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Empirical analysis of intellectual capital, potential absorptive capacity, realized absorptive capacity and cultural intelligence on innovation

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C H R O N I C L E

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A B S T R A C T

The purpose of this research is to reveal the influence of intellectual capital, potential absorptive capacity, realized absorptive capacity, and cultural intelligence on innovation in the tourism sector in Batam City. Batam has geopolitical and geographic advantages, located in the Malacca Strait, adjacent to and directly facing Singapore and Malaysia. It has not been optimal in exploring the potential for innovation in the tourism sector. Thus, this sector does not yet have a significant contribution to economic development. The research was conducted on the management of companies that are members of the Association of the Indonesian Tours and Travel Agencies in Batam City, totaling 54 people. By using the analysis of Structural Equation Model (SEM) with SmartPLS version 3.0, the results show that 1) intellectual capital has no effect on innovation; 2) potential absorptive capacity has no effect on innovation; 3) Realized absorptive capacity has a significant positive effect on innovation, and 4) Cultural Intelligence has a significant positive effect on innovation. The results of this study will give some insight to company managers in the tourism sector for developing innovation to maintain business continuity.

1. Introduction

The tourism sector in Indonesia has succeeded in creating a multiplier effects on economic growth, including creating business opportunities and providing jobs. The tourism sector is a leading priority sector for the development of "Nawa Cita" in the current government of the Republic of Indonesia. The development of the tourism sector is designed to increase the country's foreign exchange and prosper. One way of developing the tourism sector is the development of an innovation strategy through the development of tourism human resources, because Indonesia's tourism competitiveness in 2015 was at the 50th level of 141 countries in the world, with one of the pillars, namely human resources, ranked 53 in the world. Even though in 2017 Indonesia's competitiveness ranking position increased to 42 (out of 136 countries), the human resources pillar declined to 64th out of 136 countries (WEF, 2017), so that human resource development in the tourism sector innovation needs serious attention. This kind of research is rarely implemented in the tourism sector because several studies are still focused on the high-tech industrial sector (Yuwono, Daihani, & Willy Arafah, 2020). Batam is in the busiest international shipping traffic lane in the world, with a distance of 12.5 miles (20 km) from Singapore, so Batam is used as an area for industry, trade, ship transfer, and tourism. As a tourist destination, Batam, which has 373 islands and 6 main bridges connecting the main islands, has the potential to become a mainstay tourist destination. Also besides, Batam City not only has the potential to hold national and international level MICE (meeting incentive convention exhibition), but also has a lot of tourism potential (SKPD Batam, 2014). Batam City nationally ranks 3rd according to the number of foreign tourists after Bali and Jakarta, however, based on data (BPS, 2017), the growth of foreign tourists during 2015 and 2016 shows a declining growth. The number of foreign tourists in 2015 amounted to 1,443,995, decreased to 1,432,472, or decreased by (-0.80%) in 2016, likewise from 2014-2015

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showed a decline in growth of (-0.70%), and growth in recent years has also been volatile (Yuwono, Daihani, & Arafah, 2019), even though during 2011-2014 growth has always increased significantly every year with an average value of 9.74% per year (BPS, 2017). On the other hand, the occupancy rate of starred hotel rooms (room occupancy rate) in Batam City is 42.93% (BPS, 2017) which is below the national average of 54.34% (Ayuni et al., 2017). This reflects the amount of foreign exchange that comes in or the amount of expenditure made by tourists is not optimal. Corporate innovation consists of four dimensions, namely marketing innovation, product innovation, process innovation, and organizational innovation (Cassol, Gonçalo, & Ruas, 2016) Innovation is influenced by several factors such as intellectual capital, potential absorptive capacity (PACAP), realized absorptive capacity (RACAP) and cultural intelligence. Several previous studies still show different results. Intellectual capital has a significant positive effect on innovation because it is a source of economic-based knowledge (WU & Sivalogathasan, 2013), resource-based knowledge (Kianto, Ritala, Spender, & Vanhala, 2014), which describes an organization in directing its resources (Cassol et al., 2016). However, this is not significant (Yuwono et al., 2020), where this variable must first go through RACAP mediation so that it can have a significant effect on innovation. According to Limaj & Bernroider (2017), each component of absorption capacity (PACAP and RACAP) affects innovation. PACAP directly influences innovation through feelings and the selection of creative external knowledge (Gölgeci, Swiatowiec-Szczepanska, & Raczkowski, 2016), and the company's ability to combine old and new knowledge (Nazarpoori, 2017), but PACAP does not affect on innovation when the team's ability at this stage is still weak (Leal-Rodríguez, Roldán, Ariza-Montes, & Leal-Millán, 2014). Meanwhile, the influence of cultural intelligence on innovation is still rarely studied. Cultural intelligence variables have played a moderating role in the relationship between PACAP and RACAP on innovation (Gölgeci et al., 2016), but it was found that in fact, this variable was an independent variable that directly had a significant positive effect on innovation (Yuwono et al., 2020). Some of the studies above, show different results and need to be analyzed further. Research is very interesting as material for managerial implications and theory development, especially innovation in the tourism industry sector, This study will analyze:

