

The Mediation Role Of Innovativeness Between Knowledge Acquisition And Performance: An Insight From Algeria

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Abstract

The fundamental purpose of gathering knowledge from foreign partners is to enhance the performance of international joint ventures. This research aims to investigate, with reference to the KBV theory, the mediating influence of IJV innovation on the knowledge acquisition-performance connection. Using data from 122 oil and gas IJVs in Algeria, we examine the role of IJV innovation as a mediator between knowledge acquisition and IJV performance. The investigation revealed that the innovativeness of IJVs influences the connection between knowledge acquisition and performance. The findings contribute to the understanding of the performance of IJVs by illustrating how knowledge acquisition can be used to increase the innovativeness of IJVs and, consequently, improve their performance. Our study adds both conceptually and empirically to the corpus of knowledge.

Keywords: knowledge acquisition, innovativeness, performance, international joint ventures, Algeria

Introduction

Knowledge acquisition is the process through which an IJV increases its technical and managerial abilities via its capacity for learning and absorption (Park, Giroud, A., Mirza, H., & Whitelock, J., 2008). These characteristics greatly aid the IJV in developing and improving its competitive advantages, enabling it to compete with other IJVs and subsidiaries for profitability, growth, market position, and productivity (Lyles & Salk, 1996). Therefore, knowledge acquisition is vital for the survival and success of an IJV (e.g., Beamish & Lupton, 2009; Lane, Salk, & Lyles, 2001; Lyles & Salk, 1996). Nonetheless, the changing environment of expanding marketplaces makes learned information outdated before it is fully applied (Zhang, Wu, and Chen, 2018). Occasionally, this way of acquiring information is ineffective owing to misconceptions and impediments that produce dissatisfaction and hinder the proper functioning of IJVs (Inkpen & Crossan, 1995). Numerous prior studies have shown a strong relationship between information acquisition and IJV performance (Li & Lee, 2015), significantly underestimating the challenge of turning parental knowledge into IJV performance (Zhan & Chen, 2013). In addition, empirical data is equivocal and accumulating evidence suggests that knowledge transfer may not inevitably improve IJV performance (e.g. Dhanaraj, Lyles, Steensma, & Tihanyi, 2004; Easterby-Smith, Lyles, & Tsang, 2008; Steensma et al., 2005).

From the standpoint of Zhang, Wu, and Chen (2018), the tenuous relationship between knowledge acquisition and performance may be viewed; acquiring knowledge transfer benefits in developing nations is hindered by at least two substantial obstacles. First, the information provided by the foreign partner to the IJV's subsidiaries does not have to be equally advantageous to all subsidiaries; it can be shared with the partner from the host nation. Second, the uncertain environment in emerging countries swiftly destroys gained knowledge, even before it can be fully exploited. These two aspects reduce the effectiveness of information transmission and learning in IJVs. Therefore, it is essential to have a thorough understanding of both the underlying process by which an IJV may exploit the benefits of knowledge acquisition and its operational features. Without a solid understanding of this, IJVs will struggle to properly use the transferred experience of their foreign partners.

This study presents, on the basis of knowledge-based theory, a mediation model in which the innovativeness of an IJV helps with the transition of knowledge acquisition advantages into enhanced IJV performance in growing markets. Innovativeness is the creation or acceptance, assimilation, and exploitation of a novel economic or social concept; the renewal and extension of commodities, services, and markets; the development of new industrial methods; and the adoption of new management systems (Rousseau, Mathias, Madden, & Crook, 2016). Innovation refers to the conception, acceptance, and application of novel concepts, procedures, or products (Calantone, Cavusgil, & Zhao, 2002). In this view, innovativeness is an organizational concept that includes both a capacity component and a culture component (i.e., acceptance of novel ideas and procedures) (i.e., the capability to generate and implement new ideas). A capability component indicates an organization's capacity to incorporate outside-obtained information (Cavusgil, Calantone, & Zhao, 2003). Therefore, innovativeness may motivate businesses to offer valuable, scarce, distinctive, and distinctive products with added and distinct sources of value relative to competing companies (Schilke, 2014), thereby assisting businesses in entering new markets, expanding market share, and enhancing competitive advantage and performance. Matsuo (2006) argued that innovation improves performance because it can be viewed as an organizational culture or environment that motivates individuals to develop distinctive products and services. By looking at how innovative IJVs are, this study hopes to shed new light on the role of innovation in getting the most out of the performance effects of gaining knowledge.

