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The Mediating Effect of Technological Innovation on The Relationship Between Privatization of Saudi Airports and Employee Performance Dynamics

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ABSTRACT

Privatisation of Saudi airports is focused on improving the functionality of the trade routes and achieving sustainability in the aviation industry. Technological innovation is one of the crucial elements that help in the process of privatisation, as well as employee performance dynamics. Apart from that, technological innovation is also the result of unique business performance in the competitive marketplace. Therefore, this study seeks to explore the mediating effect of technological innovation on the relationship between privatisation of Saudi airports and employee performance. This paper's objective is to use global examples to analyse the effects of this growth and determine its efficacy. It starts by examining various important topics, including the degree of government participation, the choice of administrator or shareholder, the decision between group compared to individual activities, and the applicability of economic legislation. Reviewing the privatisation process, the article identifies significant shifts in the way privatisation is seen today in contrast to in the past with regard to motive, geographical scope, model category, shareholder, and transaction. This paper has examined the mediating impact of technological innovation by collecting data through a close-ended survey questionnaire from 402 employees, who are working in Saudi Arabia airport. Interpreting all of the items through IBM SPSS software, a high reliability value has been identified that refers to a minimal measurement error in this research work. The generated findings have supported this research work to draw a valid and reliable research outcome.

Keywords: Technology, Innovation, Productivity, Globalisation, Aviation

INTRODUCTION

Privatisation of airports can influence the productivity of the employees negatively [1]. Additionally, it can also encourage negative attitudes among the employees towards the management after the privatisation. Factors such as labour standards, employee rights, leadership, flexibility, and digitisation are incorporated together in the privatisation process. This indicates significant changes in the performance of the employees. The privatisation of four airports in Saudi Arabia in 2025 has brought significant changes in the management approaches. However, the minister of investment of Saudi Arabia has stated that this privatisation is necessary for achieving the required flexibility in the operations of the selected airports [2]. One of the major objectives for this type of privatisation is expansion of the logistical capabilities of the airports. The minister of investment has indicated that the airports in Saudi Arabia are pivotal communication between the Western and eastern countries. Additionally, changes in the management policies and operations will provide the required efficiency to manage the increasing number of religious tourists in the country.

The spokesperson of Saudi Arabia has stated in the global logistics forum that the country is committed to positioning itself as one of the leaders of global green energy. Additionally, they are trying to increase the strategic importance of the airports in Saudi Arabia so that the trade routes between the Western and eastern countries can be optimised. This indicates that the decision for privatisation of the selected airports is very important for the country [3]. Additionally, it can reduce the pressure on the seaports in Saudi Arabia. Almost 80% of the regional transports in the Middle East are managed by the seaports in Saudi Arabia. Increasing number of tourists and friend requirements indicate that the airports must be modernised with sustainable technology for better functionality. Modernisation of airports with sustainable technology requires significant financial investment. Therefore, privatisation of these airports is found to be one of the most efficient options for the government of Saudi Arabia.

Privatisation of Airports has been conducted by many countries to embrace liberalisation and globalisation. Airports of the western countries have achieved significant financial and operational efficiency after privatisation. Privatisation of Berlin Brandenburg has helped significantly in its modernisation. Although the modernisation program was halted at its stage due to managerial issues, it was able to achieve almost all the objectives as efficiently as possible [4]. Similarly, privatisation of airports in the United States of America is the key reason to optimise the level of transportation and trade in the country. It has also helped the United States to focus on developing more trade relations with the countries in South America.

The approaches adopted by the airports in the western countries such as Germany and the United States of America can be considered as a benchmark by the airports in Saudi Arabia for better management. However, it is necessary to understand that significant managerial changes can be experienced by the workforce of the airports after privatisation. Most of the private investors try to implement new work ethics and labour standards so that they can optimise the functionality and profitability of the airports [5]. Additionally, availability of technology can also be a challenge to achieve the sustainable goals for this privatisation process. Therefore, it can be stated that the problems that can be faced by the management of the selected airports after privatisation must be analysed and identified. This way, it will be possible to develop the problem statement for the study. The opinion presented by previous researchers in academic literature can also be included for supporting the seriousness behind the problems.