a. The effect of intellectual capital on innovation?
b. The effect of potential absorptive capacity (PACAP) on innovation?
c. The effect of realized absorptive capacity (RACAP) on innovation?
d. The influence of cultural intelligence on innovation?

2. Literature Review

Innovation is the creation of something new (Costa, Fernández, & Dorrego, 2014). Innovation is divided into three dimensions, namely product innovation, process innovation, and managerial innovation (Nazarpoori, 2017). The general objective of innovation is to provide differentiation of new products and services in the market and increase customer satisfaction. Others researchers divide innovation into four dimensions, namely: marketing innovation, product innovation, process innovation, and organizational innovation. Marketing innovation relates to activities using shared resources with partners and the use of social media such as Facebook, online discussion forums, Twitter, and others. Product innovation includes developing new and existing products and using stakeholder ideas. Process innovation is related to the development of new methods through technology, and organizational innovation is related to developing strategic competencies for sustainable innovation through organizational culture by utilizing the human resources owned by the company (Cassol et al., 2016). According to the authors in this study, innovation is a dynamic process to create something new in meeting the growing goals and expectations of consumers. Intellectual capital is a company's intangible asset that forms the basis for the company in developing innovation. This intellectual capital consists of three dimensions, namely human capital, social capital, and structural capital which will affect absorption capacity, and then influence innovation (Cassol et al., 2016; Engelman et al., 2017; Nazarpoori, 2017). So that intellectual capital is related to the company's capacity to create and apply the foundations of intangible knowledge, creating value, and thus encouraging company growth and innovation. Intellectual capital is also displayed in three dimensions, namely staffing that describe human capital, structures in organizations that describe structural capital, and consumers that describe relational capital (Survilaitė, Tamošiūnienė, & Shatrevich, 2015). Intellectual capital has an impact on innovation because the company has an organizational structure that values sustainable employee development (Kalkan et al., 2014) and develops relationships between stakeholders (Kalkan et al., 2014; Maboudi et al., 2015). These are the things that encourage companies to identify improvements for product innovation, process innovation, and marketing innovation (Kalkan et al., 2014) and technological innovation (Li & Yu, 2018). Intellectual capital contains various knowledge relevant to the organization that can be used to improve skills that drive innovation (Omoush, 2019). Intellectual capital is useful for innovation purposes because it is a knowledge-based economy (WU & Sivalogathasan, 2013), knowledge-based resources (Kianto et al., 2014), and leads to a situation of organizational competitive development which is a very strategic source of the company. important and effective in driving innovation (Maboudi et al., 2015).

H_1. *Intellectual capital has a positive relationship with innovation.*

The term absorption capacity was originally developed by Cohen & Levinthal (1990) where an organization needs knowledge that is relevant to the organization and is used to increase creativity in the organization. This absorption capacity is then developed into two parts, namely potential absorptive capacity or PACAP and realized absorptive capacity or RACAP (Zahra & George, 2002). Absorption capacity is defined as the ability of employees and motivation to encourage external knowledge and the willingness of the organization to use this knowledge for company innovation (Nazarpoori, 2017). PACAP is a stage where companies get external knowledge and understand this knowledge, so PACAP is divided into two dimensions, namely acquisition and assimilation (Zahra & George, 2002). The acquisition is a company's ability to identify and obtain external knowledge, while assimilation is a company's ability to analyze, process and interpret and understand information obtained

