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The Correlations among Social Interaction, Knowledge Sharing and Innovation Capability- Case on Medical Technology Industry

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Abstract

In face of the advance of technology, increase in competitors, and shortening product life cycle, enterprises could face market change and competition with other enterprises through constant innovation, e.g. creation of new knowledge, to maintain corporate competitive advantage. With better relationship between team members and other members, members present more social interaction to acquire more knowledge. In order to maintain more relational capital, individuals would invest in more resources, including interaction with others or providing message, resources, or knowledge required for others. In this case, individuals with more social interaction would be willing to share knowledge with others. Employees in medical technology industry in Fujian, as the research samples, are distributed 450 copies of questionnaire in this study. After deducting invalid and incomplete ones, 316 valid copies are retrieved, with the retrieval rate 70%. According to the results, suggestions are proposed, expecting to help employees in medical technology industry possess high-level professional knowledge and skills to deal with complicated work and develop the effectiveness of organizational resource application, regardless of medical technology industry product knowledge or customer needs, to achieve organizational performance.

Keywords: medical technology industry, social interaction, knowledge sharing, innovation capability, social exchange.

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Introduction

The function of medical technology industry to human society and humans in the future decades would far exceed information technology industry. Due to higher technology, large market potential, high added value of products, low pollution, emphasis on technology integration, and broad application, medical technology industry presents higher risks but high profits, is a knowledge intensive industry, and would lead the global economics. The industry presents the characteristics of developing innovative products with intellectual property protection and being able to enter the world market and aims to explore innovation capability that innovation capability shows great effects on medical technology industry.

Knowledge is the source to maintain competitive advantage. When uncertainty becomes certain, knowledge is the source of continuous competitive advantage. In face of the advance of technology, increase in competitors, and shortening product life cycle, enterprises could face market change and compete with other enterprises through constant innovation, e.g. creation of new knowledge, to maintain corporate competitive advantage. It is the reason why knowledge is regarded as the most important asset in the 21st century in the research on business management. Different from other physical resources of an organization, the carrier of knowledge is organizational members. Knowledge is possessed by organizational members. The knowledge exchange, share, and transfer among organizational members could be the active or passive behaviors. Such passive behaviors are driven by organizational system design. An organization could design knowledge management system to keep knowledge in the organization, but the system cannot necessarily keep all knowledge in the organization, as some knowledge cannot be written. In this case, a part of knowledge is kept on organizational members. Nevertheless, among the antecedents of personal knowledge sharing, the interaction among organizational members is primary. Social interaction is a type of informal interaction. Organizational members' behaviors would be changed with the relationship with other members. Members' social exchange content, in social interaction, might be emotional, e.g. social support, or essential, e.g. information and knowledge. With better relationship with other members, team members possess more relational capital to acquire more knowledge. In order to maintain more relational capital, an individual would invest in more resources, including interaction with others or providing message, resources, or knowledge required for others. In this case, individuals with more relational capital are willing to share knowledge with others. Medical technology industry requires high knowledge. In the industry, the sources of knowledge could be books or formal trainings from companies as well as sharing among team members. As a result, the correlations among social interaction, knowledge sharing, and innovation capability in medical technology industry are discussed in this study, expecting to help employees in medical technology industry present high-level professional knowledge and skills to deal with complicated work and develop the effectiveness of organizational

resource application to achieve organizational performance, regardless of the product knowledge or customer needs.