Although availability of technology can create complexity in the privatisation process, the Government of Saudi Arabia has the financial resources to procure any technology from the western countries. Additionally, good relations with countries such as the United States of America, the United Kingdom and the countries in the European Union can also be useful to address this issue. Therefore, addressing this problem is not crucial as it can be minimised and mitigated properly by the management of the airports [6]. However, one major challenge that can be faced by the management of the selected airports is the changes in the work process. Changes in the work process can influence the attitude of the employees towards the management of the airports negatively. Additionally, the work efficiency of the employees can also be reduced significantly due to the lack of experience in using advanced sustainable technologies. Therefore, it is necessary to select this issue as the problem statement for the study so that suitable solutions can be developed.

The factors that are associated with the decreasing performance of employees after privatisation are employee motivation, dynamics of innovation, changes in regulations, and others. All these factors are directly associated with the privatisation of Saudi airports. Therefore, it is necessary to select these factors as the constructs of the privatisation of Saudi airports so that their impact on the performance of the employees after privatisation can be analysed in this study [7]. Additionally, collaboration with tech companies can be beneficial for the management of the airports as they will be able to train the employees regarding the usage of advanced sustainable technologies. This can be helpful in motivating the employees to work harder under the new management framework. Therefore, it is understandable that technological innovation can be considered as a tool to mediate the relationship between the constructs of privatisation of Saudi airports and the performance of the employees after privatisation.

The nature of the problem and its relationship with the employees of the airports indicates that the data required for the analysis in this study must be collected by observing the employees. This way, it will be possible to understand the attitude of the employees towards the management of the airports after privatisation [8]. Additionally, this study requires construction of hypotheses by using the relationship between privatisation of Saudi airports and the performance of the employees after privatisation. The mediating role of technological innovation in influencing this relationship must be evaluated to understand the possibility of using this factor as a mitigation strategy for the identified problem. Therefore, it is necessary to analyse the independent and dependent variables related to the research problem and the variable with mediating role in the relationship between independent and dependent variables is also required to be examined to understand all the factors associated with these variables.

Saudi airport privatisation

Privatisation of airports in Saudi Arabia can be defined as sharing equity of the airports with the private investors. This can be considered as an alignment of strategic vision of the private partners and the Government of Saudi Arabia. The focus of the Saudi government behind this privatisation effort is to optimise the performance of the airport so that the dependency on the seaports can be minimised. Additionally, it has helped Saudi Arabia to develop trade networks with different countries in the Middle East. Similarly, existing trade networks with the western countries and eastern countries were strengthened [9]. Therefore, it is understandable that the focus of the Government of Saudi Arabia was to increase the flexibility of the airports. The objectives of this privatisation effort can be categorised as job creation, investment attraction, tourism & connectivity, operational efficiency, and economic diversification. Implementation of sustainable energy sources in the privatised airports has been helpful for the Saudi government to reduce its dependence on traditional sources. Similarly, experience of the private players has played a key role in improving the operation of efficiency of the airports. Similarly, the investors from the western countries were attracted due to this privatisation and foreign direct investment in Saudi Arabia has been increased.

This privatisation process includes the formation of different holding companies in Saudi Arabia owned by both Arab and western companies. This has increased partnership between the Arab and western companies to a significant level. The Government of Saudi Arabia was able to develop infrastructure required for the privatisation rapidly due to the involvement of foreign companies. Additionally, it was possible to provide jobs for citizens of Saudi Arabia under the privatisation process. Therefore, it can be stated that this privatisation process was beneficial for the government in Saudi Arabia and the private companies involved in the formation of the holding companies in the country. The government has developed separate strategies for managing different airports. For example, the King Abdulaziz international airport in Jeddah is managed by a public private partnership program so that the hold of the Saudi government can be maintained. On the other hand, the King Khalid international airport in Riyadh is being managed under the long-term agreements of private companies with the Saudi government.