from external sources (Cohen & Levinthal, 1990; Distel, 2017; Engelman et al., 2017; Leal-Rodríguez et al., 2014; Nazarpoori, 2017; Tan, 2018). Each component of the PACAP influences innovation (Limaj & Bernroider, 2017). The author in this study defines PACAP as the company's ability to acquire and understand knowledge relevant to the company's core business, with the dimensions of acquisition and assimilation. PACAP influences innovation by providing a flexible strategy that allows companies to change and reconfigure organizational operations (Davila, Durst, & Varvakis, 2018), and the appropriateness of selecting relevant external knowledge (Gölgeci et al., 2016). Companies with strong PACAP can absorb the results of gathering new knowledge and combine them with previous knowledge for the innovation process (Nazarpoori, 2017), so that the organizational team ability factor greatly influences PACAP in determining the success of innovation.

H_2. *Potential absorptive capacity has a positive relationship with innovation.*

RACAP is the company's ability to use the knowledge that has been acquired to become useful knowledge. RACAP consists of the transformation and exploitation of knowledge which includes how companies acquire new knowledge and the consequences of combining existing and new knowledge into the company's operational activities (Leal-Rodríguez et al., 2014; Zahra & George, 2002). Transformation also means the company's ability to unify misaligned information and combine it into something new; and the exploitation dimension, namely the company's ability to improve, utilize and create skills that focus on the application of knowledge (Cohen & Levinthal, 1990; Distel, 2017; Engelman et al., 2017; Nazarpoori, 2017; Tan, 2018) The author defines RACAP as the company's ability to utilize its knowledge as more useful and useful knowledge for organizational goals with dimensions consisting of knowledge transformation and exploitation. RACAP is the process of entering new knowledge and combining it with old knowledge into something new for organizations in the form of innovation. RACAP can directly influence innovation because the digestion process of external knowledge can be directly converted into direct input for innovation (Gölgeci et al., 2016). RACAP influences innovation because innovation begins with organizations that have begun to identify technology (Limaj & Bernroider, 2017), and these organizations have a constant interest in identifying new technologies to incorporate into operational processes and products (Davila et al., 2018). RACAP is an important stage that drives innovation through the application of new knowledge (Gunawan et al., 2017; Nazarpoori, 2017), and employee collaboration (Mennens, Gils, Odekerken-Schröder, & Letterie, 2018). In influencing innovation significantly, RACAP also requires control and stability in supporting these innovations (Albort-Morant et al., 2018).

H_3. *Realized absorptive capacity has a positive relationship with innovation.*

Cultural intelligence is a dynamic ability to ward off cultural differences that hinder knowledge exploration and transfer within organizations. The dimensions of this variable include metacognitive (knowledge and control of cognition, planning, monitoring, and revision of mental models); cognitive (knowledge structure, alertness, pattern recognition, and self-awareness); motivation (learning, efficacy, persistence, goals, enrichment, and values); and behavior (set of habits) (Ang et al., 2007; Gölgeci et al., 2016). In this study, the authors define the cultural intelligence variable as the ability of an organization to adapt to various cultures so that interactions between parts of the organization can run as it should. The dimensions of this variable are metacognitive intelligence, cognitive, motivation, and behavior. Cultural intelligence has a significant direct influence on innovation (Yuwono et al., 2020). Because this variable functions to adjust the culture in the organization to help accelerate the innovation process. Cultural intelligence is developed and practiced by individuals and collected at the company level through structural behavior and means in response to external demands so that in the current era of globalization, its role will greatly help in increasing the interaction and interdependence between culturally different social and political entities (Ang et al., 2007).

H_4. *Cultural intelligence has a positive relationship with innovation.*

The conceptual framework created is shown in the image below:

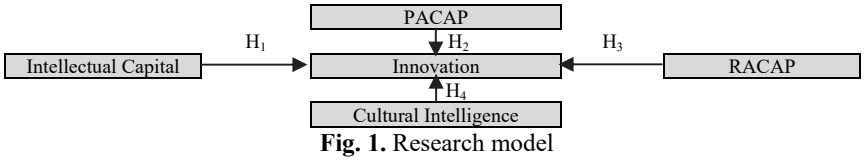

Fig. 1. Research model

3. Method

This research is quantitative research with a descriptive analysis approach to describe, provide a factual and accurate picture of the practice of implementing innovation in the tourism sector in Batam City using survey techniques. The dependent variable in this study is innovation with the dimensions of marketing innovation, product innovation, process innovation, and organizational innovation (Cassol et al., 2016), while the independent variables include intellectual capital variables with dimensions of human capital, social capital, and structural capital (Costa et al., 2014; Engelman et al., 2017), PACAP variables with dimensions of acquisition and assimilation, RACAP variables with dimensions of transformation and exploitation (Engelman et al., 2017), cultural intelligence variables with dimensions of metacognitive intelligence, cognitive, motivation and behavior (Ang et al., 2007; Gölgeci et al., 2016). Respondents in this study were all company managers who are members of the Association of The Indonesian Tours and Travel Agencies in Batam City, totaling 54 companies that are still active, and those that have been operating for more than three years. The data collection technique was done by distributing questionnaires which consisted of 59 statement indicators referring to the research above, then measured using a Likert scale

of 1-5 (strongly disagree-strongly agree). The analysis technique and hypothesis testing used partial least square (PLS) with the SmartPLS version 3.0 software (Ghozali & Latan, 2013).

4. Findings, Discussion, and Managerial Implications

Based on the results of data collection through distributing questionnaires to company managers who are members of the Association of The Indonesian Tours and Travel Agencies in Batam City, amounting to 70, there were 54 questionnaires returned. The descriptive statistics below describe the characteristics of the respondents as follows:

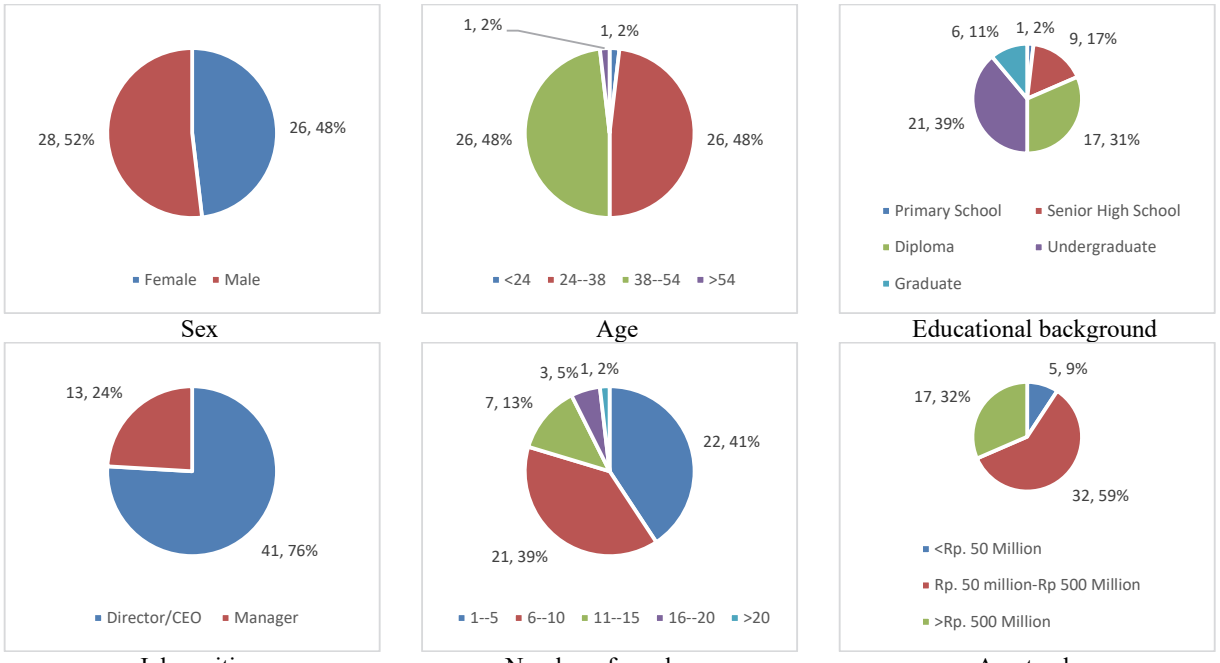

Fig. 2. Characteristics of the participants

Based on the data above, when viewed from the company's assets and turnover, it can be concluded that the majority of respondents are SMEs with a relatively small number of workers. We measur the outer model through convergent validity testing with reflexive indicators with the SmartPLS 3.0 program. The criteria for the factor loading value is more than 0.7 (if it does not meet the criteria, it will be removed from the calculation) and the Average Variance Extracted (AVE) is above 5.0 (Ghozali & Latan, 2013). The results of the outer model of validity testing are given in Table 1.