Literature review

Kim (2018) indicated that social interaction was established based on communication, through which an individual interacted with others. The result of such activity was the social interaction process. Wang & Long (2018) defined social interaction as individual interaction and identity process in an organization and a group to generate work experience (e.g. cohesiveness and leadership style). New members in an organization would learn work skills and develop relationship with members in the task group. Taylor & Glen (2019) regarded social interaction as social behavior presented in the interaction among people directly or indirectly communicating, contacting, and getting along with each other. Interaction could be the basis of interpersonal relationship and communication; interaction among people could tighten the relationship among people and shorten social relationship. In the knowledge market proposed by Friedman, Carmeli, & Dutton (2018), people shared knowledge with partners through social interaction to enhance the operation efficiency in knowledge market. Rasmussen (2018) considered that the delivery of information and experience would continuously increase with continuous growth of trust relationship between both parties, and the trust would affect the cooperation inside and outside the organization; such cooperation contained knowledge sharing. Mubarak & Noor (2018) pointed out commitment as the factor in knowledge sharing between individuals and organizations. An individual with higher social interaction showed more confidence on the company management and colleagues to affect the willingness of knowledge sharing. Abdellaoui *et al.* (2019) divided the knowledge sharing process into knowledge contribution and collection. An individual with higher social interaction with the organization would have higher confidence in the coworkers. It was proven that high social interaction revealed positive effects on knowledge sharing. Wojcik, Jeziorska-Biel, & Czapiewski (2019) pointed out social interaction as web members' voluntary contribution or emotional attachment that interaction and knowledge contribution appeared positive relationship. Kim, Kang, & Lee (2018) pointed out colleague assistance and support as the assistance provided by individual colleagues. In other words, when an employee required other colleagues' professional skills and knowledge, the colleagues would immediately offer assistance. Employees acquiring effective information from colleagues might consider that the colleagues offered support in order to seek for new ways of doing things to smoothly precede affairs. Consequently, the mutual assistance and concern among colleagues could benefit knowledge exchange. The following hypothesis is therefore established in this study.

H1: Social interaction presents significantly positive correlations with knowledge sharing.

Gan & Li (2018) considered that knowledge sharing was not simply the communication process, but the communicative competence, and defined knowledge sharing as employees in a team, through formal and informal interaction, sharing work related experience, profession, and background with other employees in the department or among departments. Zacca & Dayan (2018) established a knowledge sharing equation, knowledge sharing = transmission + absorption, revealing that knowledge sharing could spread knowledge to possess the knowledge with opposite parties and to have the entire organization understand the knowledge. Child, Oakhill, & Garnham (2018) revealed that knowledge sharing did not simply provide knowledge for others, but seek and collect knowledge possessed by the opposite parties and organizations. They considered that knowledge sharing was the behavior to achieve reciprocity through communication and further proposed members' knowledge sharing, as practitioners, through various communication media and channels, delivering the possessed knowledge to other members in the company as well as collecting and absorbing other members' knowledge. Martins *et al.* (2019) considered that the constant change of organizational tacit knowledge and explicit knowledge in the continuous process of extending and cycling from individuals, groups to organization would generate innovation. Bavik *et al.* (2018) indicated that, after acquiring required information or knowledge, innovation could be achieved through knowledge transfer, i.e. communication, processing, and application. Plume & Slade (2018) regarded the acquisition of organizational knowledge as the key factor in the development and operation of organizational knowledge management system. Knowledge acquisition was the first step of knowledge management; complete knowledge acquisition could establish good knowledge management, and organizational innovation capability depended on good knowledge management of the organization. Koopmann *et al.* (2019) discovered that expert communities could generate product and process innovation through knowledge transfer, coordination, and reuse. Shiau, Dwivedi, & Lai (2018) discovered that absorption ability was the mediator between knowledge sharing and innovation capability; knowledge sharing and acquisition would be meaningful in relevant process in the organization and mutual learning with members. In the research on knowledge sharing and innovation capability of companies, Luo, Xie, & Lian (2019) considered that innovation could be further achieved through knowledge sharing, i.e. communication, processing, and application, after acquiring required information or knowledge. Accordingly, the following hypothesis is established in this study.

H2: Knowledge sharing shows remarkably positive correlations with innovation capability.