Employee performance

Employee performance can be defined as the productivity and flexibility of the employees to fulfil their responsibility. This is one of the most influential factors for achieving sustainability in the business operation. Therefore, it is necessary for the privatised airports in Saudi Arabia to focus on improving the performance of the employees to achieve the sustainable goals of the privatisation process. Different factors associated with the privatisation process can influence the performance of the employees. For example, changes in the management can influence the mind-set of the employees both positively and negatively. Similarly, the labour standards under the influence of private companies have increased significantly. Therefore, many employees are not suitable to work in the privatised airports, as they are not capable of fulfilling the responsibilities as required.

Integration of sustainable technologies under the privatisation process can also be considered as a challenge for the previous employees due to their lack of experience. It can be speculated that the performance of the employees after the implementation of such technologies can be decreased, as the employees will not be able to manage those technologies as efficiently as possible. This indicates that employee performance is one of the most crucial factors for the airports in Saudi Arabia. It is necessary to analyse the influence of the privatisation of Saudi airports on the performance of the employees must be measured to understand the challenges faced by the employees.

Technological Innovation

Technological innovation can be defined as a combination of different advanced technologies to minimise the challenges in the operations of the companies. The Saudi government is focused on technology innovation to achieve sustainability in the aviation industry. They have collaborated with companies from the western countries such as the United States of America, the United Kingdom, and others to achieve this goal. However, it is identified that the employees of the airports can face challenges to utilise modern technology due to lack of experience. This can significantly affect the flexibility of the operations and the performance of the employees at the same time. Collaboration with different tech companies has been helpful for the Saudi government to create a suitable training framework for the employees so that they can utilise such technologies. The ministry of commerce of Saudi Arabia has stated that the current employees of the Jeddah and Riyadh airports are being trained by the foreign companies to achieve the required efficiency.

On the other hand, technological innovation can be useful for Saudi Arabia to generate jobs for the Saudi citizens. This can attract foreign companies to establish factories and offices in the country. Therefore, the technological expertise lacked by the employees of the airports can be mitigated in future. However, it is necessary

to understand that the Saudi government is required to attract foreign investors to develop the required infrastructure for promoting the development of tech companies. The current infrastructure available in the airports of Saudi Arabia is not suitable for the implementation of technology innovation. The financial capability of the Saudi government can be an effective option to address this challenge, as they will be able to fund the entire necessary technological infrastructure in the country.

Research Aim

The aim of the study is to evaluate the influence of technological innovation on the performance of the Saudi airport employees after their privatisation. The research objectives for the study must be developed by focusing on the relationship between independent variables. Additionally, it is also necessary to focus on the mediating role of the technology innovation in the relationship between independent and dependent variables to understand the possibility of using it as a mitigation strategy. Finally, another objective is required to understand the direct influence of technological innovation on the performance of the employees.

RO1: To analyse the impact of Saudi airport privatisation on the performance of their employees.

RO2: To examine the mediating role of technological innovation in the relationship between Saudi airport privatisation and performance of their employees.

RO3: To evaluate the impact of technology innovation on the performance of the employees.

LITERATURE REVIEW

Theoretical Underpinning

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is an early conceptual model that was developed to explore and provide a meaning of predicting Technology acceptance. As an extension of the Theory of Reasoned Action, TAM was conceived by Fred Davis in 1989. It is centered on the identification of factors that affect a person's decision to use technology. It has gained popularity and become one of the most used models when studying technology adoption focusing on information systems and organisations [10]. TAM identifies two key variables that shape user acceptance ability of perceived value has been extensively measured. The two key variables are perceived usefulness (PU) and perceived ease of use (PEOU). Perceived usefulness is defined as the extent to which a user perceives the use of a certain technology to improve their performance.

TAM also proposes that outside characteristics including design, training and directorial, accept the effect on PU and PEOU and hence, mediates the user acceptance. This is because TAM has another strength of being simple and flexible especially when it is used in other subject areas [12]. However, to mold the model practice or develop a better projection, other ideas such as subjective norms, user experience or perceived enjoyment were being added for better result [13]. For instance, in e-commerce research perceived trust and security are often incorporated into the TAM model to explain the purchase behaviours online. TAM can be quite helpful in the functional realities for both the technology developers and organisational administrators.