This paper examines the influence of IJV innovation as a mediator between knowledge acquisition and IJV performance. The performance of IJVs is measured by profits, sales growth, and market share. Without innovation, IJVs may not be able to increase their performance. Consequently, knowledge acquisition and creativity can better explain the performance of IJVs. This article adds to our understanding in the following ways: This study: a) adds to the debate about the role of innovativeness in the relationship between knowledge acquisition and performance in Algeria, where there aren't many studies on the topic; b) helps academics and practitioners get a better idea of how innovativeness affects the relationship between IJVs' knowledge acquisition and their performance; and c) gives more information about how innovativeness spreads.

Literature review and hypotheses

2.1. IJV's Knowledge Acquisition

The knowledge-based viewpoints place special emphasis on the value of knowledge for a company's ability to compete and perform better (Grant, 1996). Knowledge acquisition often focuses on gaining vital and important data and technologies that might, among other things, help an organization increase its effectiveness and efficiency (Park, 2010). According to Appelbaum and Goransson (1997), the growth of organizational competence is the consequence of "reported changes in insights, knowledge, and linkages between past and future operations." The process of acquiring all the information, technology, and expertise that is available and that may be used to increase a business's efficiency and effectiveness is sometimes referred to as knowledge acquisition (Park, 2010). From this perspective, since gathering external information, which is more significant than knowledge created internally, leads to changes in organizational practices and an improvement in overall performance (Phan and Peridis, 2000).

Since this study is being carried out as a component of an international joint venture, information is acquired when the IJV obtains methodology and expertise from its foreign parent business. This recently obtained information helps the acquired business align its operations with those of the parent firm, which enhances the acquired business's services, products, and performance (Anh, 2013). The IJV's organizational effectiveness is increased by the ability to make improvements thanks to the expertise acquired from international partners. So, knowledge acquisition in joint ventures can be defined as the knowledge that the new foreign partners learn, absorb, and use in the joint venture to copy the production processes and management strategies of the original economic organizations and reach similar learning goals (Nguyen & Aoyama, 2015; Sazali & Raduan, 2011).

Several studies have sought to investigate the connection between knowledge acquisition and IJV performance since, as was previously said, knowledge is viewed as the major source of an organization's better performance

(Grant, 1996). (e.g., Lyles and Salk, 1996). (For instance, Anh & Baughn, 2013, Dhanaraj, Lyles, Steensma, & Tihanyi, 2004, Lane, Salk, & Lyles, 2001, and Lyles & Salk, 1996). These investigations, however, came up empty-handed (Zhang, Wu, & Chen, 2018). According to Dhanaraj et al. (2004), tacit information transmission had no direct impact on IJV performance, but explicit knowledge transfer had a considerable impact, as well. research on organizational learning in the IJVs of Hungary. On the other hand, explicit information transfer has a detrimental influence on performance, according to Anh et al. (2006), who discovered that tacit knowledge transmission has a major impact on performance. According to Park et al.'s (2015) research, implicit knowledge transfer has no impact on performance, while explicit information transmission only influences the performance of mature IJVs. The transfer of tacit knowledge is a big part of the success of both new and long-running global joint ventures.

In this context, several research initiatives include different mediators between IJV knowledge acquisition and performance correlations, such as channel management capability (Zhang et al., 2018), relational capital and trust (Kwok, Sharma, Gaur, & Ueno, 2018), and subsidiaries' skills (Li & Lee, 2015). In this study, which is based on the KBV theory, we contend that the IJV will be able to innovate and compete with its rivals when it uses its learned knowledge effectively. This will ultimately lead to the IJV achieving higher performance. Based on what has been said, it is possible to conclude that getting the expertise of a foreign partner is a necessary but not enough condition for a joint venture to succeed.

We believe that many joint ventures (JVs) will be established during the year in developing markets like Algeria, where foreign investment is expanding quickly, and that the flow of knowledge and technology will continue to accelerate. Each business would thus have a distinct degree of knowledge. Using this example, the IJV that is better equipped to utilize its experience effectively may improve the creativity of its employees through the development of new goods, better services, and countless new management tactics. The increased knowledge also helps IJV develop the skills required to outperform competitors in the market and react more quickly to market demands and possibilities. People think that these traits will make it possible for the IJV to work better in the future.