Hwang & Zhang (2018) stated that, regardless of new products or service, innovation could appear on products, procedures, or organizational activity. Shareef *et al.* (2019) mentioned that employees were the source of corporate innovation capability, which was transferrable knowledge to generate new knowledge through knowledge transfer and embeddedness and to further derive new products and service or improve existing products and service. Javed *et al.* (2018) defined innovation capability as 1.the ability to develop new products to satisfy market demands, the ability to apply proper processes and techniques to produce new products, the ability to develop and adopt new product and process techniques to satisfy future needs, and the ability to respond to the sudden opportunities from competitors taking unexpected technological action and creation. Otaeye-Ebiede, Shaffakat, & Foster (2019) studied the reinforcement of multinational corporations' innovation capability with social interaction and knowledge sharing and considered that efficient knowledge sharing, to enhance innovation capability and the competitive advantage for competitors hard to imitate, was the knowledge asset of multinational corporations competing with local enterprises. Burton & Riley (2018) pointed out the significant effect of social interaction on knowledge sharing. Zarefard & Cho (2018) regarded the knowledge sharing process as the social interaction among people. In the social exchange process, both parties participated in exchanging valuable resources and message. When both parties regarded the exchanged resources and message, in the exchange relationship, being valuable, interaction would be continuous preceded. The communication would affect the interaction of both parties to further affect the innovation climate in the organization and enhance organizational innovation capability. Kao, Chiang, & Foulsham (2019) proposed to discuss the factors in visual team members' knowledge sharing behaviors with social exchange theory and indicated that an individual in a team, when expecting to share personal knowledge with others, could acquire equal or higher responses or rewards; or, individual sharing with others aimed to understand each other and establish trust relationship. In this case, team interaction decided the value of knowledge. The interaction process (including social exchange processes of mutual commitment, conflict, mutual trust, mutual communication, mutual understanding, and interaction) would enhance team members' knowledge sharing and affect team innovation capability. As a result, the following hypothesis is established in this study.

H3: Social interaction reveals notably positive correlations with innovation capability.

Methodology

Measurement of Research Variable

Social interaction: Referring to Lee, Kim, & Choi (2019), social interaction is divided into interpersonal trust, interpersonal commitment, and interpersonal support in this study.

1. Interpersonal trust: People, based on mutual trust, could achieve basic exchange.
2. Interpersonal commitment: Commitment reveals the identity to regard oneself as a member. The higher identity could reduce the psychological distance in the organization.
3. Interpersonal support: Colleagues present close occupation and social status as well as same goal and value at work that getting well along with colleagues would appear higher influence at work.

Knowledge sharing: From the viewpoint of social exchange theory, Kim *et al.* (2019) regarded the factors in knowledge sharing willingness as “reciprocal altruism”, “reputationism”, and “altruism”.

1. Reciprocal altruism: referring to the expectation of knowledge possessors being willing to give a hand when knowledge demanders are in need in the future.
2. Reputationism: referring to knowledge possessors expecting to shape the image of intellectuals in the organization so as to build the image of knowledge authority and being willing to share the possessed knowledge with colleagues to achieve the reciprocity.
3. Altruism: Knowledge possessors presenting positive and enthusiastic personality traits and being glad to share personal knowledge with other without any rewards.

Innovation capability: Referring to King & Chen (2019), innovation capability in this study is divided into two dimensions.

1. Technological innovation: In the improvement of existing products, service, and procedures, enterprises require better performance on production and service process or promote brand-new products and service to satisfy customer needs.
2. Product innovation: Enterprises reinforce the research and development capability, enhance product quality, develop new products or service matching market demands, and evaluate whether the sales of new products or service and customer satisfaction achieve the corporate goal.

Conceptual framework of this study

Summing up above literature review, the conceptual framework of this study is drafted (*Figure 1*) to discuss the relationship among social interaction, knowledge sharing, and innovation capability.

