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Article

The effect of innovation and strategic planning on enhancing organizational performance of Dubai Police

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The effect of innovation and strategic planning on enhancing organizational performance of Dubai Police

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Abstract

Purpose – The purpose of this study is to examine empirically the joint effect of innovation and strategic planning on organizational performance of Dubai Police.

Design/methodology/approach – To examine the hypothesized model of the study, a survey questionnaire was used. The data were collected from the general department of total quality of the Dubai Police. The total number of questionnaires distributed was 150, out of which only 95 usable questionnaires were returned and ready for analysis. The regression approach through SPSS was used to analyze the data and test the hypotheses.

Findings – The statistical results confirm the effect of strategic planning and innovation on the organizational performance of Dubai Police.

Research limitations/implications – Further details and valuable implications are discussed throughout the study. The results have many practical implications, in that it can help managers to make proper decisions when deciding to implement innovation and strategic planning in their organizations.

Originality/value – This study is a rare and unique empirical study that examines the effect of innovation and strategic planning on the organizational performance of Dubai Police.

Keywords Innovation, Public sector, Strategic planning, Organizational performance, Dubai police

Paper type Research paper

1. Introduction

Organizations are facing many challenges in the current competitive world as a result of a rapid increase in new products, processes and technologies, as well as preferences of customers. Fluctuating environmental threats also compromise their survival. Success in such an environment would be more likely by enhancing organizational performance and paying greater attention to factors that can effectively improve it. Weak organizational performance can significantly reduce the potential to attract new customers whilst also destroying the trust of existing customers. The need to improve performance concerns not

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only the private sector but also includes the public sector. According to Goodman and Pennings (1977), performance is a necessary factor in organizational analysis and there is no theory on organizations that is void of this concept. In this rapidly evolving and dynamic environment, one of the effective factors for the success of organizations, enhanced organizational performance and surviving the competition, includes concentration on innovation and strategic planning. Many studies have underscored that innovation often leads to competitive advantage (Amarakoon, Weerawardena, & Verreynne, 2018; Aziz & Samad, 2016; Naranjo-Valencia, Jiménez-Jiménez, & Sanz-Valle, 2016; Nishitani & Itoh, 2016; Salunke, Weerawardena, & McColl-Kennedy, 2019). An innovative culture in the organization is a key success factor for the development of new products, new services and improved processes. Many authors have considered innovation as a leading strategy to improve and create new products or services, develop new approaches to production, distribution and supply, modify management processes and deliver ideas that bring about the attainment of high performance and competitive advantage (Aziz & Samad, 2016; El-Kassar & Singh, 2019; Nishitani & Itoh, 2016; Porter, 1996; Salunke et al., 2019; Wang & Ahmed, 2004). Hence, innovative strategies have been considered as playing a vital role in boosting performance (Sandvik, Duhan, & Sandvik, 2014).

Given the growing importance of strategic planning and innovation toward high performance (Bryson, 2018), several empirical studies have been conducted to investigate the relationship between these two factors and organizational performance in various fields of business (Audenaert et al., 2019; Hilmi, Ramayah, Mustapha, & Pawanchik, 2010; Prajogo & Ahmed, 2006; Rhee, Park, & Lee, 2010; Rosli & Sidek, 2013). However, empirical investigations that have focused on the link between these variables are still limited in government agencies (De Vries, Bekkers, & Tummers, 2016), particularly in police departments.

Public organizations have adopted innovation to enhance and improve services delivered to their citizens and users to improve their quality of life. Public organizations are concerned with innovation to improve performance (Light, 1998; Pihl-Thingvad & Klausen, 2016; Walker, 2008). However, studies are inconclusive about the role of innovation in providing positive outcomes. Several studies have indicated a positive relationship between innovation and performance, but the findings of these studies are mixed, and no consensus has been reached (Light, 1998; Osborne, 1998; Walker & Damanpour, 2009). However, unlike investigations in the private sector, where the emphasis has been on the performance of product innovations, the focus of studies in the public sector has been on the influence of service innovations.

Strategic planning also is one of the most important factors that impact on performance. It is one of the modern managerial toolkits that can be used not only to deal with uncertain cases but also to stimulate performance. Hofer and Schendel (1978) state that strategic planning is a critical mechanism in an organizational setting. It is a process used to determine and achieve an organization's goals and objectives and bridges the gaps between where we are and where we want to go (Adeleke, 2001). Nevertheless, planning is not an easy exercise; it needs skills and knowledge, as well as conscious decisions to determine the direction of business and the techniques and resources used to achieve the required results. According to Salkic (2014), ignoring strategic planning in organizations can lead to poor performance and reduced chances of survival in the market. Thus, strategic planning must focus on factors that have a considerable impact on the organization by identifying strengths and weaknesses and strategic goals, and plan how to maximize strengths, overcome weaknesses and accomplish the goals set.