According to the two factors of perceived usefulness and ease of use, developers can ensure that the systems created meet the perception of users and requirements. TAM can be used by organisations that are planning to adopt new technologies to identify some such factors such as, a lack of training, a poor design of the user's interfaces, that may be expected to hinder the technology from being adopted, before they emerge as barriers [14]. There are also criticisms that TAM has faced especially because it has been widely used. Its main criticism is that it gives inadequate weight to enough aspects of technology acceptance while giving most attention to perceived parameters, excluding affective, relational, and environmental variables.

It can perform in one culture or organisational context but not in another, thus causing doubts. However, TAM is still one of the broadcasters of the technology acceptance literature. It is flexible in application and allows theorists and implementers to implement it in different technological settings, making it a fantastic tool to use to examine the technology acceptance model [15]. Thus, despite the fact that its limitations have been noted, extension of the model by including more variables helps in continuing the involvement as a strong framework for analysing the uses of technologies in a world.

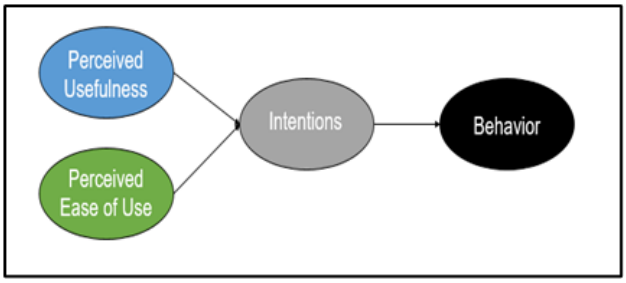

Figure 1: Technology Acceptance Model (TAM)

The uses of the Technology Acceptance Model are significant in analysing the potential of technological innovation in enhancing the privatisation of Saudi airport and the identified relationship between performance dynamics. In the context of the present research, TAM provides a perspective on how employees respond to change initiated by management during privatisation, as well as their subsequent use of new technologies to improve organisational performance [16]. Several experts have pointed out that privatisation contributes to introducing new technological systems to increase productivity and grow the quality-of-service provision. In this regard, TAM supports in establishing the determinants that contribute to employees' acceptance and utilisation of such technologies. The two basic constructs of the model, perceived usefulness (PU) and perceived ease of use (PEOU) can be used to foresee how the employees will view and use these innovations.

Organisational members will be interested to the change by accepting the new technologies and using them effectively if they think the technologies will improve their performance. In addition, if they also consider the technologies are easy to use. There is a necessity to upgrade automated checkouts of the baggage, biometric security measurements, or the use of artificial intelligence in schedule preparation at Saudi airports that are in the process of privatisation [17]. TAM speculates these perceptions in relevance bearing out the fact that effective design as well as demonstrations of performance. It gathers knowledge that helps to motivate the actual usage of the technology and thus its potential impact on improving employees' productivity.

Definition of variables

Employee Performance

Employee performance is the way an employee produces work output and their level of productivity in a specific task. In the case of the privatisation of Saudi airports, this concept becomes a dynamic one due to interventions of technology in redesigning work processes, needs, and performance benchmarks. Privatisation and the adoption of new innovative technologies can take privatisation attempts and performance as an indicator for estimating the success of such projects [18]. Technological development like implementing automated systems, AI, and other higher-level communication platforms largely affect employee performance.

It affects productivity because Distribution Management reduces unnecessary tasks, automates several processes, and promptness in decision-making process. For instance, an employee can use the biometric system for security of passengers or apply automatic baggage handling systems for higher accuracy [19]. The behaviour that defines employee performance in this context, therefore, entails the flexibility of embracing new tools. The quality consideration of keeping high service delivery and the efficiency of adopting and managing technological tools. Moreover, with the innovation, one learns to face new competencies, and this implies that employees need to be willing to learn.

Privatisation results in culture change with major concentration areas in efficiency, customer orientation, and effectiveness. In other times, the changes result in new standards of performance for the employees. Here involvement of the private sector tends to make change in accordance with international standards with special reference to technological advancement [20]. Thus, as far as the defined objectives involve the idea of escalating employees' productivity, satisfying the clients, and following improved rules and regulations more severely, they impose certain expectations on employees. In this context, employees are expected to deliver not only on the conventional expectations of a job description, also on the task of organisational change.

