

# THE IMPACT OF ENTREPRENEURSHIP TOWARDS INNOVATION IN AIRPORT INDUSTRY: THE DOUBLE MEDIATION FRAMEWORK OF STRATEGIC ALIGNMENT AND LEARNING ORIENTATION

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## ABSTRACT

*Innovation is broadly regarded as highpoint of success and one of the essential factors in highly competitive market and global economy. Many airports are lacking strategic alignment to implement entrepreneurship towards innovation in airport facilities and services. Adding to that the absence of learning orientation in airport projects is one of the hinders to improving innovation performance of airports. This study discussed and analyzed the combined mediating effect of learning orientation and strategic alignment on the relationship between entrepreneurial orientation and innovation performance within the context of airport industry. In addition to that, the direct influence of entrepreneurial orientations on innovation performance was examined. This study broadens the understanding of the phenomenon of entrepreneurial and learning orientation through highlighting the importance of strategic alignment relevant with these concepts. The result of this study showed that entrepreneurial orientation has a direct and indirect effect on innovation performance, while learning orientation and strategic alignment mediates the influence of entrepreneurial orientation towards innovation performance.*

**Keywords:** Strategic Alignment, Learning Orientation, Innovation Performance, Entrepreneurial Orientation

## INTRODUCTION

Large airports in major developing countries recognized that they must adopt new approaches in order to actively support this growth of air travel and be competitive. Innovation capability is one of the main factors that enhance the performance of airports in today competitive market in aviation and airport industry. Those airports that successfully rise to the challenge “Airports of the Future” and will exhibit three key characteristics that distinguish the successful from all others (McGrath, 2013). United Arab Emirates (UAE) has undertaken massive construction projects to develop its airports. Such development has taken place over a very short span of time and has involved particularly heavy investments. At the present time, modern airports developed with accordance to innovation concepts and entrepreneurship in aviation. The business models innovation in airlines and airport industry can contribute to the creation of value, competitive advantage and profitability with new possibilities of action (Bruno & Mauro, 2017).

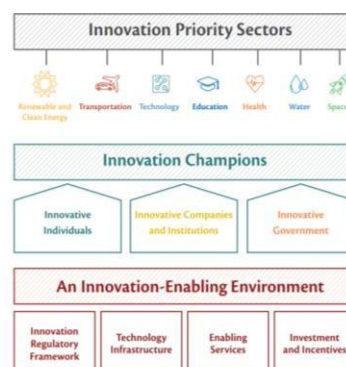
Innovation has changed its aim from products new development or a new process to focusing on increasing the customers experience by accumulating a value to a product that already exists. Innovation is the development process of introducing products with new specifications or a new process to the world in a specific field, market, or a specific industry

(Mukhtar & Ahmed, 2018). When it comes to air transport competitiveness and airport industry, there is no denying their association with the management of innovation, for both manufacturing and service companies must constantly seek innovation of its products, services and processes (Caetano et al., 2019). Moreover, the lack of alignment of organization elements towards the organizational strategy leads to weak performance. When the different departments of the organization have different strategies that are different directions and implementations, the whole organizational purposes and visions rarely could archive (Mohammed, 2015).

Thus, this study aims to align innovation with the overall strategy and infrastructure of the organization. Implementation of a model to harmonize an innovative strategy that supports the direction of the business and determines the engine of change and its impact on other areas of the business. This study discussed and analyse the combined mediating effect of learning orientation and strategic alignment on the relationship between entrepreneurial orientation and innovation performance within the context of airport industry. In addition to that, the direct influence of entrepreneurial orientations on innovation performance was examined. Therefore, the mediation role of learning orientation and strategic alignment on the relationship between entrepreneurial orientation and innovation performance in airport industry has been examined.

### Innovation and Entrepreneurship in UAE

Since its inception in 1971, the United Arab Emirates has constantly been distinguished as an icon for innovation and creativity in all industries, enhancing its social and economic status and transforming into a primary destination for talents and businesses in record time. Believing that innovation is the future of human investment, the UAE Leadership emphasizes its importance across all sectors through the UAE Vision 2021: “Innovation, research, science and technology will form the pillars of a knowledge-based, highly productive and competitive economy, driven by entrepreneurs in a business friendly environment where public and private sectors form effective partnerships”. While in Asia, carious airport systems have generally evolved through the construction of new high capacity airports, due to a much weaker set of available airports, high-perceived benefits of strong growth of traffic and weaker opposition to the construction of airports (Bonney et al., 2010). Therefore, the improving innovation performance in airport design and construction would not be achieved without the adoption of entrepreneurial orientation as well as learning orientation. The UAE National Innovation Strategy (NIS) focuses on promoting innovation at large, it aims in parallel to lead innovation in 7 primary national sectors, namely renewable and clean energy, transportation, technology, education, health, water and space. According to the vision of UAE government, transportation and airports is one of the pillars in innovation strategies in UAE as shown in Figure 1.



**FIGURE 1**  
**THE NATIONAL INNOVATION STRATEGY OF UAE**  
**SOURCE: (UAE MINISTRY OF CABINET AFFAIRS, 2015)**

The innovation in airport design is targeted at service providers in aviation. The service providers in aviation usually focus not only on the quality of the service, but also on the efficiency of aircraft operation.

The National Innovation Strategy (NIS) aims to take innovation in the UAE to new heights, where a culture of innovation is embedded amongst individuals, companies and governments. It primarily focuses on identified priority sectors that will drive future innovation. The NIS Framework is structured around the following key pillars: 1. An Innovation-Enabling Environment 2. Innovation Champions 3. Innovation Priority Sectors.

Several studies have been carried out in order to tackle the growing passenger flows through innovated methods. (Bonnetfoy et al., 2010), issued a study known as "Evolution and Development of Multi-Airport Systems". The core of their solution was creating Multi-Airport Systems. A multi-airport system is defined as a set of two or more significant airports that serve commercial traffic within a metropolitan region. However, with this solution they determined that the congestion problem at the three major airports in New York could also drive the emergence of a new secondary airport. Nevertheless, the development of a multi-airport system still poses several challenges in terms of planning and development (Bonnetfoy et al., 2010).