IJV's Knowledge Acquisition and IJV's Performance: The Mediating Role of IJV's

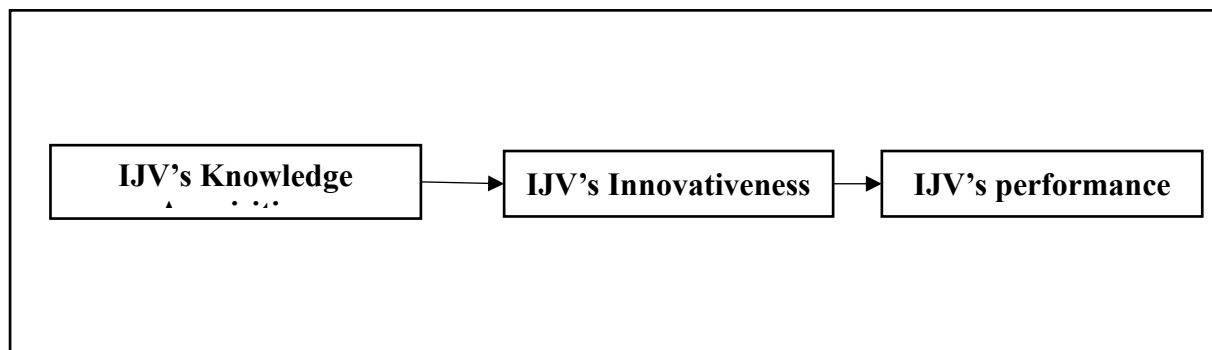
Organizational innovativeness, which is defined as a company's capacity and desire to adapt, is crucial to a business's survival and prosperity (Calantone et al., 2002). Innovativeness requires fostering an organizational culture that emphasizes innovation in every facet of business operations as opposed to only producing creative products (Groza, Zmich, & Rajabi, 2021). Innovativeness is defined as the capacity of a company to generate new concepts and solutions (Crawford & Di Benedetto, 2003). Crossan and Apaydin (2010) "advanced a broad typology for innovation and refined its definition as the creation, replication, exploitation, and integration of value-added novelty in economic and societal scopes; expansion and renewal of services, products, and marketplaces; expansion of new creation models; and formation of new management schemes. It is both a method and an outcome (p. 1155)." Leal Rodriguez, Leal Millán, and Roldán Salgueiro (2013) found that innovation is a crucial factor that leads to enhanced performance when combined with well-managed information. (Weber & Heidenreich, 2018) For businesses to successfully introduce new ideas, they need to work with other organizations to get access to their knowledge and skills.

According to earlier studies on the knowledge-based corporation (Grant, 1996; Nonaka & Takeuchi, 1995; Spender, 1996), a firm's competitive strength depends on its capacity to access information, generate knowledge, and develop its innovation skills. The fact that information is generated, combined, recombined, and used makes it a valuable asset for a corporation. A company's ability to grow and compete depends on its knowledge (Nasimi et al., 2013; Van Wijk, Jansen, & Lyles, 2008; X. Wang, 2013). The competence of the foreign partner is essential to the success and continuation of the IJV, claims knowledge-based theory (Beamish & Lupton, 2009). (Hung, Lien, Yang, Wu, Kuo, & Kuo, 2011; Jaguli, Malek, & Palil, 2014) Businesses in this field need to keep expanding and sharing worker knowledge to keep up with new products and technology.

Literature identifies knowledge acquisition as a valuable and necessary process that contributes to the development of innovation in organizations; innovativeness manifests as a culture or a company's ability to stay current; and product innovation capacity guides the best performance in the launch of new products. When these three components are properly integrated and interconnected, they have a favorable effect on the performance of a company. According to a study (Calantone et al., 2002; Hughes & Morgan, 2007), innovation has been recognized as a significant contributor to company performance. According to Schilke (2014), firm innovativeness is a requirement for success and survival and could prompt companies to offer valuable, uncommon, unique, and distinctive products with added and distinct sources of value compared to competitors, helping companies enter new markets, increase their market share, and improve their competitive advantage and performance (Gunday et al., 2011; Rhee et al., 2010).

Numerous studies on knowledge acquisition in various organizational contexts have shown that innovation can moderate the link between knowledge and performance. Data from 407 industrial companies registered on the Karachi Stock Exchange indicates that innovation partially mediates the association between knowledge management techniques and performance. A second study in the telecommunications and information technology sectors discovered that firm performance has an indirect impact on knowledge management (Alrubaiee, Alzubi, Hanandeh, & Al Ali, 2015). In the banking sector, the same outcome is confirmed (Nawab, Nazir, Zahid, & Fawad, 2015). Al-Sa'di, Abdallah, and Dahiyat (2017) used data from 207 manufacturing companies in the Jordanian city of Amman to explore the function of product and process innovations as mediators. They observed that the relationship between knowledge management and operational performance is strongly mediated solely by process innovation. To put it another way, there is enough empirical data to suggest that if an international joint venture acquires knowledge, innovation and the IJV's performance will probably improve. Consequently, the relationship between knowledge and performance may depend greatly on creativity.

H1: IJV's innovativeness has a mediation role on the relationship between IJV's Knowledge acquisition and IJV's performance.