Key performance indicators can involve an employee's ability to work within the new technology, as well as his or her efficiency in incorporating these technologies into a working environment. Therefore, when it comes to technological innovation for improving organisational performance the opportunity is there but it gets to face some issues [21]. The employees face organisational resistance, lack of some skills, or work under higher pressure. It is necessary to eliminate these barriers through appropriate training and supportive management, which will

ensure the necessary level of performance in the employment area that, has undergone privatisation and is characterised by the active use of new technologies [22]. Finally, awareness creation, training, and personnel development as well as promotion of innovation form the central cornerstones. It helps towards the improvement performance of employees, and generally realising the ultimate goals of the privatisation agenda and diffusion of technology.

Saudi Airport Privatisation

Saudi airport privatisation, therefore, means a process by which owners, managers, or operators of airports in Saudi Arabia transfer any control by the government to private individuals or organisations. This process is non-aligned with the Saudi Arabia Vision 2030, a strategic plan in place to diversify the economy of the country and improve the efficiency of the public services [23]. Saudi Arabia's airport privatisation seeks to upgrade the airport performance, enhance its competitiveness and support economic development because of private sector involvement and participation.

The goal of privatisation of Saudi Arabia airport is to update the aviation industry by the implementation of new managerial provisions, along with the incorporation of modern technologies. Some of the goals are, increasing the passenger capacity through increasing employment and satisfaction rates, and the development of a competitive industry to attract international airlines and investments [24]. Additionally, Saudi General Authority of Civil Aviation (GACA) has outsourced many of the airports such as King Abdulaziz International Airport and the King Khalid International Airport for achieving these objectives [25]. Privatisation encompasses a broad area of activities that includes infrastructure construction, services delivery, and business performances.

Technological Innovation

Technological advancement means the integration of refined technology in an organisation with a percentage effort aimed at improving productivity, reducing errors, and offering higher quality services. Additionally, when it comes to the process of Saudi airport privatisation, which has recently gained momentum, the role of technology simplifies achieving high levels of modernity along with bringing the airport experience up to equality with international standards [27]. These are bag-to-cabin, biometric security, passenger management, and advanced communication systems all of which are gratified with advanced Artificial Intelligence.

These sorts of innovations help to enhance processes, to decrease operational expenses, and to increase passenger satisfaction altogether have implications for employees and their activities. Employees are forced to align with these developments, gain skills that will enable them to manage and maximise on such technologies [28]. Technological innovation additionally refines conventional quantity of work productivity by relaying how novel work arrangements influence human performance of work activities in terms of efficiency, cooperation, and flexibility. A perfect combination of innovation and privatisation of the airports in Saudi make them highly competitive and stands with vision 2030 of Saudi Arabia.

Technological innovation is significant, as it has consistently capacitated higher living standards and the expansion of businesses and industries [31]. The advent of technological innovation has incurred massive transformation regarding how technology is used across various industries wherein the aviation sector it has enhanced operational processes and the whole travel experience. Apart from being instrumental in reducing the overall cost of airport operations, technological innovation has impacted service quality eventually leading to greater passenger satisfaction [32]. Air carriers are on the lookout to operate at airports with efficient operations to lower operating costs and improve customer service, which has further resulted in the increased competition among airlines.

To stay upfront with the norms of digitalisation, airports are continuously undergoing adjustments. It involves the development of a number of concepts and techniques with an emphasis on technical innovation, passenger satisfaction, and securing safer, quicker, and efficient operations. In this regard, [34] stated that the technological innovation of airports has less to do with size and is more concerned with geographic position and commercial revenue. Highlighting the significance of technological innovation, it has been further emphasised that innovation affects both the demand and supply sides of any business as it affords the industries to maintain their competitive edge [34].

Focusing on the human innovation dynamics and their effect on employee performance it can be stated that the inclusion of digital format or using technologies has altered and benefit to existing processes and functions. This change is driven by emerging technologies such as blockchain, Big Data Analytics, cloud computing, cognitive computing, systems integration, cybersecurity, virtual modelling and simulation, and others [35]. It has been emphasised that the privatisation of the airports exhibits a paradigmatic shift, especially concerning how technologies are adopted and utilised, and at an organisational level.