Private organizations have successfully applied strategic planning for a long time. Similarly, strategic planning can be used in public organizations to improve public services, enhance customer satisfaction and manage limited resources in a more rational and equitable manner (Salkic, 2014). Public organizations, including police agencies, aim to deliver services that meet the needs and interests of people and businesses. However, police agencies have become a notable issue in many countries and have confronted rising criticisms by practitioners and scholars (De Maillard & Savage, 2018) due to weakly organized and ineffective serious plans for development (Bryson, 2018; Porumbescu, Neshkova, & Huntoon, 2019). This has led to inefficiency and ineffectiveness, which are reflected negatively in the quality of services delivered, which, in turn, has led to decreased satisfaction of stakeholders. The poorly performance of these organizations has had an impact on many parties, with negative long-term consequences for the economy and its development and growth (Porumbescu, Neshkova, & Huntoon, 2019). It cannot be denied that these organizations have a vital role and responsibility for the economic development of any country, and poor strategic planning only leads to poor performance (De Maillard & Savage, 2018).

The aim of this study is to investigate innovation and strategic planning and their effect on organizational performance in police agencies, as very few prior studies are available on this topic. By investigating innovation and strategic planning, it is expected that the results of this research will be to contribute by spreading the boundaries of the body of knowledge. Several similar investigations have offered somewhat contradictory conclusions; no study has really provided a synthesis of knowledge on this phenomenon. Hence, this study gathers critical relevant evidence from prior research to fulfil its key goal, i.e. the impact of innovation and strategic planning on the organizational performance of the Dubai Police, an impact that has often been ignored in empirical research.

2. Related literature

2.1 Innovation

Innovation is one of the vital issues in organizations. It is also a wide and loose topic that covers several disciplines, such as product and service development, organizational behavior, operational management, marketing, technology management and quality management (Hauser, Tellis, & Griffin, 2006).

According to Beaver (2002), innovation plays a critical role in the economic progress and competitiveness of organizations and also of countries. It is one of the most salient competitive weapons and a core value capability (Sandvik & Sandvik, 2003). Innovation is also an efficient approach to improve the productivity of organizations (Lumpkin & Dess, 1996), exploit new opportunities (Bakar & Ahmad, 2010) and attain competitive advantage (Naranjo-Valencia et al., 2016).

O'Toole (1997) defined innovation as the adoption or generation of new ideas, objects or practices. It is a means for an organization to change, either as pre-emptive actions to affect the environment or in response to changes in the external environment. Therefore, the innovation here is generally defined as covering various components, including new organizational structures, new process technologies, new products or services or new programs or plans for an organization's employees.

According to Avermaete, Viaene, Morgan, and Crawford (2003), there are four types of innovation: market, organizational, process and product innovation. Organizational innovation refers to the creation or adoption of new ideas or new behavior in the organization (Damanpour, 1996). According to Gunday, Ulusoy, Kilic, and Alpkan (2011), it is strongly connected to all administrative efforts to renew organizational procedures,

routines, systems, mechanisms, etc. It is deemed a source of sustainable competitive advantage (Amarakoon et al., 2018; Aziz & Samad, 2016; Naranjo-Valencia et al., 2016; Nishitani & Itoh, 2016; Salunke et al., 2019) and a catalyst for growth in business and the economy. Organizational innovations have a tendency to improve organizational performance by decreasing transaction and administrative costs, enhancing the satisfaction of employees within the workplace, attaining access to non-tradable assets or decreasing the cost of supplies (Avermaete et al., 2003). It includes changes to organizational structures and administrative processes relating to the basic work activities of an organization and its management, which ultimately leads to generating new products and processes (Chang, Chang, Chi, Chen, & Deng, 2012).

Although innovation is of great interest to both private and public organizations (Aas, Jentoft, & Vasstrøm, 2016; Sucupira, Saab, Demo, & Bermejo, 2018), in the public sector it is viewed differently from innovation in the private sector. Aas et al. (2016), Borins (2002) and Audenaert et al. (2019) argued that innovation in the public sector is confronted with many obstacles due to monopolies and lack of competitive pressure to innovate. Bureaucratic measures and red tape by central agencies are further barriers to employees' innovation.

Innovation in public organizations is receiving increasing academic interest. Case studies have focused on many fields, such as civic environmentalism (John, 1994), healthcare (Pillay & Morris, 2016), educational choice (Roberts & King, 1996) and policing (Bond & Gabriele, 2018; Menelau, Akutsu, Isidro-Filho, & Fernandes, 2019; Sparrow, 1994). The fundamental concentration of innovation in the public organization has been on methods and strategies to decrease or minimize the use of their resources and privatize government functions, not on the influence and effectiveness of innovation itself. Many researchers have pointed out the lack of attention to the effect of the set of innovations (Christensen & Lægreid, 2006). Thus, Damanpour (1991) recommended expanding the scope of innovation studies to include an evaluation of the consequences of innovation.

Regarding innovation in police agencies, several authors and practitioners have pointed out that improving performance through innovation is rarely straightforward. In these agencies, resistance to change is high and police officers often experience difficulty in implementing new programs (Capowich & Roehl, 1994; Sadd & Grinc, 1994; Sparrow, Moore, & Kennedy, 1990). The available clues to the main dimensions of police performance associated with eight innovations, including crime control effectiveness and community satisfaction with services provided, are also surprisingly limited (Braga & Weisburd, 2006). However, it has been demonstrated that innovation among the police can prevent crime and can improve their relationship with the communities they serve (Weisburd & Braga, 2006).