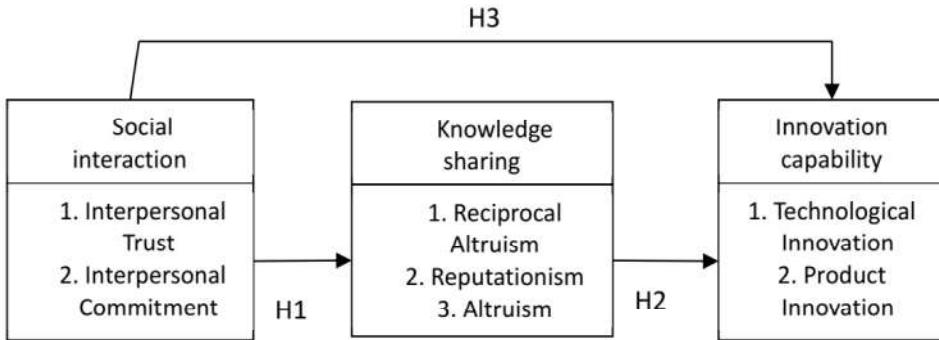


Figure 1. Conceptual framework

Research subject

Xiamen City plans four industrial parks of medical technology culture, biomedicine, health products, and medical technology to reinforce the distribution and clustering of medical technology industry, promote medical technology or wearable health medical equipment, largely introduce enterprises with medical technology into the parks, develop and promote health medical equipment, and promote the prevention, treatment, recovery, and health management covering life cycle by combining various gathered health data with vital sign analyses. Employees in medical technology industry in Fujian, as the research samples, are distributed 450 copies of questionnaire. After deducting invalid and incomplete ones, 316 copies are retrieved, with the retrieval rate 70%.

Results

Factor analysis

With factor analysis, *Table 1*, the social interaction scale is extracted three factors of “interpersonal trust” (eigenvalue=2.675, $\alpha=0.85$), “interpersonal commitment” (eigenvalue=1.872, $\alpha=0.85$), and “interpersonal support” (eigenvalue=1.423, $\alpha=0.83$). The cumulative covariance explained achieves 73.628%. The knowledge sharing scale, through factor analysis, is extracted three factors of “reciprocal altruism” (eigenvalue=3.125, $\alpha=0.87$), “reputationism” (eigenvalue=2.166,

$\alpha=0.88$), and “altruism” (eigenvalue=1.983, $\alpha=0.86$). The cumulative covariance explained reaches 75.491%. The innovation capability scale, through factor analysis, is extracted two factors of “technological innovation” (eigenvalue=2.846, $\alpha=0.90$) and “product innovation” (eigenvalue=2.512, $\alpha=0.91$). The cumulative covariance explained achieves 81.736%.

Table 1. Factor analysis table

variable	factor	eigenvalue	α	cumulative variance explained
social interaction	interpersonal trust	2.675	0.85	73.628
	interpersonal commitment	1.872	0.85	
	interpersonal support	1.423	0.83	
knowledge sharing	reciprocal altruism	3.125	0.87	75.491
	reputationism	2.166	0.88	
	altruism	1.983	0.86	
innovation capability	technological innovation	2.846	0.90	81.736
	product innovation	2.512	0.91	

Correlation analysis

From Table 2, social interaction, knowledge sharing, and innovation capability present remarkable correlations that H1, H2, and H3 are preliminarily supported.

Table 2. Correlation analysis table

research dimension	α	social interaction	knowledge sharing	innovation capability
social interaction	0.85			
knowledge sharing	0.87	0.31**		
innovation capability	0.90	0.22*	0.27**	

LISREL model indicator

LISREL (linear structural relation) model combines factor analysis and path analysis in traditional statistics and adds simultaneous equations in econometrics to simultaneously calculate multiple factors and multiple causal paths. In regard

to model fit, it could be evaluated from preliminary fit criteria, overall model fit, and fit of internal structure of model.

The research data are organized as below, where preliminary fit criteria, internal fit, and overall fit of the model are explained.

