belief, task value, avoidant tendency, and university-life satisfaction and social-activity engagement. The Cronbach's alpha of the final measurements ranged from .783 to .948, and the composite reliability (CR) of each construct above .899 and the average variance extracted (AVE) between .578 and .888. The square roots of the AVE between each pair of variables exceeded the correlation coefficient. The factor analysis results of the measurement items are summarized in Appendix.

4. Estimation

The basic structure of the matrix for this study is based on the existence of a network tie between a student i and j. The interaction structure is arbitrary and can be either symmetric or asymmetric, and asymmetric patterns are more

realistic as empirically supported by Lin (2010). Accordingly, the matrix in this study accounts for structural asymmetry in the network structure. On this basis, as a unique feature of this study, the spatial weights matrix W_{ij} is treated in four different ways, thus specifying four variations of the model (Ajilore et al., 2014; Liu, Patacchini, & Zenou, 2014). The first model is based on the local-average network, examining the normative effect conformed to the peer group. W_{ij} in this model is row-standardized as $W_{ij} = 1/n_{ij}$ which implies the estimated spatial parameter to be the effect of the peer group as a whole. The second is the local-aggregate model, identifying the aggregated effect with divergent individual peers; W_{ij} is the basic binary structure of the matrix $W_{ij} = 1$ or $W_{ij} = 0$. Third, as an alternative to the local-average model, the peer network is additionally weighted by the strength of network tie and then row-standardized. The estimated spatial parameter is the effect of the peer group as a whole in light of the tie strength. The last version is the alternative local-aggregate model, where the peer network is weighted by the strength of network tie and not row-standardized.

The model was estimated by spatial two-stage least squares (2SLS) with instrumental variable regression in order to address the endogeneity issue accompanied by self-selection and relational reciprocity (Gujarati, 2011; Kelejian & Prucha, 1998; Lee, 2007). The unexpected correlation between the independent variables and the error term may be the source of overidentification resulting from omitted variables. However, spatial 2SLS with the instruments can successfully address and resolve this issue in the process of estimation.

IV. RESULTS

Table 2 shows the results from the local-average model and the local-aggregate model. In the local-average network model, the F-statistic for excluded instruments was below the usual threshold of 10, indicating that the spatial instruments were relatively weak. Hence, an overidentification test was conducted by regressing the spatial 2SLS residuals on the nine instruments where that the error term was not significantly correlated (p= .228) and

acceptable for further analysis (Glomb & Liao, 2003; Staiger & Stock, 1997). Spatial parameter ρ1 of local-average model was .571 with statistical significance at p< .01 and spatial parameter ρ2 of local-aggregate model was .148, statistically significant, at p< .05.

To examine if this tie strength in the weights matrix provides additional information, the alternative specification for both local-average and local-aggregate model was elaborated. Higher weights were given to the peers with closer relationships, and this enabled accounting for the qualitative aspect of the relationships. The results of the alternative local-average model and alternative local-aggregate model are shown in Table 3. As the F-statistic for excluded instruments was 8.85 in the alternative local-average model, an overidentification test was also undertaken and ensured that the error term was not significantly correlated (p= .252). The spatial parameter ρ3 was .578, with statistical significance at p< .01. and the spatial parameter ρ4 was .023, with statistical significance at p< .05.

The sizes of the coefficients and the significance of the explanatory variables were relatively consistent throughout the four models. Among others, the self-motivational variables were found to be significant except for SBELIEF. TASKVAL, and ABILITY were found to positively affect classroom performance, while AVOIDANT was negative. Environmental variables were all found to be significant on academic performance. FRIENSIZE and UNIVSAT negatively affected classroom performance, whereas ACTIVITY was positively affected. of .144. The -.361 marginal effect of ABROAD implies that international students scored 32.4% lower (-.29 z-score, at 5% level), and the marginal effect of GENDER, -.280, indicates that male students scored 25.1% lower (-.23 z-score, at 5% level) of a standard deviation in classroom performance. Including additional control variables did not change the results significantly, supporting the robustness of the findings. The marginal effect of each variable was calculated by taking (I-ρWij)-1 of the coefficient.