2.2 Strategic planning

Planning is the process of formulating an organization's goals and objectives and determining how to fulfil them within a specific period of time. It is a proactive action for determining the required performance (Hofer & Schendel, 1978). The essential task of strategic planning is to see that everybody understands the organization's purpose and objectives and the methods to attain them. If the organization's efforts are to be effective, people must know what they are expected to do. Thus, planning aims to identify the mission, vision and goals of an organization, as well as to determine actions and resources to accomplish them (Oyedijo, 2004).

Wilkinson and Monkhouse (1994) defined strategic planning as, "a method used to position an organization, through prioritizing its use of resources according to identified goals, in an effort to guide its direction and development over a period of time." Strategic planning is one of the most important tools of management (Aldehayyat, 2011) that helps

organizations to deal with various changing aspects in the environment to confront competitors and gain a competitive advantage (Al-Shaikh, 2001). Oktafiga (2015) stated that strategic management is a process that involves a full set of top management commitment in setting firms' long-term vision; it involves strategic decisions followed by the implementation of strategic actions to achieve strategic competitiveness and to earn an above-average return and sustained competitive advantage (Oktafiga, 2015).

Organizations can achieve many benefits through practicing strategic planning. Al-Shaikh (2001) and Posch and Garaus (2019) mentioned that strategic planning has a role in enhancing innovation, motivation, increasing internal communication, stimulating new ideas, generating information, evaluating the environment of the organization and ensuring comprehensive consideration of all suitable options. Long-term planning is essential for all small and large organizations. Therefore, failing to practice strategic planning loses organizations the advantages and opportunities that await them (Steiner, 1967).

The literature reports that strategic planning has a substantial effect on an organization's financial success (Armstrong, 1982; Katz & Green, 2009; Kylaheiko, Puumalainen, Sjögrén, Syrjä, & Fellnhofer, 2016). A similar result is also concluded by Sexton and Van Auken (1985), who asserted that lower levels of strategic planning in organizations lead to a higher percentage of failure, and vice versa: high levels of strategic planning lead to a lower percentage of failure. This reveals that strategic planning can help organizations to survive. In addition, the value of strategic planning for organizations is proved by Singhvi (2000), who highlighted that the key to the success of organizations is having appropriate strategic planning.

In the public sector, strategic planning involves diverse activities, such as identifying goals and objectives, setting tasks and activities, identifying main issues, setting strategies and procedures for each specific issue, building teams, controlling results and evaluating alternatives (Bryson, 2018; Kemp, 2018; Salkic, 2014). According to Bryson (2018), there are five advantages of strategic planning in public organizations:

(1) enhancing strategic thinking and actions within the organization;
(2) improvement of the organization;
(3) improvement of the decision-making process;
(4) improvement in the results and work; and
(5) employees getting benefits.

Kemp (2018) and Salkic (2014) added that strategic planning assists decision-makers in these organizations to address the challenges and significant issues. It also has a role in formulating goals and objectives and making decisions that meet the organization's future vision. However, there is a shortage of studies that focus on strategic planning and its impact on police performance. Therefore, this study is an endeavor to bridge the gap by testing this relationship.

2.3 Organizational performance

Organizational performance has been defined as a set of achievements gained after implementing a set of practices. Measuring performance means assessing the achievements resulting from the implementation of a set of practices (Neely, Gregory, & Platts, 2005). In other words, performance measurement is a process of assessing progress toward achieving predetermined objectives. Through measurement, an organization evaluates and improves its production processes, and assessing the achievements appropriately is critical.

Inappropriate performance measures may not only to undermine but also misrepresent the organization's efforts (Upton, 1998).

Throughout its history, performance measurement systems have undergone a revolution, as explained by Neely et al. (2005) and Ghalayini and Noble (1996), from a purely financial emphasis to comprising more comprehensive business characteristics. According to Ghalayini and Noble (1996), the development of performance measurement was divided into two phases. The first phase purely emphasized financial performance measures such as profit, return on investment, price variances, return on sales and sales per employee. This performance was formally reported as financial outcomes (Abdel-Maksoud, Dugdale, & Luther, 2005). However, Schonberger (1996) argued that financial data were not the best measures of a manufacturing company's strength and prospects. Just as non-financial indicators (such as quality, flexibility, etc.) cannot be quantified accurately, so financial performance measures may produce misleading information that could undermine the achievement of a company's strategic objectives (Bhasin, 2008). Thus, they are not suitable for making strategic decisions. In other words, financial performance may not be relevant to practice because it is attempted to quantify performance in financial terms, whereas most of the improvements on the shop floor are unsuitable to be quantified in dollars (Ghalayini & Noble, 1996). Hence, traditional performance measures may not support continuous improvement efforts in a plant.