From the complete model analysis result, Table 3, three dimensions of social interaction (interpersonal trust, interpersonal commitment, interpersonal support) could notably explain social interaction ($t > 1.96$, $p < 0.05$), three dimensions of knowledge sharing (reciprocal altruism, reputationism, altruism) could significantly explain knowledge sharing ($t > 1.96$, $p < 0.05$), and two dimensions of innovation capability (technological innovation, product innovation) could remarkably explain innovation capability ($t > 1.96$, $p < 0.05$). Apparently, the overall model in this study presents favorable preliminary fit criteria.

Table 3. Overall linear structural model analysis result

evaluation item	parameter/evaluation standard		result
preliminary fit	social interaction	interpersonal trust	0.738**
		interpersonal commitment	0.725**
		interpersonal support	0.714**
	knowledge sharing	reciprocal altruism	0.736**
		reputationism	0.757**
		altruism	0.743**
	innovation capability	technological innovation	0.778**
		product innovation	0.791**

Note: * stands for $p < 0.05$, ** for $p < 0.01$, and *** for $p < 0.001$.

From Table 4, social interaction shows positive and notable correlations with knowledge sharing (0.385, $p < 0.01$), knowledge sharing reveals positive and significant correlations with innovation capability (0.296, $p < 0.01$), and social interaction appears positive and remarkable with innovation capability (0.237, $p < 0.01$) that H1, H2, and H3 are supported.

Table 4. Overall linear structural model analysis result

evaluation item	parameter/evaluation standard	result
internal fit	social interaction→knowledge sharing	0.385**
	knowledge sharing→innovation capability	0.296**
	social interaction→innovation capability	0.237**

Note: * stands for $p < 0.05$, ** for $p < 0.01$, and *** for $p < 0.001$.

From Table 5, the overall model fit standards $\chi^2/Df=1.312$, smaller than the standard 3, and $RMR=0.004$, revealing the proper results of χ^2/DF and RMR . Moreover, chi-square value is sensitive to sample size that it is not suitable for directly judging the fit. However, the overall model fit standards $GFI= 0.983$ and $AGFI=0.942$ are higher than the standard 0.9 (the closer GFI and $AGFI$ to 1 showing the better model fit). This model therefore presents better fit indices.

Table 5. Overall linear structural model analysis result

overall fit	χ^2/Df	1.312
	GFI	0.983
	AGFI	0.942
	RMR	0.004

Note: * stands for $p < 0.05$, ** for $p < 0.01$, and *** for $p < 0.001$.

Discussion

Discussion of Management implications

Employees in the medical technology industry could be affected by social interactions and knowledge sharing at work. These are two crucial factors for human resources in the medical technology industry to understand their employees. With the help of research results, the supervisors can master these variables and increase the chances of knowledge sharing and social interaction, thereby increasing the innovation capability in the medical technology industry. As research indicated, a concrete relationship strength is beneficial when employees in the medical technology industry want to share their knowledge. Accordingly, to encourage them to share their knowledge, their relationship has to be strengthened first, such as creating their chance to see each other or a daily meeting to discuss work situations. When employees in the medical technology industry are willing to share their knowledge, positive effects appear in a working environment with good social interaction. After referring to lots of social interaction contents, it's clear

that once the willingness of knowledge sharing raises, the innovation capability will also increase.

Discussion of theoretical model

Figure 2 shows the overall research results. The path coefficients reaching the significance are presented with solid lines, while those not achieving the significance are displayed with dotted lines. Clearly, the path coefficients of all variables reach the significance, revealing that the path coefficients achieve convergent validity, conforming to the basic requirement for model analysis. The research model fit is therefore verified that this research model conforms to the theory and presents validity.