As stated in the laws and regulations on aerodromes, there are four main factors which play a major role in improving airport capacity (Abeyratne, 2014): (1) integration of arrival/departure/surface management; (2) optimization management; (3) improvement of surface surveillance; and (4) airport collaborative decision making.

## Strategic Alignment

A "strategic alignment" may also refer to a state in which "company product development and business strategies are focused on customers, users, and markets," which leads to financial success (Eunice, 2015). Reconciliation is defined as "suitable or desired component coordination or relationship" (TheFreeDictionary.com 2014). The strategy describes harmonization as a fit between the internal structure of the company and the external environment (Hiekkanen et al., 2013). Some scholars suggest that strategic alignment refers to inter-organizational relationships that focus on how to achieve a specific goal. Strategic alignment can help maximize return on investment, gain competitive advantage, and provide direction and flexibility to meet challenges and opportunities (Basile & Faraci 2015, Wong et al., 2012, Wu & al., 2014). In their research, (Satyro et al., 2014) relate to a number of relevant terms or synonyms of strategic alignment, namely structural alignment, strategic uncertainty, strategic coding, strategic adjustment, strategic coherence, unity model and strategy adjustment, all management terms (Ilka et al., 2018).

A recent study by (Abdulrahman, 2016) showed that the strategic direction has a positive impact on the company's performance. Based on configuration theory, a strategic alignment study suggests that adapting a corporate strategy to internal and external factors increases business efficiency and abuse results in reduced productivity (Wu et al., 2015). For almost a quarter of a century, corporate strategic direction has demonstrated the positive impact of adjustments on corporate results (Coltman et al., 2015).

Several famous international Airports have implemented strategic alignment to improve the overall performance of the airport. One of successful examples is Dallas/Fort Worth International Airport (DFW) applied a leadership system that promotes employee alignment and engagement with the airport's strategic plan and has generated superior business results. Each phase and element of this system is integrated to help management and employees understand how they affect DFW's most important goals and initiatives that drive performance. Although DFW has been implementing its current leadership system for the past six years, it has still not integrated all concepts throughout all levels of the organization (Poinsatte, 2011).

Strategic alignment is essential for international airports in particular. In air transport, the evolution of traffic depends upon many economic factors, and on the way in which the markets participants respond to those factors. Although airlines are the main actors, the airports are by no means passive, and their strategies will also have an impact on airline behavior and

route development (Badánik et al., 2010). The new airline business models as the focus of the strategic and organizational research have changed the airport management philosophy (Halpern, 2018). Moreover, the alignment of IT strategy in airport functions is one of the success factors of well-known international airport nowadays. The allocation and automated passenger flow forecast tools. Focusing on improving operations and innovation while enhancing passenger experience, airports use different concepts such as: Airport Collaborative Decision Making (ACDM), Airport Operations Center (APOC) and Total Airport Management (TAM), which benefit on new technologies and digital tools (Sorin et al., 2018).

## **Learning Orientation**

Learning orientation indicates the extent to which an organization receives and shares information about market changes, customer expectations and needs, competitive behavior, and the development of new technologies to create new products or services beyond the capabilities of the competition (Radwan et al., 2017). In recent decades, organizational learning has become a key element in gaining a competitive advantage and the ability to learn faster than competitors is seen as a source of stable competitive advantage. Therefore, anything that competes in a dynamic, changing environment must follow the learning process, behavioral changes, and productivity gains (Abbas & Alireza, 2011). Therefore, learning orientation can be a development approach that allows transforming a new strategic initiative into superior organizational performance. Thus, it is expected that two different but related concepts will result in distinct and linear effects and a common synergy in various aspects of the organization's activities. Strategic synergy and learning orientation can be assessed by determining the mediating effect of learning orientation in the relationship between strategic direction and organizational activity (Natasa, 2016; Ariamanesh et al, 2020).

Learning from the company has many interesting consequences: success of the new product, customer service, improved profitability, access to quality desired by the customer, increased flexibility, opportunities and threats of the new environment. This allows organizations to respond quickly to new opportunities and environmental threats (Beyene et al., 2016). Learning orientation has three main aspects: the desire to learn, the shared vision and the open-mindedness (Beyene et al., 2016). The literature shows that learning orientation is influenced by three factors namely: Shared vision, commitment to learning, and open-mindedness.

A shared vision means that all members of an organization focus on training, which strengthens their energy, commitment and dedication. As a result, organizations can not implement creative ideas because there is no common vision (Abbas & Alireza, 2011). An organization's commitment to learning is an amount it considers worthwhile to provide training. It aims not only to promote the learning process, but also to create and strengthen the learning environment in the learning process. In fact, the company that seeks to learn recognizes that training is an important investment required to maintain the organization. (Abbas & Alireza, 2011). An open mind refers to a critical assessment of an organization's day-to-day activities and the acceptance of new ideas. In other words, it is the process by which an organization begins to suppress existing knowledge or repetitive assumptions and habits. Indeed, existing knowledge is a fundamental obstacle to diverting an organization from the vision and processes needed for innovation and migration (Abbas & Alireza, 2011).

## **Innovation Performance**

Innovation is one of the most popular words in modern society. Innovation can be defined as a successful implementation of a new idea in the market (Steiber & Alänge, 2014). This definition has several advantages. This indirectly highlights the differences between creativity and invention on the one hand and the development and implementation of products on the other. This gives the organization its purpose and momentum and suggests that creativity is nothing of continuity. The advantage of this definition is that it goes beyond the traditional

limits of generating innovative ideas and patents. But this puts a lot of pressure on the results (Benaim, 2015). Many people value innovation and believe that innovation is necessary for individuals and organizations. For example, citizens ask organizations to be more innovative in addressing organizational and socio-economic issues (Mehmet, 2016). The literature examines various types of innovation, including incremental products, radical products, incremental processes, radical processes, and administrative innovations (Kim et al., 2012). This research focuses on the two most cited types of organizational innovation: product innovation and process innovation (Zia, 2017). Product innovation is defined as changes or innovations made to the final product or service, and process innovation refers to the novelty introduced in the method or process that produces the product or service (Kim et al., 2012). Product innovation is defined as a new product or service introduced on the market to meet the needs and expectations of customers. Types of innovation vary and depend on the object, sector, volume or strength. They are independent, have recognizable attributes and no boundaries. These are: product innovation, process innovation, organizational innovation, technological innovation and market innovation (Carayannis & Grigoroudis, 2015).