Research context

Algeria was selected as the study's location as one of the African nations that, like the rest of the continent, has recently undergone economic transition (World Economic Forum, 2020). According to a 2019 report by the World Economic Forum, Algeria's competitiveness index indicator ranks relatively low among 89 of 137 countries. This number indicates both a lack of national and organizational competitiveness. Given that technology transfer through foreign direct investment is regarded as a form of transnational knowledge diffusion (Günther, 2005),

The local market is expected to benefit from MNC FDI by receiving much-needed capital and capabilities, such as cutting-edge technologies, tacit knowledge, materials, and production systems, as well as management and labor skills (Bodman & Le, 2013; Javorcik & Kaminski, 2008; Osabutey, Williams, & Debrah, 2014). Consequently, Algeria is drawing a growing amount of FDI. These foreign investments must result in the formation of an international joint venture with at least 51 percent ownership by a local partner or partners. (Investment Guide to Algeria, 2019). Our research concentrated on the oil and gas industry because it accounts

for 94% of export revenues (the Algerian Investment Guide, 2019). Typically, domestic oil companies provide acquired oilfields, internal financing, or equity funding to cover land use or clearance expenses, property use rights, and other minor possibilities, whereas foreign oil companies provide essential technical capabilities, technologies, equipment, machinery, and funds for operations (Kwok et al., 2018; Okonkwo, 2019). In addition to "profit and loss sharing" and "exposure to oilfields," "learning or knowledge gain" is a key objective of these IJVs (Okonkwo, 2019). Therefore, performing research on such a company is justifiable.

Data collection

The questionnaire for the study was offered in both English and French. This is because the target audience consists of IJVs in Algeria, where, despite the fact that many IJVs operate in English, the French language is commonly used in business. Consequently, the questionnaire was developed in English before being translated into French. The researchers then performed back-to-back translation to ensure that no errors or complications occurred during translation (Douglas & Craig, 2007; Ozolins, 2009). The questionnaire's draft version provides measures for all variables, including IJV knowledge acquisition, IJV innovativeness, and IJV performance. Additionally, there are questions about the respondents and information about the IJV.

We can go forward now that we have identified IJVs that have been around for at least three years. In 2016, there were 702 joint ventures for oil and gas. (CNRC, 2019). 326 surveys were completed using IJVs. This led to the collection of 126 questionnaires, four of which were left unfinished owing to a dearth of missing data, yielding a sample of 122 IJVs with a response rate of 37.42%. (122 out of 326). The survey approach has no influence on the results since a t-test on independent samples shows no difference in the mean scores for any of the study variables between these two groups (drop-collect vs online questionnaires).

We also examined non-response bias by comparing the outcomes of early and late respondents (Armstrong & Overton, 1977; Lambert & Harrington, 1990). There were no statistically significant differences between these two groups, showing that non-response bias was not present. Using variance inflation factors, this study also examines the effect of multicollinearity (VIFs). The data demonstrates multicollinearity with tolerance values ranging from 0.272 to 0.469 and variance impact factor values ranging from 2.131 to 3.672. Hair, Black, Babin, Anderson, and Tatham (2006) found that the effects of multicollinearity are within acceptable ranges. This shows that multicollinearity is not something to worry about.

The respondents to the surveys were familiar with the procedure of data collection. In the IJV, the period of the informant was classified into three categories: 1-3 years, 4-6 years, and 7 years or more. 20 (16.4%), 60 (49.2%), and 42 (34.4%) individuals were aged 1-3 years, 4-6 years, and 7 years and older, respectively. Notably, the majority of responders had between four and six years of IJV experience. The staff sizes of the participating IJVs ranged from 0 to 100 employees, 101 to 300 people, 301 to 1000 employees, and 1001 employees and above. The corresponding frequencies of the four alternatives are as follows: 10 (8.2%) out of 122; 29 (23.8%) out of 122; 59 (48.4%) out of 122; and 24 (19.7%) out of 122.

Measurement tool

Using the literature and outcomes from previous research, we created questionnaires to collect data for thorough hypothesis testing. The variables have been defined in previous research and were used in this study. However, in order to increase the application of the ideas used in the analysis of the underlying relationship, major changes were made to them (Table 1).

Measurement tool reliability

The items entered into the variable being measured are the initial step in establishing the reliability of the measuring equipment. There must be a loading of at least 0.70. 2016 (Hair et al.). Table 2's data show that (0.705), which equates to the minimum level, was the lowest loaded value on the relevant component. After that, Cronbach's alpha and composite reliability (CR) are used to assess dependability. As a consequence, as previously mentioned, Cronbach's alpha is and the allowable range for CR is (0.60-0.70). (0.70). 2016 (Hair et al.). The

findings in Table 3 show that each variable's CR and Cronbach's alpha values were much higher than the necessary minimum level, demonstrating the high degree of internal consistency of the measuring device.