Table 1
Validity test

Variable	Factor loading	Result	Variable	Factor loading	Result	Variable	Factor loading	Result
Innovation			PACAP			Cultural Intelligence		
MRI1	0.898	Valid	ACQ2	0.758	Valid	MET1	0.831	Valid
MRI2	0.812	Valid	ASS1	0.829	Valid	MET2	0.881	Valid
PRD1	0.797	Valid	ASS2	0.808	Valid	MET3	0.895	Valid
PRD2	0.863	Valid	ASS3	0.915	Valid	COG1	0.818	Valid
PRD3	0.719	Valid	ASS4	0.759	Valid	COG2	0.893	Valid
PROC1	0.903	Valid	RACAP			COG3	0.87	Valid
PROC2	0.882	Valid	TRF1	0.779	Valid	COG4	0.904	Valid
PROC3	0.843	Valid	TRF2	0.774	Valid	MOT1	0.881	Valid
ORI1	0.868	Valid	TRF3	0.733	Valid	MOT2	0.885	Valid
ORI2	0.806	Valid	TRF4	0.872	Valid	MOT3	0.854	Valid
ORI3	0.875	Valid	EXP1	0.724	Valid	BEH1	0.796	Valid
Intellectual Capital			EXP2	0.816	Valid	BEH2	0.882	Valid
HUC1	0.704	Valid	EXP2	0.852	Valid	BEH3	0.744	Valid
HUC2	0.727	Valid						
SOC1	0.765	Valid						
SOC2	0.781	Valid						
STC1	0.787	Valid						
STC7	0.791	Valid						
STC8	0.763	Valid						
STC11	0.764	Valid						

Source: Primary Data Processed, 2020

Testing the outer model is also carried out by means of reliability testing. Reliability is used to test the reliability of a construct to prove the accuracy, consistency, and accuracy of the instrument in construct measurement. Through the SmartPLS 3.0 program, measuring reliability is done in two ways, namely by Cronbach's alpha and composite reliability. The value of Cronbach's alpha and composite reliability must be more than 0.7 to meet the reliability requirements (Ghozali & Latan, 2013). The calculation results can be seen in Table 3 as follows,

Table 2
Test of Convergent Validity by AVE

Variable	*Average Variable Extracted (AVE)*	Result
Innovation	0.713	Valid
Intellectual	0.735	Valid
PACAP	0.666	Valid
RACAP	0.631	Valid
Cultural Intelligence	0.735	Valid

Source: Primary Data Processed, 2020

Table 3
Reliability Test

Variable	*Cronbach's Alpha*	*Composite Reliability*	Result
Innovation	0.959	0.965	Reliable
Intellectual Capital	0.896	0.917	Reliable
PACAP	0.874	0.908	Reliable
RACAP	0.902	0.923	Reliable
Cultural Intelligence	0.970	0.973	Reliable

Source: Primary Data Processed, 2020

The intellectual capital variable does not have a significant effect on innovation. The effect of intellectual capital on innovation is positive but not significant, which means that the greater the value of intellectual capital has no significant effect on increasing the value of innovation. In the tourism sector in Batam actually, the majority of respondents have a bachelor's degree or diploma education who have sufficient basic knowledge in the tourism sector, but because the majority of companies only have limited human resources, namely 1-5 people (40%) and 6-10 (38%) per company, the organizational structure and employee rewards on an ongoing basis are not optimal. For several reasons, companies employ few employees such as business efficiency, which makes it possible to have multiple jobs or over-job descriptions of each employee. Intellectual capital, which consists of human capital, social capital, and structural capital, which is owned by the company, is ultimately unable to develop adequate skills in encouraging innovation. Fig. 3 and Table 4 show the results of our survey.

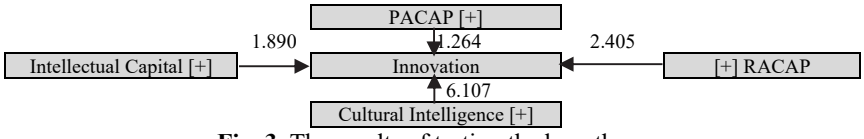

Fig. 3. The results of testing the hypotheses

Table 4
Hypothesis Test

Hypothesis	Description	T-Statistic	P-Value	Conclusion
1	Intellectual capital has a significant positive effect on innovation	1.890	0.059	Rejected
2	PACAP has a significant positive effect on innovation.	1.264	0.207	Rejected
3	RACAP has a significant positive effect on innovation.	2.405	0.017	Accepted
4	Cultural Intelligence has a significant positive effect on innovation	6.107	0.000	Accepted

Source: Primary Data Processed, 2020.