Product innovation refers to the development of new products, changes in the current product design or the application of new technologies and resources to current production methods, focusing on existing markets for existing products and not current products. Differentiation of features and functions (Tony, 2016). Process innovation means significant improvements in production and logistics methods or support activities such as procurement, accounting, maintenance and information technology (Polder et al., 2010). Process innovation consists of changes related to the production process of a product or service. Although it does not necessarily affect the final product, it benefits the production process and generally increases productivity and reduces costs. Example: A car made by a robot and a car made by a human worker (Tony, 2016). Marketing innovation is defined as implementing new marketing method that involve significant changes in the packaging, design, placement and product promotion and pricing strategy OECD Oslo Manual, 2005. The objective of marketing innovation is to increase the sales and market share and opening new markets (Polder et al., 2010). Market innovation involves finding new markets or market segments for existing products. Some adjustments or modifications to existing products may be required in order satisfying requirements of the new market. Example: existing hard and soft back books transformed into electronic books suitable for users of mobile devices (Tony, 2016). Organizational innovation is defined as introduction of new practices of doing business, workplace organizing methods, decision making system and new ways of managing external relations (Polder et al., 2010). OECD 2005 defined the organizational innovation as implementing new ways of organizing business practices, external relations and work place. Organizational innovation is new ways of organizing routine activities.

## **Entrepreneurial Orientation**

Entrepreneurship is the practice of starting a new business /venture or reviving an existing one in order to capitalize on new found opportunities. In its essence it is about a proactive mindset that encourages ownership of surrounding problems in society, sees them as opportunities and embraces the risks and failures involved in finding a solution. Thus, entrepreneurship development requires an appropriate framework that encourages people to take the necessary steps to start a small and medium business and to improve their chances for success (Ernest, 2011). Entrepreneurship it is a holistic sight of the organization can occur in methods, services, and products, therefore organizations in order to take suitable action to overcome environmental challenges need to entrepreneurship (Al-Shami, Muhamad, Majid & Rashid, 2019; Al-Shami, Mamun, Sidek & Rashid, 2019; Pan et al., 2016). Companies using entrepreneurial orientation have performed better than other companies (Roxas et al., 2016; Morgan et al., 2015). Therefore, entrepreneurial orientation incorporates policies into additional practices that make assumptions about entrepreneur choice and activity (Mason et al., 2015).

Entrepreneurial orientation is a strategic company-wide orientation that captures the behavior of an organization with strategic practice, management philosophy, and

entrepreneurship (Anderson et al., 2009). entrepreneurial orientation has become one of the most established and popular components in the entrepreneurship literature (Gupta & Wales, 2017). Most entrepreneurial orientation definitions concern the organizational level: (i) commitment, (ii) risk taking and risk-taking, (iii) developing an appropriate business culture, (iv) practice, entrepreneurship Decision-making and implementation of actions (v) Ensuring dynamic development. In view of the above, the focus on entrepreneurship is a type of organizational culture that provides a higher level of entrepreneurship (Fang et al., 2014). The components of entrepreneurial orientation are distinguished and used reliably in the literature of previous studies. Based on the conceptualization of (Miller & Friesen, 1983), three dimensions of entrepreneurial orientation have been identified and used consistently in the literature.

**Innovativeness:** Willingness to innovate, to introduce novelties through creativity and experiments focused on the development of new products and services, as well as new processes (Lechner & Gudmundsson, 2014).

**Pro-activeness:** Seeking opportunities, advancing by introducing new products and services and to act anticipating future demands to create change and shape the environment (Kwak, 2013; Khan & Khalique, 2014)

**Risk-taking:** Tendency to act boldly. Venturing into new and unfamiliar markets, relying on a large portion of resources to risk with uncertain results, get loans heavily (Kellermanns, et al., 2016; Kajalo & Lindblom, 2015)

## LITERATURE REVIEW

### Relationship 1: Entrepreneurial Orientation and Innovation Performance

Many studies have demonstrated the importance of improving business performance through entrepreneurship (Shan et al., 2016; Wenhao et al., 2019). To maintain the competitive advantage of organizations, it is necessary to legitimately recognize the dynamic nature of customers' needs and desires (Wenhao et al., 2019). EO is therefore one of the key strategic directions that provide businesses with a sustainable competitive advantage and superior value for their customers (Rigtering et al., 2017). Innovation is an important factor of entrepreneurship and innovation in today's business world (Kantur, 2016; Al-Shami, Al-Hammadi, et al., 2019).

Therefore, understanding what drives innovation is essential for every business or project. In addition, a better understanding of economic obsolescence, trends in open innovation and the relationship between openness and IP can provide practical guidance on how companies can enhance their innovation capabilities (Semrau et al., 2016).

The results of a survey conducted by Asbjørnand (2013) showed that economic obsolescence must focus on organizational innovation as a means to improve the overall performance of the company. As a result, managers must allocate resources to organizational innovation and organizational innovation to improve intellectual property. In this study, the moderation model between these three variables will be validated in the airport environment. While Patrick (2014) proposed a conceptual model of the impact of EO on IP. He found that trends in open innovation and the entrepreneurship provide a proof on the association between them.