Variable	Definition	Source
IJVs' Knowledge acquisition	the new foreign partners' knowledge that is acquired, absorbed, and applied by IJV to create the same management techniques and manufacture activities, and got equally to the original economic organizations	(Lin, 2007; Nguyen & Aoyama, 2015)
IJVs' Innovation		(C. L. Wang & Ahmed, 2004)
IJVs' performance	an indicator that measures how well an organization accomplishes its objectives	(Tsang, Nguyen, & Erramilli, 2004)

Table 1. Operational definitions

Items	Alpha	Loading	CR	AVE	R Square (R ²)	Alpha
IJV Knowledge Acquisition (KWA)	0.910		0.929	0.653	-	0.910
KWA1		0.799				
KWA2		0.851				
KWA3		0.872				
KWA4		0.846				
KWA5		0.784				
KWA6		0.753				
KWA7		0.741				
IJV Innovativeness (INNO)	0.852		0.890	0.575	0.435	0.218
INNO1		0.727				
INNO 2		0.728				
INNO 3		0.832				
INNO 4		0.791				
INNO 5		0.738				
INNO 6		0.728				
IJV's Performance	0.936		0.945	0.588	0.505	-
PERF1		0.705				
PERF2		0.724				
PERF3		0.817				
PERF4		0.833				
PERF5		0.786				
PERF6		0.816				
PERF7		0.727				
PERF8		0.727				
PERF9		0.721				
PERF10		0.783				
PERF11		0.799				
PERF12		0.789				

Table 2. Measurement reliability test

Measurement tool validity

Discriminant validity and convergent validity tests are used to evaluate the measuring instrument's validity. The extracted average variance was used to assess convergence validity (AVE). The acceptable AVE value must be at least 0.50. (Hair et al., 2016). The findings in Table 2 show that the AVE values were higher than the allowed minimum limit. Their square root must be much greater than their maximum correlation coefficient with any other variable in order to assess the discriminant validity of AVE values (Hair et al., 2016).

According to Table 3, the values of the square root of AVE (on the diagonal line) exceeded the correlation coefficient of this variable with every other variable. These results suggest that the measuring tool has a good level of convergent and discriminant validity.

	INNO	PERF	KWA
INNO	0.758		
PERF	0.663	0.767	
KWA	0.660	0.630	0.808

Table 3. Square root of AVE and correlation coefficients.

Mediation

Clearly, the bootstrapping approach, which was developed by Preacher and Hayes, is the most current method for mediation analysis (2004, 2008). A non-parametric resampling test is bootstrapping. According to Hair Jr, Hult, Ringle, and Sarstedt (2016) and Pardo & Román (2013), the method's main advantage is that it does not rely on the assumption of normality, which makes it appropriate for smaller sample sizes. Bootstrapping will be used twice in this technique: once without involving the mediator (direct connection) and once with mediation in place. If the initial bootstrapping result (the direct path without mediation) is found to be non-significant, there is no mediating influence (Hair Jr, Hult, Ringle, & Sarstedt, 2016; Wong, 2016). The following phase should add the mediating variable and repeat the bootstrapping process if the direct route is significant. There is no mediation if the results of bootstrapping show that the indirect path is insignificant. However, if the results show that the indirect path is significant, the variance accounted for (VAF) should be calculated. When determining VAF, a value of more than 80% denotes full mediation, a value of between 20% and 80% denotes partial mediation, and a value of 20% or less denotes no mediation.

In order to do this, bootstrapping was used using the route model from Table 4 to explore the direct relationship between knowledge acquisition and performance without the need for a mediator. The statistics indicate that the direct route is statistically significant. Therefore, it is important that the innovativeness of IJV be considered as a mediator. In order to confirm that the innovativeness of IJVs serves as a mediator between knowledge and IJV performance, the next step is to evaluate the importance of direct and indirect routes. Tables 6 and 7 show that the innovativeness of IJV acts as a mediator between the indirect effect of knowledge on IJV's performance (B = 0.289, T = 3.772, p = 0.000) and the direct effect of knowledge on IJV's performance (B = 0.289, T = 3.772, p = 0.000).

It is critical to ascertain the mediation's strength. As suggested by Hair et al., the degree of mediation is measured using variance accounted for (VAF) (2016). The formula for calculating VAF is as follows:

Where a = is coefficient value between independent variable and mediating variable,
b= is coefficient value between mediating variable and dependent variable,
c= is coefficient value between independent variable and dependent variable.

Therefore, the calculation of VAF is as follows:

Assessing VAF for IJV's innovativeness mediation (information from table 5)

$$VAF = \frac{0.660 * 0.438}{0.660 * 0.438 + 0.341}$$

$$VAF = 0.459$$

From the proposition of Hair et al., (2016), VAF with 45.9% is considered as partial mediation.