In the second phase of its evolution various scholars, most notably Kaplan and Norton (1992), claimed that some shortcomings have been found in financial measures, such as imbalance, lack of precision and neutrality, focusing only on historical data and the short term, all of which fail to reflect organizational performance and strategic issues. Therefore, many academicians and practitioners tend to use indicators that focus on both financial and non-financial indicators to evaluate performance (Grawe, Chen, & Daugherty, 2009; Saunila, Pekkola, & Ukko, 2014; Wadongo, Odhuno, Kambona, & Othuon, 2010). For example, the balanced scorecard (BSC) method has been generated to provide a balanced measurement by which to evaluate organizational performance. Accordingly, the BSC has retained the financial measures and added three other perspectives (customer, internal process and learning and growth) to achieve a balanced measurement (Kaplan & Norton, 1992, 1996).

Although the majority of the studies on BSC have focused on the private sector, some have indicated that the public sector has adopted BSC successfully, even though performance depends on different their goals and core business (Northcott & Taulapapa, 2012; Wilson, Hagarty, & Gauthier, 2004). While the private sector intends to increase profit and enhance value for customers, the public sector intends to improve performance, customer satisfaction and quality (Serrano Cinca, Mar Molinero, & Bossi Queiroz, 2003). Governments are looking to improve their performance in terms of corruption prevention and accountability, strengthened integrity, transparency, client satisfaction, citizen participation, use of public resources and program outcomes (Ashour, 2004). Ashour further pointed out that these reforms are crucial for enhancing public sector performance, for development, protecting the public performance and strengthening the government's role in providing basic services to citizens.

Measuring performance in the public sector is nevertheless an integral part of the management process, to evaluate whether strategic objectives are being met, if any major problems exist, and how to solve and improve them in the future (Kanji & Sa, 2007). In addition, public organizations at the present time consider the use of performance measurement as an important move toward service quality and providing value for money (Morgan & Murgatroyd, 1994). Eskildsen, Kristensen, and Jørn Juhl (2004) found that

private and public organizations achieve excellent results in different ways; therefore, the results of studies on the private sector cannot be generalized to the public sector.

Some studies have indicated that BSC can be adopted as a model to measure organizational performance in police agencies (Najafi, Aryanegad, Lotfi, & Ebnerasould, 2009). BSC can cover and measure all of the aspects of police agencies, achieving strategic goals, enhancing the use of resources in creating preferred outputs, and obtaining balance and cause and effect from BSC perspectives (Najafi et al., 2009). Therefore, this study will apply BSC to evaluate the organizational performance of the Dubai Police.

2.4 Relationship between innovation and organizational performance

Many studies have asserted that innovation is the most critical factor in improving organizational performance (Wheelwright & Clark, 1992) and long-term success (Scott, Van Reenen, & Zachariadis, 2017). It has a significant role to play in improving productivity and increasing the efficiency of production (Baumann & Kritikos, 2016; Mansury & Love, 2008), enhancing revenue (Shefer & Frenkel, 2005) and increasing the firm's value (Bowen, Rostami, & Steel, 2010). In addition, innovation enables organizations to provide a greater variety of differentiated products that can increase financial performance (Hitt, Ireland, Camp, & Sexton, 2001).

Many scholars have pointed out that innovation has an impact on organizational performance (Bowen et al., 2010; Cai & Li, 2018; Cainelli, Evangelista, & Savona, 2006; Calantone, Cavusgil, & Zhao, 2002; Damanpour, Walker, & Avellaneda, 2009; Davila, Varvakis, & North, 2019; Garcia-Morales, Matias-Reche, & Hurtado-Torres, 2008; Grawe et al., 2009; Gunday et al., 2011; Hilmi et al., 2010; Keskin, 2006; Khin & Ho, 2019; Liao & Rice, 2010; Li & Atuahene-Gima, 2001; Mansury & Love, 2008; Panuwatwanich, Stewart, & Mohamed, 2008; Rhee et al., 2010; Rosman, Suffian, Marha, Sakinah, & Mariam, 2018; Tajuddin, Iberahim, & Ismail, 2015). These studies have been carried out across different economic sectors around the globe. For instance, Bommer and Jalajas (2004) claimed that greater innovation assists organizations to attain sustainable competitive advantage, improve organizational performance and respond to changes and challenges. Further, speed of innovation gives organizations an opportunity to attain a greater market share, which can lead to high profitability and income (Garcia-Morales et al., 2008). McMillan (2010) denoted that innovation brings efficiency and effectiveness, i.e. the two main criteria influencing success and long-term survival. Adopting an innovative culture can establish "isolation mechanisms" as the knowledge generated from innovation becomes unavailable to competitors (Aragón-Correa, García-Morales, & Cordón-Pozo, 2007); this feature permits the organization to improve its performance, achieve more profits, and gain and maintain a competitive advantage. In addition, a study by Tajuddin et al. (2015) reported that innovation has a substantial role in improving organizational performance. Thus, greater innovation allows an organization to better respond to the environment, improve its capabilities and maintain a competitive advantage (Calantone et al., 2002; Salunke et al., 2019).