The high-level of EO will enhance innovation performance (Patrick, 2014; Shan et al., 2016; Rigtering et al., 2017; Zhai et al., 2018; Wenhao et al., 2019). Based on the results of previous studies, it is concluded that EO has a direct impact on IP. Therefore, the empirical part of this study will validate the following hypothesis statement:

*Hypothesis 1: Entrepreneurial orientation has a significant relationship with innovation performance.*

## **Relationship 2: Strategic Alignment and Innovation Performance**

As a business grows, strategic alignment is becoming more important each day, especially for a large organization. Previous studies have highlighted the positive association between alignment and better organizational performance (Laban & Deya, 2019). Roberts & Grover (2012) found that firm performance is higher when customer-sensing capability and customer responding capability are aligned than when they are misaligned. Misalignment has an adverse impact on managers' intrinsic motivation to improve firm performance (Laban & Deya, 2019). However, the alignment of IT strategy will impact the strategy of innovation by the organization (Al-Lamy et al., 2018; Yunis et al., 2017). Strategic alignment has been a top managerial concern (Laban & Deya, 2019), for its positive impacts on firm performance (Saunila, 2017). It is deemed crucial in understanding how organizational performance can be improved through supporting business strategy with other organizational strategies. In order to understand whether strategic alignment results in superior organizational performance, much effort has been put on the definition, measurement, backgrounds and consequences of the alignment between business and IT strategies, that is, the strategic IT alignment (Jinhwan et al., 2020). Hazeline, et al., (2016) presents a case study of a large Malaysian service provider that has extensively utilized the BSC as its core strategy alignment tool. Their study results indicate the implications of strategic alignment on an organization's strategic alignment process and its performance. Airlines have consistently outperformed its competitors throughout its history, in the context of an unforgiving industry environment. It is important to examine how airlines has achieved its outstanding performance and sustained its competitive advantage, through effectively implementing a dual strategy: differentiation through service excellence and innovation, together with simultaneous cost leadership in its peer group. Based on the results of previous studies show empirical evidence that SA affects IP directly. Therefore, this study examines the following assumptions.

*Hypothesis 2: Strategic alignment has a significant relationship with innovation performance*

## **Relationship 3: Learning Orientation and Innovation Performance**

Understanding the learning mechanism is important for creating an environment of innovation in which mutually beneficial relationships between employees and their organizations contribute to learning and innovation (Rashid et al., 2014; Sirén et al., 2019). Learning can therefore have a significant impact on organizational innovation. Examining these relationships shows that LO has a positive relationship with business innovation and efficiency of learning (Wenhao et al., 2019). (Yacine, 2015) conducted a study to examine the role of LO employees in IP in production. The results of the Yatsin study confirmed an association between LO and IP. Furthermore, Yatsin encouraged researchers to explore this relationship in other sectors in the future and to add value to researchers and practitioners of organizational learning and intellectual property. Another claim is by (Suliyanto & Rahab, 2012) who found that businesses need to strengthen learning strategies and innovation practices to improve their performance. These findings support the influential role for LO on IP. However, some studies have shown that LO plays an important role in mediating the relationship between entrepreneurship and organizational performance (Lonial & Carter, 2013). More detailed studies are generally needed to demonstrate the existence and effectiveness of EO parameters and organizational performance reports with the influence of LO (Chih-Yuan et al., 2017).

In the same field, (Chih-Yuan et al., 2017) concluded that LO is important for entrepreneurial businesses and influences the intellectual property of businesses. They suggested that the indirect influence of LO on the relationship between organizational activities is still

unknown and that further research is needed. As a result, they created a model that included several intermediaries to study in depth the impact of entrepreneurial activity on the performance of several companies (improvement of productivity and profitability) through LO mediation. The results of their studies show that LO can increase growth and profitability, respectively, compared to intermediate effects (Soares & Perin, 2019). The results of previous studies show empirical evidence that LO directly affect IP. Therefore, this study examines the following hypothesis statement:

*Hypothesis 3: Learning orientation has a significant relationship with innovation performance.*

#### **Relationship 4: Entrepreneurial Orientation and Strategic Alignment.**

The alignment of IT strategy with business strategy has been among the top concerns of business leaders for several decades (Kappelman et al., 2014). Thus, IT can be used to support entrepreneurial activity. The association between SA and EO has been approved in many studies in the past. (Street et al., 2018) found that the different patterns of EO could result in a high or moderately degree of SA between the IT and business in large size organizations. Furthermore, there are many type of entrepreneurial action leads to SA, the most significant action is interconnection efforts to align strategies (Street et al., 2018).

The organizational entrepreneurial initiatives are described as a cause of favorable strategic positions. Entrepreneurial opportunities are linked to entrepreneurial initiatives which build adaptive capabilities that enable organizations to sustain a state of adaptation of new strategies and align these strategies through a strategic adaptation mechanism (Kappelman et al., 2014). This lead to a conclusion that EO helps organizations to achieve IT-Business alignment strategy.

Renata et al., (2018) claimed that the organizational ability to adapt entrepreneurship to changes in the IT field staff is high and is directly related to SA. In other words, the application of alignment analysis technique has a promising future together national companies, but it would be more difficult without entrepreneurial efforts. In the same context, (Rothaermel et al., 2016) suggested that the majority of large organizations should ensure the organization's competitive advantage on the market (entrepreneurial orientation), and linked it to core IT and business competencies through strategic alignment. The association between EO and SA is mainly because entrepreneurship is the base of IT infrastructure and process. Hence, any plan to achieve alignment between IT and business strategy should reply on EO to achieve this goal (Street et al., 2018). Based on these reviews, it is found that SA and EO has a certain degree of direct association, this finding need further investigation. Thus, this study will examine the following hypothesis statement:

*Hypothesis 4: "Entrepreneurial orientation has a significant relationship with strategic alignment".*

#### **Relationship 5: Entrepreneurial Orientation and Learning Orientation**

There is plenty of empirical evidence that demonstrates a direct relationship between entrepreneurship and learning activities. Entrepreneurship is a learning process and that every aspect of organizational learning is directly or indirectly related to business management (Wenhao et al., 2019). Hence, the link between EO and LO does exist. Based on this claim, several studies in the past in these disciplines empirically shown that EO has a positive effect on LO (Sirén et al., 2017; Zhai et al., 2018).