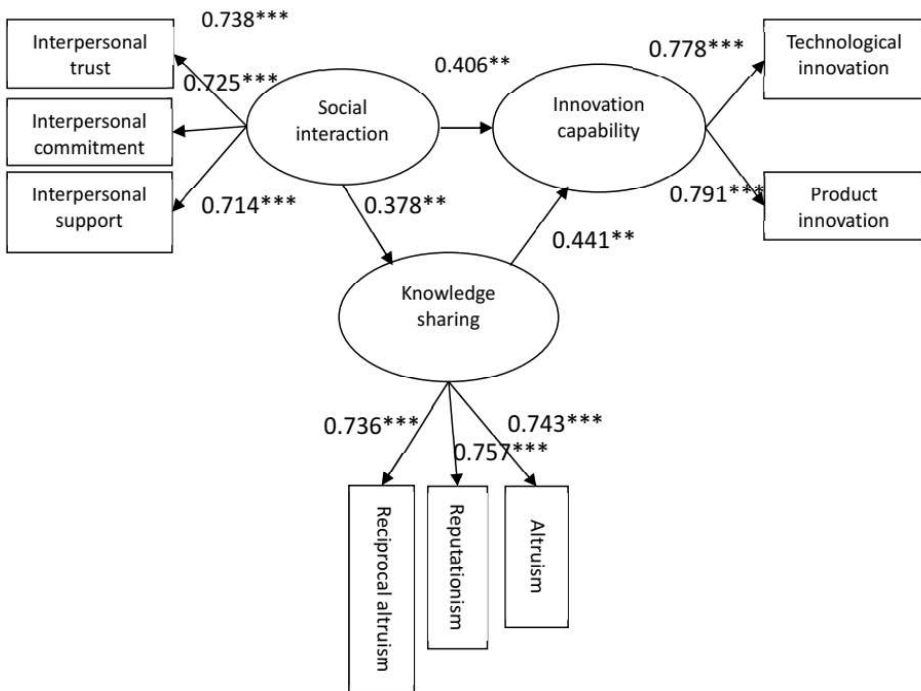


Figure 2. Path diagram

Conclusion

The research results prove knowledge as the key success factor in medical technology industry. Medical technology industry has to constantly create knowledge for innovation to maintain the competitive advantage. Nevertheless, medical technology industry has to keep knowledge in the organization for the operation. Many organizations establish formal knowledge systems for sharing

knowledge records, but the effect is not manifest, because a lot of tacit knowledge cannot be written. Informal knowledge sharing therefore plays an important role in organizational knowledge sharing. Members in medical technology industry would exchange emotion, information, and even knowledge in the social interaction. Mentorship is the system to improve or expand organizational members' informal interaction for fast circulation of organizational knowledge and information. Social interaction therefore could complement knowledge spread in medical technology industry. What is more, in order to enhance organizational knowledge sharing in medical technology industry, other factors, such as organizational human resource measures, should be taken into account. The design of team work in medical technology industry would benefit knowledge sharing. Team-based work design could enhance social interaction and reduce obstacles to knowledge sharing. Regarding training, peer mentorship could benefit work-related knowledge sharing. A part of the reward for organizational members in medical technology industry is the result of team performance to enhance the cooperation willingness among organizational members. An organization in medical technology industry providing rewards for knowledge sharing could benefit knowledge sharing. The enhancement of face-to-face communication could promote the knowledge sharing from the interaction among employees in medical technology industry.

Recommendations

From the summary of research results and findings, following practical suggestions are proposed in this study.

1. In addition to complete department systems, it is suggested to test the degree of candidates getting along with others and the personality in the recruitment. Besides, it is encouraged to create working environment and climate suitable for knowledge sharing, create friendly working environment, and enhance employees' innovation capability to have employees in medical technology industry become the stable power to promote various business goals.
2. Social interaction is a critical factor in the promotion of employees' customer orientation, performance, and innovation in medical technology industry. Either new employees or senior colleagues would more or less feel maladjustment due to overall environment or personal ideas, or conflict with others. For this reason, the promotion of new policies in medical technology industry should be transparent to avoid misunderstanding and trouble.
3. Managers in medical technology industry could establish knowledge sharing systems to form knowledge sharing culture. When the sharing system is effectively implemented, employees in medical technology industry would take knowledge giving as granted, without resistance, and spontaneously exchange knowledge to agitate creative and unique concept for promoting the value of organizational exclusive knowledge bank. Once medical technology industry

and employees present common goals, the employees would regard such goals as the overall innovation capability development of the enterprise, rather than focusing on self-growth.