Direct Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
KWA -> PERF	0.632	0.646	0.064	9.855	0.000

Table 4. Path Coefficient Direct Relationship of Knowledge Acquisition and IJVs' performance without Mediation

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
INNO -> PERF	0.438	0.440	0.102	4.288	0.000
KWA -> INNO	0.660	0.665	0.063	10.547	0.000
KWA -> PERF	0.341	0.343	0.102	3.351	0.001

Table 5. Path Coefficient Direct Relationship with Involving IJVs' Innovativeness Mediation

Procedure	Path	Path Coef.	Indirect Effect	STDEV	Total Effect	VAF	t value	p Values	Results
Step 1: Direct effect (without mediator)	KWA --> PERF	0.632	n/a	n/a	n/a	n/a	9.855	0.0000	Partial Mediation
Step 2: Indirect Effect (with mediator)	KWA --> PERF	0.341	0.289	0.077	0.630	0.459	3.772	0.0000	
	KWA --> INNO	0.660							
	INNO --> PERF	0.438							

Table 6 Summary of Mediation Analysis in PLS-SEM

Results

The outcome of the structural model test is shown in Table 7. The path coefficients' significance and relevance has been assessed. The mediating variable was used to quantify the independent factors' indirect effect on the dependent variable.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
KWA -> INNO -> PERF	0.289	0.293	0.077	3.772	0.000

Table 7. Hypotheses testing results

Discussion and Conclusion

Companies use IJV formation to enhance their performance and prosperity. Despite this, a significant number of IJVs fall short of their objectives, either partially or entirely, due to a lack of the necessary components. In order to bridge existing practical and theoretical gaps, this study examined the role of IJV innovativeness as a mediator in the relationship between knowledge acquisition and IJV performance. This study was able to look at how the role of IJVs' innovativeness as a mediator affected the relationship between IJVs' knowledge acquisition and their performance.

To achieve the purpose of the study, 122 managers from IJVs in the Algerian oil and gas sector were surveyed. The results indicate that innovation in IJVs plays a substantial role as a mediator in the relationship between knowledge acquisition and IJV performance, with partial mediation. Previous research has demonstrated that innovativeness is a mediator between knowledge transfer acquisition and performance (e.g., Durmuş-Ozdemir & Abdulkhoshimov, 2018; Jiménez-Jiménez & Sanz-Valle, 2011; Nawaz et al., 2014; Slavkovi & Babi, 2013; Urgal, Quintás, & Arévalo-Tomé, 2013).

Moreover, the mediating effects are significant additions to this study; the questions of why and how the mediation of IJV's innovativeness occurs can be answered not only by analyzing previous studies but also by providing theoretical explanations. Consequently, significant ideas such as the knowledge-based view theory (KBV) have provided theoretical foundations for new results; KBV argues that knowledge is the primary source of a company's ability to innovate, resulting in improved firm performance (Grant, 1996; Nonaka & Takeuchi, 1995; Spender, 1996). So, the results of this study agree with the KBV and previous research. It was found that the dependent variable of IJV's innovativeness has a big effect on IJV's performance through IJV's knowledge acquisition.

In addition to their theoretical and empirical contributions, this study's findings have significant practical implications for organizations, policymakers, stakeholders, and managers. Additionally, this research can lead to a number of new research avenues. In the end, this study adds to the growing amount of information about IJV knowledge acquisition, especially by looking at its causes and effects in the Algerian oil and gas industry.

Limitations and Future Research Directions

Our study, like other scientific studies, has significant limitations that provide an opportunity for additional investigation. This study's objective was to investigate the function of IJVs' innovativeness as a mediator between knowledge acquisition and performance. It is advised that future studies consider other factors that might reinforce this relationship. In addition, longitudinal research should be conducted to disclose more outcomes. Knowledge management approaches have been shown to influence knowledge acquisition (Elhachemi, 2020), innovation (Darroch & McNaughton, 2002; Jafari & Ramalingam, 2014), and performance in prior research (Ahmed, Fiaz, & Shoab, 2015; Gholami, Asli, Nazari-Shirkouhi, & Noruzi, 2013; Jayasingam, Ansari, Ramayah, & Jantan, 2013). Management's commitment to the firm in terms of defining policies, objectives, and organizational learning, as well as evaluating employee performance, is referred to as knowledge management techniques (Evangelista, 2009). Therefore, we suggest that future studies investigate how knowledge management approaches affect the relationship between knowledge acquisition, innovation, and performance. Additionally, it serves as a connection between knowledge and performance.