In addition, previous studies have argued that the adoption of EO reflect on the effectiveness of the entire organization, thus promoting high-level generative learning, and enhance business opportunity in the future (Yang et al., 2013) Therefore, this study conclude that EO affects LO. However, how entrepreneurship and learning interchangeably correlated. Entrepreneurship and learning are connected to each other by increasing opportunities for people to learn the process of becoming an entrepreneur and starting a business through



entrepreneurship orientation, education, and instruction; and providing access to entrepreneurship training and small business counseling opportunities (Oktavio et al., 2019).

In the same context, (Timothy & Jim, 2016) assumed that learning obligations and a learning culture, combined with entrepreneurship tools and functions will help organization to collect knowledge from outside the organization and identify new business opportunities. While Henry (2013) suggested that managers and entrepreneurs involved can develop a culture that includes LO training to support profitability. In other words, (Henry, 2013) claim the existence of connection between LO and EO. Another empirical evidence supports this relationship is found in a study conducted by (Julia, 2015) in Indonesian SMEs which revealed that EO influences the LO of SMEs.

Hence, to improve organizational performance, these EO and LO are essential factors to sustain innovation development. While the findings of some studies indicated that LO must be in place to maximize the effect of EO on innovation performance, and that LO is an important dimension, along with EO to foster innovation performance (Wenhao et al., 2019). Some scholars found that LO and performance are significantly correlated but with the interaction effect of EO (Jawad et al., 2018). Another empirical evidence provided by (Nek et al., 2018) who figured out that EO was seen to have a strong direct relationship to the organizational performance. Therefore, an increase on LO will reduce performance while increasing EO, would increase the performance of the organization. Accordingly, the empirical part of this study considers the following hypothesis statement:

*Hypothesis 5: "Entrepreneurial orientation has a significant relationship with learning orientation".*

### **Relationship 6: The Mediation Model between Entrepreneurial Orientation, Learning Orientation, and Innovation Performance**

In highly entrepreneurial and market oriented organizations, it is still necessary to act indirectly through education and mediate the impact of entrepreneurship on innovation effectiveness. Understanding the clearinghouse mechanism is important in creating an environment where mutually beneficial relationships between employees and their organizations promote learning and innovation (Oktavio et al., 2019). Therefore, focusing on learning can have a significant impact on organizational innovation. Therefore, the overall goal of this study is to assess the impact of learning orientation on the relationship between entrepreneur orientation and innovation effectiveness. By examining this report, you can see that education orientation has a positive relationship between innovation and continued effectiveness. A focus on learning is essential for both innovation and productivity. The concept of a high-performance company focused on entrepreneurial behavior is likely a necessary situation, but entrepreneurship may not be the only feature related to high efficiency (Brettel & Rottenberger, 2013). LO can increase the impact on entrepreneurial towards organizational innovation. Hence, that companies need to strengthen their innovation performance through entrepreneurship and advanced learning strategies (Soares & Perin, 2019).

Various studies have shown an influential role in learning orientation. However, some studies have shown that learning orientation can play an important role as an intermediary in the relationship between EO and IP (Chih-Yuan et al., 2017). The willingness and ability of an organization to take the initiative, take risks and innovate to take advantage of market opportunities may require the company and its decision makers to gather information about potential opportunities and translate information into new knowledge (for example, to learn) potential opportunities (Oktavio et al., 2019). Thus, two additional functions can work with an entrepreneurial orientation to help increase the level of productivity in organizations (Soares & Perin, 2019), and a focus on learning is a determining factor (Lonial & Carter, 2013). In the same context, (Chih-Yuan et al., 2017) also concluded that training attention is important for entrepreneurs and affects the effectiveness of business innovation. They suggested that the indirect impact of LO on the relationship between EO and IP is still unknown and further research is needed. Therefore, they created multiple intermediary models to fully study how

entrepreneurship impacts the performance of various companies (productivity growth and profitability) through training orientation. The results of their studies show that growth and profitability each increase when focusing on learning in terms of mediation effects. The results of previous studies provide empirical evidence that LO plays a mediating role and does not directly affect IP, therefore, it is assumed that there is a model of mediation between EO, LO, and IP. Therefore, this study examines the following hypothesis statement

*Hypothesis 6: "Learning orientation mediates the relationship between entrepreneurial orientation and innovation performance".*

### **Relationship 7: The Mediation Model between Entrepreneurial Orientation, Strategic Alignment, and Innovation Performance**

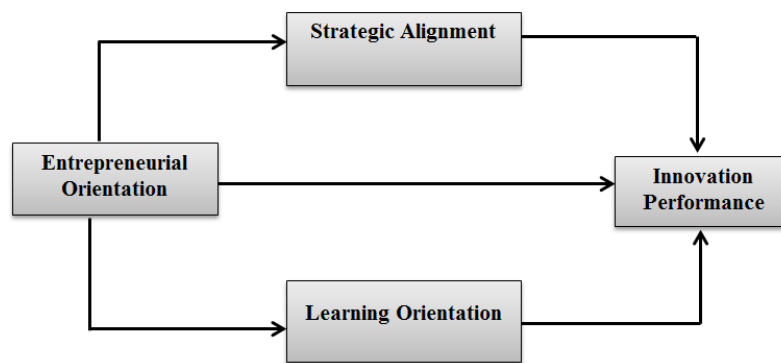
The review of literature reveals few empirical attempts in the past to evaluate the mediation role of SA between EO and IP. Some scholars suggested that the alignment of IT and business strategy with entrepreneurship strategy has been considered among the top interest of businesses and researchers for several decades (Kappelman et al., 2014; Tseng & Tseng, 2019). Likewise, (Chris et al., 2018) claimed that SA plays a significant mediation role between entrepreneurship and innovation. This claim is based on several empirical findings in the literature stating that dimensions of SA been proposed to influence both entrepreneurship and innovation. They suggested that future researches should measure this relationship and validate the significant mediation role of SA in innovation strategies (Chris et al., 2018). Today, large organizations must consider the alignment of IT/business strategy with entrepreneurship and innovation. Some researchers may choose to use IT alignment as a mediator variable between EO and IP simply to improve the efficiency of business performance, while others use business alignment as a way to indirectly enable entrepreneurship towards innovation and enhance value of creativity in the workplace (Levy et al., 2001). Thus IS/IT alignment strategy can be categorized as a mediator variable by evaluating whether an organization has IT resources to achieve growth, differentiation, business alliance, and process innovation; or a hybrid strategy that combines differentiation, alliance, growth, and innovation with entrepreneurship (Kappelman et al., 2014).