The organizational structure determines the drive for corporate innovation (Kalkan et al., 2014). The condition will prevent the company from specifically identifying improvements for innovation. The results of the study are in line with research by Santoso et al. (2017), which concluded that there is a lack of direct contribution from intellectual capital to company innovation. The PACAP variable does not have a significant effect on innovation. These results contradict studies (Albort-Morant, Leal-Rodríguez, & Marchi, 2018; Davila et al., 2018; Gölgeci et al., 2016; Limaj & Bernroider, 2017; Nazarpoori, 2017), but supports the research of Leal-Rodríguez et al. (2014). PACAP does not affect innovation due to organizational limitations in choosing creative external knowledge to be implemented directly into useful innovations in the company. When viewed from the research data, PACAP is less strong because of its average value. The lowest PACAP rate among other research variables indicates that the company lacks filling and is less able to choose creative knowledge. Low PACAP scores reduce the ability to absorb new knowledge results and combine it with previous knowledge in driving innovation. The RACAP variable has a direct effect on the innovation variable. The influence of RACAP on innovation is positive and significant, which means that the greater the value of RACAP, the greater the value of innovation. The results of this study support the research of Davila et al. (2018); Gölgeci et al. (2016); Gunawan et al. (2017); Limaj & Bernroider (2017). RACAP influences innovation because the digestion process of RACAP can directly be converted into innovations that will be carried out. Also besides, companies that are members of the Association of The Indonesian Tours and Travel Agencies Batam have succeeded in developing old knowledge and new knowledge so that they often produce innovative products such as attractive tour packages that allow the company to continue to grow and develop. The cultural intelligence variable has a significant positive effect on innovation. Batam is a city in Indonesia that consists of various ethnicities (Saefuloh, 2011). This condition gives rise to different habitual tendencies, for example, the use of foreign languages, expressions, accent, interaction with various cultures of the community both from Indonesia and abroad, consumption of foreign products, and other activities in the economic and socio-cultural fields (Dedees, 2016) Likewise in the world of work in the tourism sector where the elements of the cultural intelligence variable have been implemented well to increase interaction in encouraging the innovation process in the tourism sector. The results of this study support the research of (Yuwono et al., 2020). The managerial implementation

of the results of this study is that companies always pay attention to the aspects of strengthening intellectual capital between determining the organizational structure and relationships with the most optimal stakeholders in identifying innovation improvements. In addition, it is also recommended to have a strategy for searching and developing specific talent for employees in accordance with the company's strategy, providing innovation incentives, and determining the right job descriptions, especially a division that deals with aspects of company innovation.

5. Conclusion and scope for future research

Based on the results of data analysis and discussion, it can be concluded that 1) H_1 is rejected, intellectual capital has no effevt on innovation; 2) H_2 is rejected, PACAP has no influence on innovation; 3) H_3 accepted, RACAP has a significant positive effect on innovation, and 4) H_4 accepted, that Cultural Intelligence has a significant positive effect on innovation. Future research is recommended to also consider various aspects, for example, the company's financial aspects, because innovation development requires financial support. Besides, the role of the government in supporting company innovation also needs to be used as a study material considering that the local government is also responsible for innovation, especially destinations in the tourism sector (Yuwono, 2018).

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Appendix

The questionnaire used for the proposed study of this paper.