The COVID-19 pandemic is now a problem because it has messed up the economy, society, and population of the whole world. In a similar way, it is hard to say how the pandemic will affect science, technology, and innovation in the long run. In this situation, it is important to think about a number of possible trends, which often go against each other, about how the pandemic might affect science, technology, and new ideas. Some of these trends are general investment, digital infrastructure, openness and inclusion, and working together with other countries. The World Health Organization (WHO) says that the COVID-19 pandemic and its effects on economic activity may have long-term effects on research, technology, and new ideas. It can also change the goals, plans, and actions of the government in the fields of innovation, technology, and science. Science, technology, and innovation (STI) affect many different groups, such as businesses, research institutions, universities, and the current and future STI workforce (STI). These factors will determine the speed and direction of future innovation, as well as how it affects people's lives and the way the global market works. So, future research should focus mostly on how

environmental uncertainty affects the learning of new technical skills and how it affects the performance of organizations.

References

- Ahmed, S., Fiaz, M., & Shoaib, M. (2015). Impact of knowledge management practices on organizational performance: an empirical study of banking sector in Pakistan. *FWU Journal of Social Sciences*, 9(2), 147-167.
- Al-Sa'di, A. F., Abdallah, A. B., & Dahiyat, S. E. (2017). The mediating role of product and process innovations on the relationship between knowledge management and operational performance in manufacturing companies in Jordan. *Business Process Management Journal*, 23(2), 349-376.
- Alrubaiee, L., Alzubi, H. M., Hanandeh, R. E., & Al Ali, R. (2015). Investigating the relationship between knowledge management processes and organizational performance the mediating effect of organizational innovation. *International Review of Management and business research*, 4(4 Part 1), 989.
- Anh, C. P. T. T., & Baughn, C. (2013). Antecedents and consequence of International Joint Venture Learning: the case of Vietnam.
- Bodman, P., & Le, T. (2013). Assessing the roles that absorptive capacity and economic distance play in the foreign direct investment-productivity growth nexus. *Applied Economics*, 45(8), 1027-1039.
- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial marketing management*, 31(6), 515-524.
- Cavusgil, S. T., Calantone, R. J., & Zhao, Y. (2003). Tacit knowledge transfer and firm innovation capability. *Journal of business & industrial marketing*.
- Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of management studies*, 47(6), 1154-1191.
- Darroch, J., & McNaughton, R. (2002). Examining the link between knowledge management practices and types of innovation. *Journal of intellectual capital*.
- Dhanaraj, C., Lyles, M. A., Steensma, H. K., & Tihanyi, L. (2004). Managing tacit and explicit knowledge transfer in IJVs: the role of relational embeddedness and the impact on performance. *Journal of international business studies*, 35(5), 428-442.
- Durmuş-Özdemir, E., & Abdukhoshimov, K. (2018). Exploring the mediating role of innovation in the effect of the knowledge management process on performance. *Technology Analysis & Strategic Management*, 30(5), 596-608.
- Elhachemi, T. (2020). The influence of knowledge management practice on knowledge acquisition: conceptual paper proposition. *Journal of Global Business and Social Entrepreneurship (GBSE)*, 6(17).
- Evangelista, F. (2009). Organizational context and knowledge acquisition in IJVs: An empirical study. *Journal of World Business*, 44(1), 63-73.
- Gholami, M. H., Asli, M. N., Nazari-Shirkouhi, S., & Noruzy, A. (2013). Investigating the influence of knowledge management practices on organizational performance: an empirical study. *Acta Polytechnica Hungarica*, 10(2), 205-216.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic management journal*, 17(S2), 109-122.
- Groza, M. D., Zmich, L. J., & Rajabi, R. (2021). Organizational innovativeness and firm performance: Does sales management matter? *Industrial marketing management*, 97, 10-20.
- Günther, J. (2005). The absence of technology spillovers from foreign direct investment in transition economies *Structural Change and Exchange Rate Dynamics* (pp. 149-166): Springer.
- Hung, R. Y. Y., Lien, B. Y.-H., Yang, B., Wu, C.-M., & Kuo, Y.-M. (2011). Impact of TQM and organizational learning on innovation performance in the high-tech industry. *International Business Review*, 20(2), 213-225.
- Jafari, S. M., & Ramalingam, M. S. a. T. (2014). The effect of knowledge management practices on employees' innovative performance. Paper presented at the 2nd International Conference on Innovation and Entrepreneurship.
- Jaguli, A. R., Malek, M. M., & Palil, M. R. (2014). Do MNCS'high quality and standard requirements matter? A channel for vertical spillovers. *International Journal of Business and Society*, 15(1), 127.
- Javorcik, B. S., & Kaminski, B. (2008). How to Attract FDI and Maximize Its Benefits. *Competitiveness of New Europe*, 74-96.
- Jayasingam, S., Ansari, M. A., Ramayah, T., & Jantan, M. (2013). Knowledge management practices and performance: are they truly linked? *Knowledge Management Research & Practice*, 11(3), 255-264.
- Jiménez-Jiménez, D., & Sanz-Valle, R. (2011). Innovation, organizational learning, and performance. *Journal of Business Research*, 64(4), 408-417.
- Kwok, F., Sharma, P., Gaur, S. S., & Ueno, A. (2018). Interactive effects of information exchange, relationship capital and environmental uncertainty on international joint venture (IJV) performance: An emerging markets perspective. *International Business Review*.