In addition to that, the theoretically pairings between EO and IP is influenced by a third variable. In this regard, SA should be paired with an IS/IT alignment strategy for innovation strategy, this mediation relationship will explain the growth of innovation in airport industry; and a new alignment should be paired with IS/IT strategy. Each of these theoretically- pairings is a good solution to achieve high degree of strategic alignment in airport projects (Sabherwal et al., 2001). Moreover, the four principal dimensions of innovative (process, product, organization, and marketing) linked to IT/Business alignment as well as entrepreneurship. Hence SA mediates the association between EO and IP (Shan et al., 2016; Wenhao et al., 2019). This mediation model concentrating entrepreneurship through a newly organization, helping innovative works to full potential, and rewarding a corporate entrepreneur, encouraging individuals in the organization to look at the organization from a different perspective and educating employees on the importance of corporate entrepreneurship (Tseng & Tseng, 2019). Based on the previous claims, this study suggests the following hypothesis statement for empirical evaluation in chapter four.

*Hypothesis 7: "Strategic alignment mediates the relationship between entrepreneurial orientation and innovation performance"*

Based on an extensive review of previous literatures, as well as discussion of the underlying theories, a conceptual framework is developed to show the relationship between the four variables and their influences on innovation in airport industry. Moreover, this study will examine the direct influence of entrepreneurial orientation towards innovation performance with the mediation effect of strategic alignment based on the finding of Duppen (2014) who suggest that managers should focus of entrepreneurship to enhance innovation inside organization.

Therefore, the empirical evidence that the author attempts to examine in the survey is that SAM theory should be implemented in innovation development plan but without of entrepreneurial orientation, strategic alignment is not sufficiently explaining the change of innovation performance with strategic alignment. The variables were categorized into three groups, group (1) independents variables: entrepreneurial orientation, group (2) mediation variables learning orientation and strategic alignment, the group (3) dependent variable: innovation performance as shown in Figure 2. Based on the findings of previous studies it is evident that entrepreneurial orientation has a direct and indirect effect on innovation performance, while learning orientation and strategic alignment mediates the influence of entrepreneurial orientation towards innovation performance.



**FIGURE 02**  
**PROPOSED MODEL**

Furthermore, the author summarized the different findings on these relationships and develops a framework for analysis and investigating the model fit after conducting a survey in Dubai airport. The constructs of this framework would result in a beneficial impact on the performance of airport industry. Therefore, the focus should be given by the management of airports to benefit from this framework and ensure that innovation performance can be enhanced through entrepreneurship and strategic alignment. Furthermore, the review of literature indicates a set of propositions about the relationship between those variables. These propositions could support the formulation of hypotheses for empirical study.

## RESEARCH METHODOLOGY

This study applies quantitative methodology to examine the relationship between strategic alignment, learning orientation, innovation performance, and entrepreneurial orientation. Therefore, this study used a causal and correlation research methodology in an attempt to investigate the research hypothesis. The study population consists of individuals represents the staffs and employee working in Dubai airport. The number of respondents in the study sample equal to 413. SEM approaches have been used to examine the hypotheses and model fit and evaluates the direct and indirect relationships between the variables. The output data in Table-1 reveals the degree of data reliability by evaluating the magnitude of Cronbach's Alpha coefficient. It is found that the overall reliability of primary data collected from the survey associated with all items is "Excellent" (Cronbach's Alpha=0.911). While the reliability of each variable is greater the cut-off point (0.7). The magnitude of reliability coefficient varying between 0.70 – 0.95 is acceptable. It is highly recommended to exceed cut-off point (0.7) before conducting the actual analysis (Cronbach, 1951). Reading the data in Table-1 indicate an acceptable consistency of primary data for all items in the questionnaire. Therefore, further analysis could be conducted with reliable results.

<b>Variable name</b>	<b>#items</b>	<b>Cronbach's Alpha Coefficient</b>	<b>Reliability level</b>
Entrepreneurial Orientation	18	0.716	Good
Learning Orientation	18	0.808	Very Good
Strategic Alignment	16	0.825	Very Good
Innovation Performance	24	0.800	Very Good
Overall Reliability	76	0.911	Excellent