References

- Abdellaoui, A., Chen, H.Y., Willemsen, G., Ehli, E.A., Davies, G.E., Verweij, K.J.H., Nivard, M.G., de Geus, E.J.C., Boomsma, D.I., & Cacioppo, J. T. (2019). Associations between loneliness and personality are mostly driven by a genetic association with neuroticism. *Journal of Personality*, 87(2), 386-397. DOI: 10.1111/jopy.12397.
- Bavik, Y. L., Tang, P. M., Shao, R., & Lam, L. W. (2018). Ethical leadership and employee knowledge sharing: Exploring dual-mediation paths. *The Leadership Quarterly*, 29(2), 322-332. DOI: 10.1016/j.leaqua.2017.05.006.
- Burton, R. J., & Riley, M. (2018). Traditional Ecological Knowledge from the internet? The case of hay meadows in Europe. *Land Use Policy*, 70, 334-346. DOI: 10.1016/j.landusepol.2017.10.014.
- Child, S., Oakhill, J., & Garnham, A. (2018). You're the emotional one: the role of perspective for emotion processing in reading comprehension. *Language, Cognition and Neuroscience*, 33(7), 878-889. DOI: 10.1080/23273798.2018.1431397.
- Friedman, A., Carmeli, A., & Dutton, J. E. (2018). When does respectful engagement with one's supervisor foster help-seeking behaviors and performance? *Journal of Vocational Behavior*, 104, 184-198. DOI: 10.1016/j.jvb.2017.11.007.
- Gan, C., & Li, H. (2018). Understanding the effects of gratifications on the continuance intention to use WeChat in China: A perspective on uses and gratifications. *Computers in Human Behavior*, 78, 306-315. DOI: 10.1016/j.chb.2017.10.003.
- Hwang, K., & Zhang, Q. (2018). Influence of parasocial relationship between digital celebrities and their followers on followers' purchase and electronic word-of-mouth intentions, and persuasion knowledge. *Computers in Human Behavior*, 87, 155-173. DOI: 10.1016/j.chb.2018.05.029.
- Javed, B., Abdullah, I., Haque, A. U., & Rubab, U. (2018). Inclusive leadership and innovative work behavior: the role of psychological empowerment. *Journal of Management & Organization*, 1(1), 1-18. DOI: 10.1017/jmo.2018.50.
- Kao, G.Y.M., Chiang, X.Z., & Foulsham, T. (2019). Reading behavior and the effect of embedded selfies in role-playing picture e-books: An eye-tracking investigation. *Computers & Education*, 136, 99-112. DOI: 10.1016/j.compedu.2019.03.010.
- Kim, J. (2018). Emotional Labor in the Care Field and Empathy-enhancing Education by Reading Literature: A Brief Review. *Iranian Journal of Public Health*, 47(8), 1084-1089.