As for innovation in the public sector and its impacts on organizational performance, there are several limitations in studying this relationship, given the scarcity of available empirical studies (Audenaert et al., 2019; Damanpour et al., 2009; Walker & Damanpour, 2009). Nor have current studies specifically investigated the performance outcomes of innovation, which, therefore, provides clues to uphold the idea that innovation may have different effects on several aspects of organizational performance, findings that reinforce the studies of Walker (2005) on private and public sector innovation and their impact on organizational performance. Some evidence has been offered that even though success

through innovation is not guaranteed and is risky, its adoption can promote organizational performance. According to the above discussion, the following hypothesis is postulated:

H1. There is a positive and significant effect of innovation on organizational performance.

2.5 Relationship between strategic planning and organizational performance

Practising strategic planning in organizations has a role in improving performance. Studies have indicated that organizations, which adopt strategic planning record better performance and effectiveness than those that do not (Greenley, 1986; Hofer & Schendel, 1978; Miller & Cardinal, 1994). Strategic planning clarifies the direction of the organization, controls its activities, and enhances coordination between its departments and employees (McCarthy & Minichiello, 1996).

Veskaisri, Chan, and Pollard (2007) indicated that a sustainable basis for generating and preserving competitive advantage depends on strategies that clearly define all of these aspects, which in turn, lead to reinforcing organizational performance. Dauda, Akingbade, and Akinlabi (2010) indicated that best practices of strategic management contribute to boosting both market share and profitability of the organization; for that they propose the adoption of the concept of strategic planning by organizations to gain these benefits.

Greenley (1994) said that strategic planning enhances the efficiency of management practices, which, in turn, are reflected positively in organizational performance. A good strategic planning system can help organizations to connect their long-term goals to their operational plans and short-term objectives (Falshaw, Glaister, & Tatoglu, 2006), coordinate and unify actions to attain efficiency and improve effectiveness, combine their business systems and evaluate strategic direction, all of which will reflect positively in organizational performance (Andersen & Nielsen, 2009). Strategic planning can also assist organizations to manage any instability of the environment (Boyd, 1991), which enables them to outperform competitors (Falshaw et al., 2006). In the same way, Capon, Farley, and Hulbert (1994) pointed out that adopting strategic planning can help organizations to enhance their performance by taking into account environmental adaptation and adopting systematic thinking to deal with strategic issues.

On the other hand, many studies have reported contradictory results (Elliott, 2016; Falshaw et al., 2006; Ghobadian, O'Regan, Thomas, & Liu, 2008; Gică & Negrusa, 2011; Miller & Cardinal, 1994; Yusuf & Saffu, 2005). Armstrong (1982) argued that these contradictory findings are to the result of serious research problems. He asserted that the description of the planning techniques is critical in strategic planning studies, to evaluate the value of the planning in a scientific manner. Other studies have indicated that the role of strategic planning to improve performance is contradictory and inconsistent (Pearce, Freeman, & Robinson, 1987). They have doubts about the ability of researchers to understand the impact of strategic planning on organizational performance as a result of limitations in the methodology adopted. Boyd (1991) indicated that the relationship between strategic planning and organizational performance is modestly positive. He argued that these results are due to measurement errors in the studies, which have led to an underestimation of this relationship. According to the above discussion, the following hypothesis is postulated:

H2. There is a positive and significant effect of strategic planning on organizational performance.

3. Methodology

To test the hypothesized model, this study used a survey questionnaire research design and quantitative methodology approach. In total, 150 questionnaires were distributed by drop-off to the targeted respondents in the Dubai Police. Dubai Police is a large organization with more than 24,000 employees (Chu, 2017). Dubai Police was also the first department in the region that practiced these tools by establishing a total quality department that focuses and maintains quality and encourages innovation in all the Dubai Police departments and stations. Based on that Dubai Police were chosen as a scope for this study. Moreover, the SPSS software and the partial least square structural equation modeling (PLS-SEM) were used to analyze the data collected.

3.1 Measure

Previous literature was the source of the techniques for measuring the variables. Organizational performance measures were based on the BSC developed by Kaplan and Norton (1992). Many studies were used BSC to measure organizational performance (Habidin, Yusof, & Fuzi, 2016; Mehralian, Nazari, Nooriparto, & Rasekh, 2017). The indicator items used in this study were adapted from the study by Mafini and Pooe (2013) in their study in government social services departments in South Africa. The questions on innovation were adapted from Pinar and Girard (2008) and strategic planning measurements from Samson and Terziovski (1999). Appendix includes a list of items used in this study. A five-point Likert scale was used to measure the responses, ranging from "1" (strongly disagree) to "5" (strongly agree).

3.2 Sampling design and data collection procedures

A drop-off questionnaire was distributed to sample 150 managers in the Dubai Police. The original language of the questionnaire, translated into Arabic language by a bilingual person. The Arabic version was re-translate into English by another bilingual person, to detect any modifications and changes by comparing the two English versions, and therefore, ensuring the validity and reliability of the instrument as recommended by Brislin (1986).

The sampling method used was a proportionate stratified random sampling. The reason for using this method is the nature and hierarchy of the Dubai Police, which has many general departments and police stations. This technique provides a sample that is highly representative of the population being studied and enables the researcher to generalize the results obtained for the total population. The selection of random samples was done using the Randomizer program available online and Microsoft Office Excel 2013.