〈Table 2〉 Results of the local-average and local-aggregate models

	Local - average model		Local - aggregate model	
	Coefficient	Marginal effect	Coefficient	Marginal effect
ρ1 (spatial parameter)	.393*		.130*	
SBELIEF	.004	.005	.005	.006
TASKVAL	.117*	.156	.110*	.139
AVOIDANT	- .096*	- .128	- .104*	- .131
ABILITY	.248***	.330	.250***	.317
FRIENSIZE	- .230**	- .306	- .223*	- .283
UNIVSAT	- .089*	- .119	- .082†	- .104
ACTIVITY	.084†	.112	.085*	.107
ABROAD	- .365*	- .488	- .371*	- .470
GENDER	- .226*	- .302	- .214*	- .270
MATHTYPE	.335**	.447	.314**	.398
SEMTYPE	.412**	.550	.385*	.487
YEAR	.096†	.129	.097†	.122
ENGLISH	- .011	- .015	- .011	- .014
KOREAN	- .038	- .051	- .040	- .051
(Intercept)	- 1.172**		- 1.167**	
R^2 (Adj. R^2)	.265 (.234)		.265 (.233)	
F (df)	8.39*** (349)		8.37*** (349)	
F-statistic for excluded instruments	8.37***		21.87***	

*** p< .001; ** p< .01; * p< .05; † p< .1; n = 365

〈Table 3〉 Results of the alternative local-average and local-aggregate models with tie strength

	Local - average model		Local - aggregate model	
	Coefficient	Marginal effect	Coefficient	Marginal effect
ρ1 (spatial parameter)	.395*		.020*	
SBELIEF	.004	.001	.005	.007
TASKVAL	.117*	.037	.112*	.139
AVOIDANT	- .095*	- .030	- .102*	- .126
ABILITY	.248***	.079	.251***	.309
FRIENSIZE	- .229**	- .073	- .232***	- .286
UNIVSAT	- .089*	- .028	- .083†	- .103
ACTIVITY	.084*	.027	.085*	.105
ABROAD	- .367*	- .117	- .368*	- .454
GENDER	- .227*	- .072	- .217*	- .267
MATHTYPE	.334**	.107	.315**	.388
SEMTYPE	.410**	.131	.386*	.476
YEAR	.097*	.031	.098*	.120
ENGLISH	- .011	- .004	- .012	- .014
KOREAN	- .039	- .012	- .040	- .049
(Intercept)	- 1.174**		- 1.163**	
R^2 (Adj. R^2)	.266 (.234)		.264 (.232)	
F (df)	8.42***(349)		8.32***(349)	
F-statistic for excluded instruments	8.75***		22.98***	

*** p< .001; ** p< .01; * p< .05; † p< .1; n = 365

V. DISCUSSION

A series of spatial lag models comprising self-motivational and environmental attributes was developed and proposed to identify robust peer effects on

individual academic performance by different mechanisms. Estimated peer effects overall supported that students' academic performance is significantly influenced by friendship networks within the classroom outside of individual fixed effects. These results suggest that social norms and group culture influenced each member of the group to a large magnitude. The peer effects with individual-orientation from the local-aggregate model provide evidence that the divergent influence of each individual peer is considerable as well. The conjoint effects with tie strength were also statistically significant, supporting the notion that one is more influenced by those with whom one maintains closer relationships. This conclusion suggests that emotional attachment moderates the endogenous peer effect. However, the spatial parameter and the coefficient of individual fixed variables were not comparable in terms of magnitude.

Among self-motivational variables, task value and ability positively predicted classroom performance in the hospitality and tourism higher-education setting. At the same time, avoidance tendency, a form of academic self-regulatory failure, negatively affected the performance. Though the power of self-efficacy has been supported by a vast number of studies, one's belief in one's academic efficacy did not show a significant effect on academic performance in the present investigation. Nonetheless, this result does not necessarily countervail the notion when reviewing the model of the current study and the relevant literature in detail. The academic efficacy of an individual student develops as she or he experiences success and receives positive feedback (Bandura, 1997). If a student highly believes in his or her efficacy, the avoidance tendency is naturally diminished. Correlations among these psychological variables may cancel out the significance of efficacy belief itself. The result of self-belief corresponds to Pajares and Kranzler's (1995) and Pajares and Miller's (1997) finding that students' psychological calibration does not always correspond to their actual performance. As a whole, in the presence of the other variables accounted for in academic efficacy, and given that academic performance is one of many indicators of success in the life of students, the statistical insignificance of self-belief in the empirical context of the present study does not argue that the belief is less important than the ability.