Technological innovations such as AI algorithms and Data Analytics can efficiently analyse passenger behaviour and predict traffic patterns, which benefits in allowing airports to manage congestion and staff resources more effectively thus enhancing employee performance and operational efficiency [38]. Technology has always been instrumental in setting the trajectory for societal development and has played an important role in the categorisation of airports [39]. Airports are undergoing a digital transformation process, transitioning from a business-to-business (B2B) strategy to a customer-focused B2C (business-to-customer) approach which has resulted in the development of the concept of "Smart Airport" [39].

Conceptual Framework

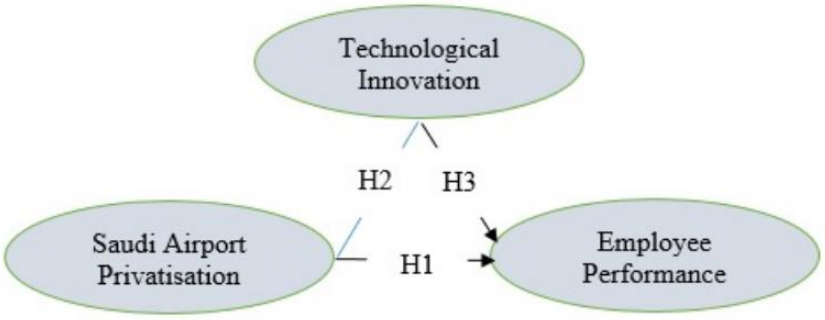

Figure 2: Conceptual framework

Hypothesis Development

Saudi Airport Privatisation and Employee Performance

The privatisation of airports is gaining strength quickly, which has raised interest in the topic of study. The digital transformation and "high-performance" solutions have increased performance in today's work environment, which is defined by cutting-edge technology and changing behaviours [40]. The necessity for an updated HR strategy to manage business and improve worker satisfaction is highlighted by the airport financing industry's explosive expansion, which is surpassing the expansion of the whole sector [41]. Employee performance must be assessed to determine if employees are successful in achieving organisational objectives and to get insight into how to boost efficiency in the future. Internal workers of many major organisations generally operate in a wide range of marketplaces, each with its own human resource rules and procedures. Employee performance is the outcome of a worker's ability to complete tasks assigned by managers based on knowledge, experience, commitment, and timing. The amount of effort put forward, organisational support, and a person's ability to execute a job are the main determinants of employee performance [42].

Vision 2030 (KSA, 2016) places a strong focus on the growth of the aviation sector in the Kingdom of Saudi Arabia. However, it has come under scrutiny for increasing layoffs, unequal earnings, and eroding social security. Thus, it may be argued that to enhance long-term results, privatisation has to be combined with measures that promote competition and efficient government regulation [46]. The research has emphasised Saudi Arabia's airport privatizations justifications and difficulties. One of the causes of privatisation is economic hardship. Second, economic considerations focus on enhancing the activities' profitability and reliability. The process of reducing government intervention and increasing the contribution of private entities in addressing the needs of the populace is recognised as privatisation. It necessitates depending less on authorities and a greater emphasis on the private sector for assistance [47]. Following privatised businesses, supervisory oversight takes adopt a more opportunistic shape, which causes damages for the government and the workforce while benefiting the newly formed shareholders. Practices that put short-term financial gains, cost cutting, and profit maximisation ahead of workers and the general welfare are examples of this unethical expression. Employees may suffer from the situation's possible repercussions, which might include declining benefits, job instability, and even worsening workplace circumstances [48].

This should be carried out in a private location to maintain respect and secrecy. It is critical to explain the particular issues in detail and to indicate the desire to help the employee get better. It is important to hear their point of view as well because there can be hidden motives behind their performance. It takes a methodical and compassionate strategy to deal with an airport employee's subpar performance [51]. The procedure that follows is especially important to establish shared performance objectives with the staff members once their abilities and

difficulties have been evaluated. Providing the resources and assistance that the employee needs is crucial to their progress. This might entail more instruction, coaching, or even changes to duties or workload. Demonstrating that the company cares about their performance and that the company is prepared to give them the resources they need to do their jobs well is crucial [52].
H1: Saudi airport privatisation can significantly influence employee performance.