To determine the minimum sample size, Hair, Hult, Ringle, and Sarstedt (2014) recommended running a power analysis test. *A priori* power analysis was carried out using G*Power 3.1.9.4 software (Faul, Erdfelder, Lang, & Buchner, 2007). Based on some recommended statistical parameters (Faul, Erdfelder, Buchner, & Lang, 2009): medium effect size f^2 (0.15), an alpha significance level (α err prob, 0.05); power ($1 - \beta$ err prob; 0.95), two predictors (i.e. strategic planning and innovation) and three main numbers of predictors as total (i.e. strategic planning, innovation and organizational performance), a minimum sample of 107 would be required to test a regression-based model (Figure 1).[AQ3]

Although the result of *a priori* power analysis in Figure 1 indicates a minimum of 107 participants would be needed for this study, to avoid the issue of low response rate, it became necessary to contemplate other means to determine a larger sample size. Therefore, the sample size was determined using Krejcie and Morgan's (1970) method. As the population size was 243 managers, the sample size was deemed sufficient at 150.

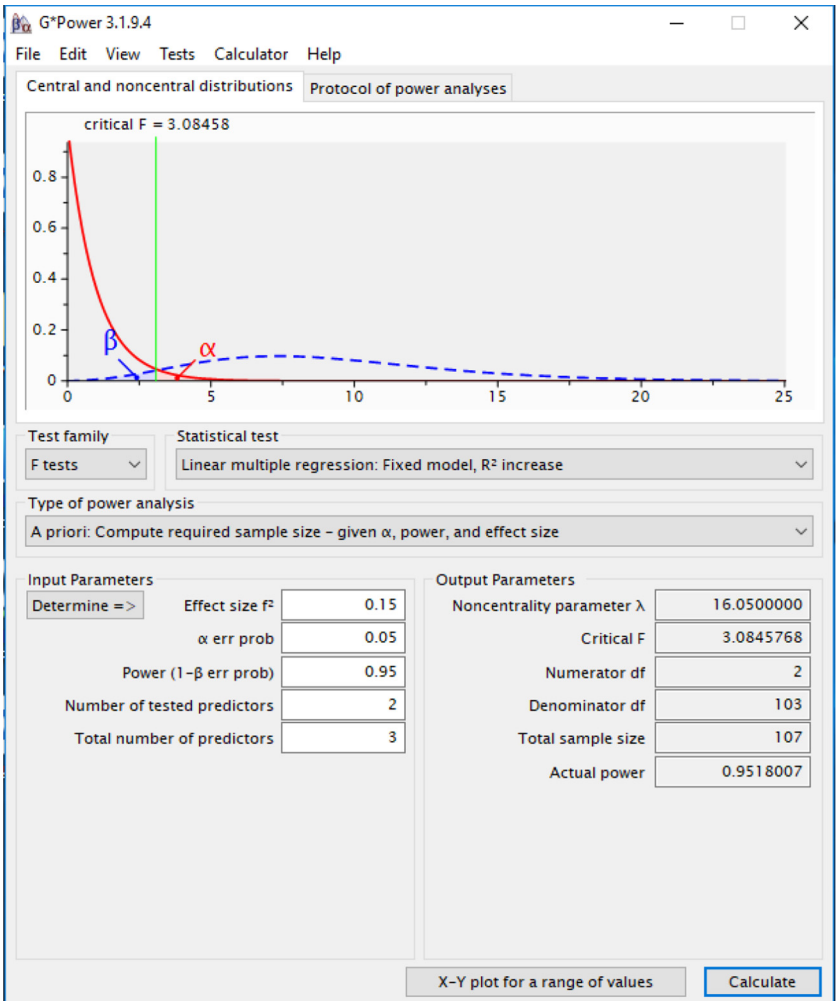

Figure 1. Screen of the software G*Power 3.1.9.4 with the calculation of the minimum sample of the study

The questionnaires were personally distributed to the respondents in the second week of January 2018. The respondents were asked to complete the questionnaire within ten days, during which follow-up phone calls were made as reminders. After ten days, the researcher collected the completed questionnaires; the remainder were considered as unreturned. A total of 150 questionnaires were distributed and 95 completed and returned, a 63 per cent response rate.

3.3 Research framework

The framework contains of indigenous variables (organizational performance) and two exogenous variables (innovation and strategic planning) as shown in Figure 2. In this framework, there are two relationships between the independent and dependent variables: between innovation and organizational performance, and between strategic planning and

organizational performance. These relationships were hypothesized, as shown above, to test the conceptual framework of the study. The hypothesized relationship was based on the resource-based view (RBV) that suggests organizations are able to achieve better performance through the effective use of their organizational resources and capabilities than are their competitors. Innovation and strategic planning are capabilities that can affect organizational performance.

4. Data analysis

All data collected were coded in SPSS. A preliminary analysis was conducted for the second stage of data collection, to ensure the results obtained were valid. The preliminary analysis includes screening for missing values, outliers and normality. The data were then analyzed using SPSS and SmartPLS. A two-step approach was applied: the measurement model and the structural model.