Other social and environmental variables were all found to be significant, and

yet with mixed directionalities. As an organizational network factor within the classroom and the university, for example, the size of the friend network in the classroom and university-life satisfaction were found to lower classroom performance. However, social activities do not always counteract strong academic outcomes, a point supported by the positive effect of ACTIVITY, engagement in social activities of personal interest not limited to the university boundary. Engaging in a social community of personal interest may be a source of support, helping to relieve stress and providing energy for students to succeed in academic work. This result empirically supports the difficulty of studying abroad, as international students who are staying outside of their home country struggle with communicating, daily living, eating well, and adjusting. Consistent with previous studies, a significant female advantage was also found in the current results.

Ⅵ. CONCLUSION

The inquiry about peer effects in the classroom has been continuously discussed, and the effort to estimate the pure effect of peers apart from other confounding effects has been a longstanding struggle. Hospitality and tourism is a field where the collaboration between peers is indispensable for training up service excellence and creative responses to the complicated and ever-evolving needs and demands of customers. Accordingly, understanding peer effects and their mechanisms is the key to advancing the core competency and competitive advantage of students graduating into the field. This study firstly approached peer effects in two different frames of reference: peers as a group versus as an individual, and afterwards, alternative models of both approaches were developed considering tie strength in the social network. By defining a social network in the classroom, peer effects were successfully identified with statistical significance in all four distinctive models.

The amplitude of the normative peer effect implies that group-based culture and norms are among the most influential sources of endogenous effect on a member's outcomes. The significance of the aggregated effects of individual

peers underlines the respective value of each member in a given social network. Tie strength—the qualitative attribute of relationship—moderates these peer effects. This study also points to personal psychological factors and environmental factors affecting academic performance from social cognitive perspective. Self-motivational factors relevant to academic self-efficacy and self-regulation, and environmental factors including the classroom, university, community, and national surroundings of the individual, are directly and indirectly affecting students' performance in the classroom. The result should be noted as considerations should be given to model the significant group-based influence, whereas previous approach was to focus more on individuals.

The present study has numerous implications, both theoretically and practically. With respect to the theoretical contribution, this study suggests a holistic theoretical framework grounded on social cognitive theory pertinent to the understanding of peer effects on academic performance in the hospitality and tourism classroom. Among various types of social relations in the hospitality and tourism literature, peer effect has been paid less attention than other psychological effects impacting individual performance. However, peer effect has been of major interest in the educational context, and that practical value is magnified in the field of hospitality and tourism, wherein social interaction is key to the core outcomes of achievement and value creation. This research represents a step toward the filling of this gap in the literature, seeking empirical evidence for the effects of the relationship through a quasi-field experiment. The model considers individual heterogeneous fixed characteristics potentially affecting academic performance, on both the personal and environmental levels. While many studies have used secondary data for examining peer effects on academic performance, this study employs primary data collected through a customized questionnaire, which enables the integration of psychological factors explaining the outcome. The benefit of the integration lies in that its factors can largely compensate for individual fixed effects on academic performance as well as correlations from self-selection bias, and thus strengthen the robustness of the findings.

Second, this study offers methodological implications by the use of asymmetric spatial weights matrices with four variations, with the inclusion of tie strength.

Based on asymmetric relationship recognized as more realistic (Lin, 2010; Scott, 2000), the present study further classifies the source of the asymmetry into network ties and tie strength, and materializes the matrix based on the network nomination and the relational weights. Peer effects are alternatively examined jointly with tie strength, and tie strength is found to influence the degree of the endogenous effects. As a whole, the framework and the findings of the study enlarge the interdisciplinary value in this field of study.

The findings also suggest implications for practical application. First, the results send a message to industry practitioners and human resource directors who have to deal with groups and teams in the hospitality and tourism industry. Studies investigating peer effects stipulate that these effects may vary in the field upon the context. Given that the hospitality and tourism curricula developed for undergraduate students has predictive validity for future employment and job performance, the mechanisms by which motivational and environmental factors together affect performance should be applied in the practical context of the industry. The findings of this study emphasize the importance of human resource management's cultivating desire and fit norms for working groups. An appropriate organizational climate and team spirit will directly affect individual outcomes, consequently leading to collective improvement in organizational performance. At the same time, the significance of individual members has been verified, supporting the notion that retention of quality manpower is beneficial not only because it produces quality outcomes but also because proven-successful team members demonstrate quality benchmarks that others can follow. Quality relationships between and among the members, and the cultivating environment, are also noteworthy.