- Lane, P. J., Salk, J. E., & Lyles, M. A. (2001). Absorptive capacity, learning, and performance in international joint ventures. *Strategic management journal*, 22(12), 1139-1161.
- Leal Rodríguez, A. L., Leal Millán, A., & Roldán Salgueiro, J. L. (2013). Knowledge management and the effectiveness of innovation outcomes: The role of cultural barriers.
- Li, J., & Lee, R. P. (2015). Can knowledge transfer within MNCs hurt subsidiary performance? The role of subsidiary entrepreneurial culture and capabilities. *Journal of World Business*, 50(4), 663-673.
- Lin, W. B. (2007). Factors affecting the correlation between interactive mechanism of strategic alliance and technological knowledge transfer performance. *The Journal of High Technology Management Research*, 17(2), 139-155.
- Lyles, M. A., & Salk, J. E. (1996). Knowledge acquisition from foreign parents in international joint ventures: An empirical examination in the Hungarian context. *Journal of international business studies*, 27(5), 877-903.
- Matsuo, M. (2006). Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research*, 59(2), 242-250.
- Nasimi, M. H., Nasimi, S., Kasmaei, M. S., Kasmaei, H. S., Basirian, F., & Musapour, H. (2013). Knowledge management and competitive advantage for organizations. *Kuwait Chapter of the Arabian Journal of Business and Management Review*, 2(5), 56.
- Nawab, S., Nazir, T., Zahid, M. M., & Fawad, S. M. (2015). Knowledge management, innovation and organizational performance. *International Journal of Knowledge Engineering-IACSIT*, 1(1), 43-48.
- Nawaz, M. S., Hassan, M., & Shaukat, S. (2014). Impact of knowledge management practices on firm performance: Testing the mediation role of innovation in the manufacturing sector of Pakistan. *Pakistan Journal of Commerce and Social Sciences*, 8(1), 99.
- Nguyen, N. T. D., & Aoyama, A. (2015). The impact of cultural differences on technology transfer: Management practice moderation. *Journal of Manufacturing Technology Management*, 26(7), 926-954.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*: Oxford university press.
- Okonkwo, O. (2019). Knowledge transfer in collaborations between foreign and indigenous firms in the Nigerian oil industry: The role of partners' motivational characteristics. *Thunderbird International Business Review*, 61(2), 183-196.
- Osabutey, E. L., Williams, K., & Debrah, Y. A. (2014). The potential for technology and knowledge transfers between foreign and local firms: A study of the construction industry in Ghana. *Journal of World Business*, 49(4), 560-571.
- Rousseau, M. B., Mathias, B. D., Madden, L. T., & Crook, T. R. (2016). Innovation, firm performance, and appropriation: A meta-analysis. *International Journal of Innovation Management*, 20(03), 1650033.
- Sazali, A., & Raduan, C. (2011). *The Inter Firm Technology Transfer in Malaysia—A Holistic Approach*. Saarbrücken: Verlag Dr. Müller (VDM).
- Slavković, M., & Babić, V. (2013). Knowledge management, innovativeness, and organizational performance: Evidence from Serbia. *Economic annals*, 58(199), 85-107.
- Spender, J.-C. (1996). Organizational knowledge, learning and memory: three concepts in search of a theory. *Journal of organizational change management*, 9(1), 63-78.
- Tsang, E. W., Nguyen, D. T., & Erramilli, M. K. (2004). Knowledge acquisition and performance of international joint ventures in the transition economy of Vietnam. *Journal of International Marketing*, 12(2), 82-103.
- Urgal, B., Quintás, M. A., & Arévalo-Tomé, R. (2013). Knowledge resources and innovation performance: the mediation of innovation capability moderated by management commitment. *Technology Analysis & Strategic Management*, 25(5), 543-565.
- Van Wijk, R., Jansen, J. J., & Lyles, M. A. (2008). Inter-and intra-organizational knowledge transfer: a meta-analytic review and assessment of its antecedents and consequences. *Journal of management studies*, 45(4), 830-853.
- Wang, C. L., & Ahmed, P. K. (2004). The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *European Journal of Innovation Management*, 7(4), 303-313.
- Wang, X. (2013). Forming mechanisms and structures of a knowledge transfer network: theoretical and simulation research. *Journal of knowledge management*, 17(2), 278-289.
- Zhang, J., Wu, W.-p., & Chen, R. (2018). Leveraging channel management capability for knowledge transfer in international joint ventures in an emerging market: A moderated mediation model. *Industrial Marketing Management*.