## FINDINGS AND ANALYSIS

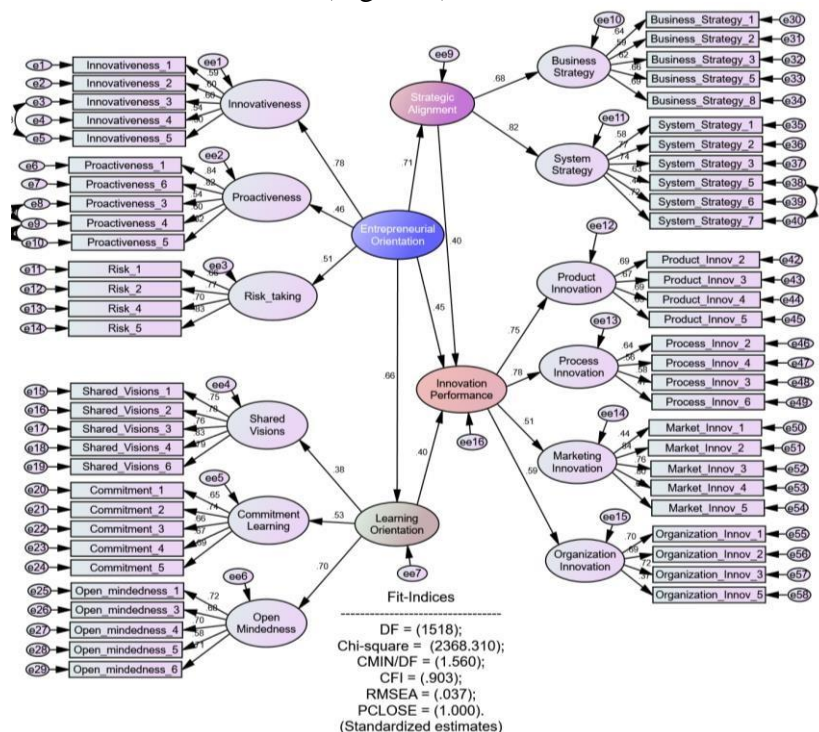
This section presents the quantitative analysis of data gathered from the respondents who have been participated in the survey which was conducted at Dubai International Airport. The respondents represent the administrative and non-administrative staff working in this airport. The results from the statistical methods is used to answering research questions, examining the relationships between the independent variable of the study (entrepreneurial orientation) with the dependent variable (innovation performance) and two mediators (learning orientation & strategic alignment) using statistical regression analysis. SEM analysis is used to examine the hypothesis of this study as well as evaluating the model fit of the conceptual framework. The Construct Validity is divided to two types; the convergent validity which indicates how closely related the observed variables (indicators) to a given latent variable. While the discriminant validity in contrast indicates how far the latent variable to each other. Establishing discriminant validity requires ensuring that the correlation between two latent variables EO and IP is significantly lower than unity (Franke et al., 2018). Table-2 indicates the amount of AVE and composite reliability of each factor.

<b>Variable</b>	<b>Latent Variables (dimensions)</b>	<b>Number of indicators</b>	<b>AVE &gt; 0.4</b>	<b>Square root of AVE</b>	<b>Composite Reliability &gt; 0.6</b>
Entrepreneurial Orientation	Innovativeness	5	0.410	0.569	0.704
	Proactiveness	5	0.542	0.736	0.852
	Risk taking	4	0.554	0.744	0.760
Learning Orientation	Shared Visions	5	0.615	0.784	0.888
	Commitment	5	0.465	0.682	0.813
	Open Mindedness	5	0.461	0.679	0.810
Strategic Alignment	Business Strategy	5	0.413	0.643	0.778
	System Strategy	6	0.437	0.661	0.819
Innovation Performance	Product Innovation	5	0.466	0.682	0.813
	Process Innovation	4	0.420	0.567	0.652
	Marketing	5	0.515	0.717	0.836

	Innovation				
	Organizational Innovation	4	0.401	0.633	0.717

Average Variance Extracted (AVE) higher 0.4 is acceptable with a condition that composite reliability > 0.6. (Fornell & Larcker, 1981). The convergent validity of the construct in this case is sufficiently reflects variance for the variables “observed variables” to join into a single construct. In other words, the indicators of each dimension are explaining well the latent construct (Fornell & Larcker, 1981).

The early review of output from AMOS version 22.0 after running SEM analysis reveals that most fit indeces was satisfactory enough to consider a good model-fit with the observed data from the survey. The values of fit-indices are satisfactory and compatible with the cut-off points for SEM standards. PCLOSE=1.00 (perfect non-significant) which reflects a high degree of model-fit, CMIN/DF=1.560 (≤ 2.00), and CFI=0.903 (≥0.90). RMSEA=0.037 (≤0.05) for high degree of model-fit. Therefore, hinging on the effective analysis above, an effective measurement model fitted effective data (Figure 3).



**FIGURE 3**  
**INNOVATION MODEL AT AIRPORT INDUSTRY**

**Model Structure**

Table.1 indicates the significance level of non-standardized relationships between entrepreneurial orientation, learning orientation, strategic alignment, and innovation performance. In addition to that the critical ratio (CR) is used to assess the significance of these relationships. The range  $-1.96 \geq C.R \geq 1.96$  indicates 2-sided significance at the customary 5% level (Hair et al., 2010). All direct relationships are significant (Sig. ≤ 0.05) whereas the lowest C.R.=2.431 and the highest C.R.=5.199. All CR values within the cut-off points. Accordingly, all regressions (estimates) between entrepreneurial orientation, learning orientation, strategic alignment, and innovation performance are validated and justified to confirm statistical associations between these variables as shown in Table 3.

Endogenous variable		Exogenous Variable	SE	C.R.	Sig.
Innovation Performance	<<	Entrepreneurial Orientation	0.165	2.431	0.015
Innovation Performance	<<	Learning Orientation	0.061	2.944	0.003
Learning Orientation	<<	Entrepreneurial Orientation	0.273	4.836	00000
Strategic Alignment	<<	Entrepreneurial Orientation	0.277	5.199	00000
Innovation Performance	<<	Strategic Alignment	0.061	2.890	0.004

### Hypothesis Evaluaiton

To justify the direct relationships between variables the Critical Ration (C.R) is applied in order to examine each hypothesis as well as assess the significance level of regression coefficients. C.R is formed by dividing an estimate by its standard error. The following two criteria are used to validate the hypotheses of this study.

- i) The  $C.R \geq 1.96$  or  $\leq -1.96$  for a regression weight. Then a hypothesis is true, otherwise the hypothesis should be rejected (Garsson, 2005; Hair et al, 2010)
- ii) Estimation path coefficient for a relationship is significant at the 0.05 cut-off point (Sig.  $\leq 0.05$ )

The justification of each hypothesis is indicated in Table 4.25 shows that all values of  $C.R \geq 1.96$  and ranging between lowest value 2.431 (EO-IP) and highest value 5.199 (EO-SA). Moreover, the level of significance  $\leq 0.05$  for all relationships indicated in Table 4. From this result it is concluded that EO (independent variable) influences three variables at once in the conceptual model namely: SA (mediator variable), LO (mediator variable) and IP (dependent variable) in direct relationships. While SA and LO together affect IP directly and indirectly. The indirect effect (mediation) of SA and LO will be examined in next section. In summary, the SEM analysis shows that “Hypothesis 1, Hypothesis 2, Hypothesis 3, Hypothesis 4, and Hypothesis 5” are validated to be true and not rejected. In other words, there are significant and positive correlations (direct effects) between the four constructs (EO, LO, SA, and IP) of the conceptual framework.