Second, the findings are directly applicable to educators of hospitality and tourism in higher education. For instance, combining this investigation's results for study-abroad status and social-activity engagement on academic performance, universities should be encouraged to provide opportunities for international students to participate and engage in communities of practice or to meet up with domestic-international peer partners who can exchange their respective strengths, such as language ability or local information. As it is noted that students learn in groups and from their peers to a considerable degree,

instructors should be more confident to initiate group activities such as discussions or group projects into coursework. Various pedagogical methods engaging peers in the learning process, such as hands-on training, behavioral modeling, action learning, or flipped learning, will be valuable for students as it will allow them to enlarge their opportunities and resources to learn, ultimately enriching their outcomes.

While the current study successfully addresses peer effects in the hospitality and tourism classroom, several limitations restrict the generalizability of the findings. Although the sample has diversity in its population and in the well-developed curriculum, university-wide correlated effects might not be treated. The fact that the samples are from one university enables control of correlated effects among the samples effectively in the model. However, it would be desirable to test the model with larger samples, in the classrooms at various universities, in order to secure higher generalizability to broader hospitality and tourism educational settings. Second, including only friendships in the definition of the spatial weighting matrix does not allow for a full accounting of family or neighborhood factors in the model. Applying a relational matrix with other networks, or integrating additional relevant variables into the model, could adduce additional interesting findings. Third, an interpretational limitation is concordant with the comparison of the spatial parameters estimated. Since the parameters are estimated from different models, their comparability is limited. Fourth, notwithstanding the peer effects captured through the quasi-field experiment in this study, there remains a limitation in capturing the dynamics of the peer groups and their consequences. Fifth, the classes chosen for data collection may not be representative of all learning modes. Given the bidirectionality inherent in continuously interacting with and simultaneously affecting each other, the effects found in this study and their consequences may, in turn, lead to other variations. As an important aspect of a social relationship lies in reciprocation, future studies could take that reciprocation into account.

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Appendix. Measurement items and standardized factor loadings with Cronbach's α, CR, and AVE

	loadings
Academic Efficacy Belief (.948 / .986 / .672)	
1. I believe I will receive an excellent grade in this class.	.836
2. I'm certain I can understand the most difficult material presented in the readings for this course.	.872
3. I'm confident I can understand the basic concepts taught in this course.	.858
4. I'm confident I can understand the most complex material presented by the instructor in this course.	.860
5. I'm confident I can do an excellent job on the assignments and tests in this course.	.905
6. I expect to do well in this class.	.784
7. I'm certain I can master the skills being taught in this class.	.861
8. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.	.872
Task Value (.925 / .979 / .578)	
1. I think I will be able to use what I learn in this course in other courses.	.778
2. It is important for me to learn the course material in this class.	.853
3. I am very interested in the content area of this course.	.825

4. I think the course material in this class is useful for me to learn.	.809
5. I like the subject matter of this course.	.814
6. Understanding the subject matter of this course is very important to me.	.790
7. I think I will be able to use what I learn in this course in my future job.	.824
8. I see connections between this class and my career goals.	.797
Avoidance tendency (.783 / .899 /.677)	
1. I would skip an assignment for this class if I were pressed for time.	.859
2. I postpone starting assignments for this class as much as I can.	.850
3. I'll wait to study for this class until the night before the exam.	.806
College-life satisfaction (.915 / .976 / .765)	
1. In most ways, my college life is close to my ideal.	.890
2. The conditions of my college life are excellent.	.919
3. I am satisfied with my college life.	.906
4. So far, I have gotten the important things I want in college life.	.859
Social-activity engagement (.941 / .972 / .888)	
1. I participate in a club/community of my interest.	.941
2. I feel support from a club/community and its members.	.959
3. I'm attached to a trustworthy club/community.	.940

2023년 12월 24일 원고 접수
2024년 1월 17일 수정본 접수
2024년 1월 24일 최종 수정본 접수 및 게재확정
3인 익명심사 필