4.1 Demographic analysis

Table I below shows the demographic information of respondents. Most of the respondents (80 per cent) are male. Qualification is classified into four categories. Most of the respondents have a college degree (66.3 per cent) or a postgraduate degree (26.4 per cent), which indicates good knowledge to test the proposed hypotheses; 6.3 per cent have only high school level and 1 per cent below this. Experience level is classified into three levels: 57.9 per cent of the respondents have experience of more than 10 years, the rest divided almost equally with 6-9 years (20 per cent) and 0-5 years (22.1 per cent). It is an advantage in this study to have received responses from such a high proportion of highly qualified and experienced employees.

4.2 Descriptive analysis

Table II shows the results of the descriptive analysis. Strategic planning has the highest mean (4.003) and the second lowest standard deviation (0.664), indicating a good level of awareness of employees about the importance of strategic planning for improving

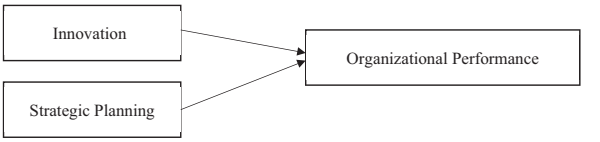

Figure 2.
Study framework

Table I.
Participants' demographic information

Demographic variable	Category	Frequency (N = 95)	(%)
Gender	Male	76	80
	Female	19	20
Qualifications	Under high school	1	1
	High school	6	6.3
	College degree	63	66.3
	Graduate studies	25	26.4
Experiences	0-5 years	21	22.1
	6-9 years	19	20
	10 years or more	55	57.9

organizational performance. The second highest mean is innovation (3.940) with the highest standard deviation. Organizational performance has the lowest mean and standard deviation of all the variables, which indicates a comparative lack of awareness about its role.

4.3 Test of normality

As suggested by Cain, Zhang, and Yuan (2017) and Hair, Hult, Ringle, and Sarstedt (2017), normality should be assessed before testing the data, for multivariate skewness and kurtosis. Webpower software, available online, was used for this. The results showed that the data collected was not multivariate normal; Mardia's multivariate skewness ($\beta = 8.497$, $p < 0.01$) and Mardia's multivariate kurtosis (61.76, $p < 0.01$) confirmed the data was not normal. SmartPLS was, therefore, used to analyze the research model as it is a non-parametric analysis software.

4.4 The measurement evaluation

Convergent and discriminant validity were tested to evaluate the measurement model. Convergent validity is the degree to which a group of items converges to measure a specific construct (Hair, Anderson, Tatham, & Black, 2010). It can be examined by Cronbach's alpha, composite reliability and the average variance extracted (AVE). The cut-off value for Cronbach's alpha and composite reliability should be at least 0.7, and AVE values at least 0.5. Table III illustrates that all three values are above the recommended threshold.

Discriminant validity is the measurement of which construct is totally distinct from other constructs. The high value of discriminant validity provides evidence that the construct is exclusive and captures some elements, which other measures do not display (Hair et al., 2010). It can be measured using AVE against the correlation square. The absence of multicollinearity occurs when AVE values are greater than the correlation square (Fornell & Larcker, 1981; Hair et al., 2010). However, any cross-loading between items is an indication that there is a problem of discriminant validity (Hair et al., 2010).

Discriminant validity for this model was measured using Fornell–Larcker's criterion, as suggested by Hair et al. (2017). This technique suggests that the variance extracted estimates should be greater than the squared correlation estimate indicated for any two constructs (when compared with the correlation values from the row and column) and needs to be larger than the square root of AVE. If the values represented by any result confirm these criteria, therefore, the framework developed to reach its discriminant validity, hence

Construct	*N*	Minimum	Maximum	Mean	SD
Organizational performance	95	1.00	5.00	3.653	0.608
Strategic planning	95	1.00	5.00	4.003	0.664
Innovation	95	1.00	5.00	3.940	0.821

Table II. Descriptive statistics of the constructs

	Cronbach's alpha	Composite reliability	AVE
Innovation	0.886	0.929	0.814
Organizational performance	0.784	0.859	0.604
Strategic planning	0.781	0.860	0.607

Table III. Construct reliability and validity

quality for further analysis. Table IV below exhibits the Fornell–Larcker criterion; the results show discriminant validity was achieved.

4.5 The structural model

To test the hypotheses, many techniques and approaches can be used. In this study, both hypotheses were tested to discover the direct effect of the independent variables on the dependent variable. Therefore, SmartPLS's bootstrapping was used to test the proposed hypotheses.

Table V below depicts the results, showing that innovation has a positive and significant effect on organizational performance at the 0.05 level of significance ($\beta = 0.239$, $t = 2.944$, $p < 0.005$). Similarly, the relationship between strategic planning and organizational performance is positive and significant at the 0.001 level of significance ($\beta = 0.545$, $t = 7.111$, $p < 0.001$). Therefore, the results support both hypotheses, *H1* and *H2*.