Hypothesis	Hypothesis Statement	C.R	Result	Sig.
Hypothesis 1	Entrepreneurial orientation has a significant relationship with innovation performance	2.431	Validated	0.015
Hypothesis 2	Strategic alignment has a significant relationship with innovation performance.	2.890	Validated	0.004
Hypothesis 3	Learning orientation has a significant relationship with innovation performance.	2.944	Validated	0.003
Hypothesis 4	Entrepreneurial orientation has a significant relationship with strategic alignment	5.199	Validated	0.000
Hypothesis 5	Entrepreneurial orientation has a significant relationship with learning orientation	4.836	Validated	0.000

### Indirect Effect Hypotheses (Mediation Effect)

To test a mediation model, this study conducted a mediation analysis based on (Baron

& Kenny's, 1986) theory. This theory is a well-known technique to examine a mediation relationship based on three variables. The final step in mediation test is to measure the multiple regression of first mediation model constructing entrepreneurial orientation and learning orientation towards innovation performance as well as the second mediation model constructing entrepreneurial orientation and strategic alignment towards innovation performance. Reading the output data in Table.5 shows that the multiple regression of entrepreneurial orientation and learning orientation is significant according to mediation theory.

The magnitude of regression coefficient  $B_{01}=0.454$  related to entrepreneurial orientation is decreased from initial value  $B_1=0.564$  after learning orientation mediated the direct effect of entrepreneurial orientation on IP, while this relationship is still significant. Therefore, learning orientation partially mediates the relationship between entrepreneurial orientation and innovation performance.

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.903	.134		6.751	.000
	Learning Orientation	.259	.031	.332	8.444	.000
	Entrepreneurial Orientation	.454	.038	.473	12.038	.000

a. Dependent Variable: Innovation Performance

With regard to the mediation role of strategic alignment. Table 6 shows the multiple regression of entrepreneurial orientation and strategic alignment is significant according to mediation theory. The magnitude of regression coefficient  $B_{01}=0.497$  related to entrepreneurial orientation is decreased from initial value  $B_1=0.564$  after strategic alignment mediated the direct effect of entrepreneurial orientation on innovation performance, while this relationship is still significant. Therefore, strategic alignment partially mediates the relationship between entrepreneurial orientation and innovation performance.

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.583	.123		4.746	.000
	Entrepreneurial Orientation	.278	.038	.289	7.359	.000
	Strategic Alignment	.497	.036	.546	13.881	.000

a. Dependent Variable: Innovation Performance

Baron and Kenny advise that the strongest evidence of mediation exists when IV affect DV in a significant relationship as in mediation theory, but to this relationship still significance after entering the mediators (strategic alignment and learning orientation) as well as decreasing the strength of direct association between entrepreneurial orientation and innovation performance. This is an evidence of "partial mediation".

The analysis of empirical data revealed that EO has a significant effect on SA, LO, and IP. While the relationship between EO and IP is mediated by SA and LO. This result is identical with the findings from previous studies on this topic (Chih-Yuan et al., 2017; Julia, 2015;

Patrick, 2014; Asbjørnand, 2013; Yang et al., 2013; Henry, 2013; Shihping & Yu-Lin, 2011). While LO is necessary factor to overcome the complexities of airport system which require skilled workers and experienced managers. Hence, modern airports must practice LO in a way to establish innovated services. This result is identical what other scholars concluded in this field like (David, 2017; Beyene et al., 2016; Ratajczak, 2014). IP has a high degree of association with EO. However, this association is partially mediated by two mediators (EO & SA). This outcome is identical with previous results and empirical projects in the same domain by (Shihping & Yu-Lin, 2011; Hazeline et al., 2016; Brettel & Rottenberger, 2013).

## **CONCLUSION AND IMPLICATIONS**

This study broadens the understanding of the phenomenon of entrepreneurial and learning orientation through highlighting the importance of strategic alignment relevant with these concepts. Based on the findings of previous studies it is evident that entrepreneurial orientation has a direct and indirect effect on innovation performance, while learning orientation and strategic alignment mediates the influence of entrepreneurial orientation towards innovation performance. The results reveal that significant correlations between the endogenous and exogenous variables were demonstrated through analyses of Critical Ratio (CR) values. In addition to correlation analysis, the goodness of fit for the model was also scrutinized. In this section, both academic and practical applications in airport industry are recommended and supported in this study. With regard to academic and theoretical implications, this research makes the following three contributes: First: formulation of a valid factor structure for each variables with the airport settings; Third: the effective implication of these three variables. With respect to the practical empilication, this study highlights the role of learning and SA in large organizations like airports and strengthens the involvement of entrepreneurship and innovation in large industries, which contributes to better performance and passenger services.

## **LIMITATIONS AND FUTURE RESEARCH**

Although this research has answered the main research questions and tested the fit of theoretical model successfully, but conducting this research were not without certain limitations and constraints. One of the main constraints is the time needed for conducting this study to a wider population and includes other airports in UAE as well as covering the whole area of UAE, other limitation is the geographic area where the researcher suggests to test the theory presented in this study. Drawing from current literature and theory in the area, the researcher proposed the main hypotheses based on the relationship between these two variables, the moderation effect of strategic management should be examined as well. Thus, entrepreneurial orientation could have a significant relationship with innovation performance through moderation influence. Hence, it is recommended to make further validations to more hypotheses in entrepreneurship and innovation, other industries also should be surveyed0

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