Code	Statement Questionnaire	1	2	3	4	5
	Innovation (Cassol et al., 2016)					
	Marketing Innovation					
MRI1	The company uses partner firms', financial and technological human resources to develop its portfolio of innovative projects.					
MRI2	The company monitors social networks and uses formal and informal social networks, such as blogs, discussion forums, Twitter, Facebook, Orkut and other media to monitor and evaluate the impact of launching its innovations					
	Product Innovation					
PRD1	The company develops new products.					
PRD2	The company develops improvements to existing products.					
PRD3	The company has created or improved products using employees, customers or suppliers' ideas.					
	Process Innovation					
PROC1	The company develops new production methods.					
PROC2	The company is improving its current production methods.					
PROC3	The company seeks to apply new technologies in its production systems.					
	Organizational Innovation					
ORI1	The company develops strategic competencies for innovation aiming for sustainability of its business and future competitive advantage.					
ORI2	The company promotes an innovation-oriented organizational culture.					
ORI3	The company encourages employees to take initiative and behave innovatively in all of its different units/ areas/departments					
	Intellectual Capital					
	Human capital (Engelman et al., 2017)					
HUC1	Our employees are highly skilled.					
HUC2	Our employees are widely considered the best in our industry.					
HUC3	Our employees are creative and bright.					
HUC4	Our employees are experts in their particular jobs and functions.					
HUC5	Our employees develop new ideas and knowledge.					

	Social capital (Engelman et al., 2017)
SOC1	Our employees are skilled at collaborating with each other to diagnose and solve problems.
SOC2	Our employees share information and learn from one another.
SOC3	Our employees interact and exchange ideas with people from different areas of the company.
SOC4	Our employees apply knowledge from one area of the company to problems and opportunities that arise in another.
	Structural capital (Costa et al., 2014)
STC1	There is a new product ideas scheme in place, and employees are encouraged to participate (for instance through economic incentives)
STC2	Entrepreneurs and innovative project leaders are encouraged and rewarded, with no punishment for failures
STC3	Employees have autonomy and resources to develop their creativity through informal and parallel projects
STC4	The characteristics of project teams are a very important feature of the product innovation process
STC5	There is a plan to identify/acquire the skills that are necessary to achieve product innovation goals
STC6	Top management provides clear support, autonomy and authority to the people involved in product innovation projects
STC7	Innovation metrics represent an explicit and important part of top management's performance evaluation
STC8	Top management is strongly committed to the product innovation process
STC9	There is a system to manage NPD projects
STC10	The role of innovation in achieving the firm's strategic goals is clearly defined
STC11	There is a well-organized NPD process
STC12	The areas of strategic focus on which to concentrate the product innovation efforts are clearly identified
	PACAP (Engelman et al., 2017)
	Acquisition
ACQ1	The search for relevant information concerning our industry is every-day business in our company.
ACQ2	Our management motivates the employees to use information sources within our industry.
ACQ3	Our management expects that the employees deal with information beyond our industry.
	Assimilation
ASS1	In our company ideas and concepts are communicated cross-departmental.
ASS2	Our management emphasizes cross-departmental support to solve problems.
ASS3	In our company there is a quick information flow.
ASS4	Our management demands periodical cross-departmental meetings to interchange new developments, problems, and achievements.
	RACAP (Engelman et al., 2017)
	Transformation
TRF1	Our employees have the ability to structure and to use collected knowledge.
TRF2	Our employees are used to absorb new knowledge as well as to prepare it for further purposes and to make it available.
TRF3	Our employees successfully link existing knowledge with new insights.
TRF4	Our employees are able to apply new knowledge in their practical work.
	Exploitation
EXP1	Our management supports the development of prototypes.
EXP2	Our company regularly reconsiders technologies and adapts them according to new knowledge.
EXP3	Our company has the ability to work more effectively by adopting new technologies.
	Cultural Intelligence (Ang et al., 2007; Gölgeci et al., 2016)
	Metacognitive Intelligence
MET1	I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.
MET2	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me
MET3	I am conscious of the cultural knowledge I apply to cross-cultural interactions.
	Cognitive Intelligence
COG1	I know the legal and economic systems of other cultures.
COG2	I know the rules (e.g. vocabulary, grammar) of other languages.
COG3	I know the cultural values and religious beliefs of other cultures.
COG4	I know the rules for expressing nonverbal behaviors in other cultures.
	Motivational Intelligence
MOT1	I am confident that I can socialize with locals in a culture that is unfamiliar to me.
MOT2	I am sure I can deal with the stresses of adjusting to a culture that is new to me.
MOT3	I am confident that I can get accustomed to the shopping conditions in a different culture.
	Behavioral Intelligence
BEH1	I change my verbal behavior (e.g. accent, tone) when a cross-cultural interaction requires it.
BEH2	I vary the rate of my speaking when a cross-cultural situation requires it.
BEH3	I alter my facial expressions when a cross-cultural interaction requires it