- Kim, J., Kang, S., & Lee, K.H. (2018). How social capital impacts the purchase intention of sustainable fashion products. *Journal of Business Research*, 117, 596-603. DOI: 10.1016/j.jbusres.2018.10.010.
- Kim, J., Kim, M., Choi, J., & Trivedi, M. (2019). Offline social interactions and online shopping demand: Does the degree of social interactions matter?. *Journal of Business Research*, 99, 373-381. DOI: 10.1016/j.jbusres.2017.09.022.
- King, R.B. & Chen, J. (2019). Emotions in Education: Asian Insights on the Role of Emotions in Learning and Teaching. *The Asia-Pacific Education Researcher*, 28(4), DOI: 279-281. 10.1007/s40299-019-00469-x.
- Koopmann, J., Johnson, R. E., Wang, M., Lanaj, K., Wang, G., & Shi, J. (2019). A self-regulation perspective on how and when regulatory focus differentially relates to citizenship behaviors. *Journal of Applied Psychology*, 104(5), 629-641. DOI: 10.1037/apl0000366.
- Lee, J., Kim, J., & Choi, J. Y. (2019). The adoption of virtual reality devices: The technology acceptance model integrating enjoyment, social interaction, and strength of the social ties. *Telematics and Informatics*, 39, 37-48. DOI:10.1016/j.tele.2018.12.006.
- Luo, Y., Xie, M., & Lian, Z. (2019). Emotional Engagement and Student Satisfaction: A Study of Chinese College Students Based on a Nationally Representative Sample. *The Asia-Pacific Education Researcher*, 28, 283-292. DOI: 10.1007/s40299-019-00437-5.
- Martins, J., Costa, C., Oliveira, T., Gonçalves, R., & Branco, F. (2019). How smartphone advertising influences consumers' purchase intention. *Journal of Business Research*, 94, 378-387. DOI: 10.1016/j.jbusres.2017.12.047.
- Mubarak, F., & Noor, A. (2018). Effect of authentic leadership on employee creativity in project-based organizations with the mediating roles of work engagement and psychological empowerment. *Cogent Business & Management*, 5(1), 1-14. DOI: 10.1080/23311975.2018.1429348.
- Otaye-Ebede, L., Shaffakat, S., & Foster, S. (2019). A Multilevel Model Examining the Relationships between Workplace Spirituality, Ethical Climate and Outcomes: A Social Cognitive Theory Perspective. *Journal of Business Ethics*, 166, 611-626. DOI: 10.1007/s10551-019-04133-8.
- Plume, J.C., & Slade, L.E. (2018). Sharing of sponsored advertisements on social media: A uses and gratifications perspective. *Information Systems Frontiers*, 20(3), 471-483. DOI: 10.1007/s10796-017-9821-8.
- Rasmussen, L. (2018). Parasocial interaction in the digital age: An examination of relationship building and the effectiveness of YouTube celebrities. *The Journal of Social Media in Society*, 7(1), 280-294.
- Shareef, M.A., Mukerji, B., Dwivedi, Y.K., Rana, N.P., & Islam, R. (2019). Social media marketing: Comparative effect of advertisement sources.

- Journal of Retailing and Consumer Services*, 46, 58-69. DOI:10.1016/j.jretconser.2017.11.001.
- Shiau, W.L., Dwivedi, Y.K., & Lai, H.H. (2018). Examining the core knowledge on facebook. *International Journal of Information Management*, 43, 52-63. DOI: 10.1016/j.ijinfomgt.2018.06.006.
- Taylor, L.K., & Glen, C. (2019). From empathy to action: Can enhancing host-society children's empathy promote positive attitudes and prosocial behaviour toward refugees?. *Journal of Community & Applied Social Psychology*, 1-13. DOI: 10.1002/casp.2438.
- Wang, L., & Long, L. (2018). Idiosyncratic deals and taking charge: The roles of psychological empowerment and organizational tenure. *Social Behavior and Personality: An International Journal*, 46(9), 1437-1448. DOI: 10.2224/sbp.7084.
- Wojcik, M., Jeziorska-Biel, P., & Czapiewski, K. (2019). Between words: A generational discussion about farming knowledge sources. *Journal of Rural Studies*, 67, 130-141. DOI: 10.1016/j.jrurstud.2019.02.024.
- Zacca, R., & Dayan, M. (2018). Linking managerial competence to small enterprise performance within the dynamic capability logic. *Journal of Small Business and Enterprise Development*, 25(2), 256-276. DOI: 10.1108/JSBED-02-2017-0042.
- Zarefard, M., & Cho, S.E., (2018). Entrepreneurs' managerial competencies and innovative start-up intentions in university students: Focus on mediating factors. *International Journal of Entrepreneurship*, 22(2), 141-163.