5. Discussion and conclusion

High-quality performance is the most important factor that organizations are looking for and striving to achieve. To achieve the best organizational performance, they need to implement innovative strategies and practices. Innovation and strategic planning are considered as the most important drivers in enhancing overall performance, and the effects of both were examined in this study, with various results. The effect of innovation on organizational performance is positive and significant ($\beta = 0.239$, $t = 2.944$, $p < 0.005$), and therefore, *H1* is supported. This result is in line with many studies in the previous literature (Rosman et al., 2018; Tajuddin et al., 2015).

The study predicted a positive relationship between strategic planning and organizational innovation, and this received empirical confirmation ($\beta = 0.545$, $t = 7.111$, $p < 0.001$), supporting hypothesis *H2*. This result is consistent with many previous studies that have found a positive and significant effect of strategic planning on organizational performance (Aldehayyat & Twaissi, 2011; Arasa & K'Obonyo, 2012; Boyd, 1991; Gică & Negrusa, 2011; Glaister, Dincer, Tatoglu, Demirbag, & Zaim, 2008; Pollanen, Abdel-Maksoud, Elbanna, & Mahama, 2017; Suklev & Debarliev, 2012; Wolf & Floyd, 2017).

These findings strongly support the RBV theory that innovation and strategic planning provide valuable insight into managers' role in applying these elements in their daily tasks,

Table IV. Discriminant validity

	Innovation	Organizational performance	Strategic planning
Innovation	0.902		
Organizational performance	0.591	0.777	
Strategic planning	0.645	0.699	0.779

Source: Fornell-Larcker Criterion

Table V. Hypothesis testing

H	Hypothesis	β	*t*-value	*p*-value
H1	Innovation → organizational performance	0.239	2.944	0.003
H2	Strategic planning → organizational performance	0.545	7.111	0.000

leading to competitive advantage, and hence, sustaining their business success. That is, the findings imply that innovation and strategic planning are an important driver of organizational performance as they can trigger the organization into innovative and proactive actions.

This study contributes to the literature, both theoretically and practically, by identifying multiple ways through which organizational resources and capabilities impact the organizational performance of police agencies. Generally, the theoretical value of this research is that it has established the relevance of the RBV theory in explaining the interaction between innovation, strategic planning and organizational performance in a single model. Indirectly, it provides a new direction in research on the predictors of organizational performance in the context of police agencies.

There are significant benefits for researchers who can better understand how innovation and strategic planning drive police performance. This is essential, as police agencies have too long been treated by researchers as organizations outside strategic planning or innovation; in fact, innovation and strategic planning are critical for police agencies. Fast transformation puts strong pressure on available resources and organizational systems, which, in turn, influences the actions of managers and employees. Thus, the close link between the two fields will bring new knowledge to spur police activities. Moreover, this study attempted to narrow the gap in previous studies, which have examined these relationships in the context of police organizations. In practice, the results can be used by managers, practitioners and decision-makers of other public and private organizations.

This study has implications for decision-makers in police agencies on how to deal with organizational resources and how to improve their organizational performance. As innovation is key in affecting organizational performance and an important source of competitive advantage, a special emphasis should be given to fostering an innovation culture in. The management must recognize the important role of strategic planning in police agencies, which can lead to improving organizational performance. This means that these practices should be in place for such a culture to develop. That is, the decision-makers in police agencies need to recognize the potential of innovation and strategic planning practices in adding value to their agencies. Therefore, it is expected that the new empirical findings of this study can serve as a stimulus to the management of police agencies, by taking them into consideration.

Finally, this study has focused on the effect of innovation and strategic planning on organizational performance in the Dubai Police. Hence, this study could be extended to other organizations in both the public and private sectors. Studying such model that combines these practices in other organizations particularly that manufacturers by nature could be concluded interesting results.

The cross-sectional approach was used to collect the data at a point of time. Because of the complicated joint impact of innovation and strategic planning on organizational performance, longitudinal research could be used to clarify and explain the complicated relationships over a long period. This approach can detect the changes in the association among the variables through over time. Another limitation of the study concerns the research design, which restricted the researcher to detect the dynamic associations between the variables over time.

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Appendix

Table AI. List of total scale items to measure variables of the study

Organizational performance measure	
OP1	Resources are managed efficiently in our department
OP2	Our department is always able to meet its financial goals
OP3	Our section is able to meet our client demands
OP4	Most of our department's clients are satisfied
OP5	Programs are implemented speedily
OP6	The level of wastage in our department is low
OP7	Our department has successfully developed the procedure to improve the quality of service offered
OP8	We have ample opportunities to make independent decisions
Strategic planning measure	
SP1	In our department, we have a mission statement, which has been effectively communicated to all the employees and gained their support
SP2	In our department, we have comprehensive planning process, which sets and reviews short and long-term goals
SP3	Our plans focus on the achievement of the best practice in the other police departments
SP4	When we develop our plans, policies and objectives, we always incorporate customer requirements and the needs of all stakeholders, including the community
Innovation measure	
IN1	Our department encourages employee innovation
IN2	Our employees seldom provide new product ideas
IN3	Our employees often provide new operational ideas
IN4	Our company believes in experimenting with new ideas

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