Saudi Airport Privatisation, Employee Performance and Technological Innovation

An increase in travel for passengers is the most powerful of several developments that are making privatisation increasingly appealing. The four billion travellers who went through airports last year are expected to nearly double to 7.8 billion in 2036, according to the "International Air Transport Association (IATA)". Numerous procedures and routines in the logistics industry across several sectors, notably the aviation field, are profoundly transformed by innovative technology [49]. Coordination between internal and external businesses is increasingly essential for learning from the distinctive environment, using that information, and converting it for innovative purposes. The collaboration of promotional activities with the company's internal operations, like the integration of production processes, provides the necessary information and skills to pursue the associated innovation aims and goals, making it an essential principle in business creation of new goods. However, technical advancements in the external corporate environment have an impact on it [53].

For example, Figure 2 shows that the "New Abha Airport Project", which is a component of "Saudi Vision 2030", seeks to establish the "Aseer" area as a top travel destination by increasing the airport's capacity to accommodate 13 million people a year. It has 20 gates, 41 platforms, and a 65,000 m^2 terminal for easier travel processes. The project highlights the area's cultural legacy with a design influenced by regional customs and an emphasis on sustainability. The integration of cutting-edge technologies will improve air links to 250 locations and the passenger experience [55]. A "public-private partnership (PPP)" initiative of USD 1 billion has been initiated by Saudi Arabia to modernise and enlarge provincial airports. Foreign firms are anticipated to play a major part in the creation of the project of the airports through 30-year "design-build-finance-operate-maintain (DBFOM)" agreements [55].

Functioning in multidisciplinary groups allows specialists from diverse fields to combine their expertise and exchange ideas. Numerous advantages of interconnected collaboration have been identified by previous research, including improved decision-making excellence, increased organisational learning, and the promotion of innovation and information sharing [58]. Artificial intelligence, machine learning, virtual reality, and automation are examples of technological innovations at private airports that improve worker satisfaction by masking the distinction between their professional and private lives. Long-term efforts have been undertaken by the service sector to increase efficiency via the use of technology [59]. Without a question, information and communication technology (ICT) plays a major role in the aviation sector. Using mobile devices like computers or smartphones to locate and reserve flights, log in and get information on flights arriving and departing has become commonplace in recent years. Wi-Fi is being offered on board by a growing variety of airlines. The aviation industry has seen a number of technological advancements [60].

Following an effort to stand out from the competitors and endure fierce rivalry, airline businesses are currently attempting to implement innovative technologies. These businesses are now giving their front-line staff members dedicated tablets. Numerous studies have shown that using technology-intensive gadgets for work makes preparation easier and boosts productivity [61]. Implementing "bring-your-own-device (BYOD)" policies can boost worker productivity. Since company information and organisational data are easily accessible through personal gadgets like cell phones, PCs, and laptops, BYOD boosts productivity among staff members. Hence, the studies have defined that technological innovation has a mediating role and it influences the relationships between Saudi airport privatisation and employee performance [58].
H2: Technological innovation mediates the relationships between Saudi airport privatisation and employee performance.

Technological Innovation and Employee Performance

Every aspect of social and economic activity is impacted and restructured by digital technology. In certain implementations, they interfere with ongoing activities, whereas in other people, they have a more gradual effect and enhance them. Digital technologies are used in every industry, from production and farming to professional medical services, and more. These changes are occurring at different rates and in different directions depending on the technology, sector, and region [62]. Considering various digital technologies and software, several technological trends may emerge, collide, and change over time, at varying rates in various industries. Additionally, digital technology provides businesses the ability to reinvent themselves by enhancing the production and

organisation of goods and services, developing new products and services, and sometimes changing innovation practices [63].

Every firm is impacted by the emergence of an ever-changing business climate. Product variants and technological advancements are two elements that have a big impact on business success. Technology expertise is a selling point that any business needs for success in a worldwide marketplace [64]. A company's capacity to innovate is crucial to its success, and it has a big impact on both its efficiency and the standard of its goods. An organisation's strategic decisions to take advantage of market possibilities provide it a competitive edge. Unlike assets, competencies are based on a company's workforce, which is used to produce, administrate, and exchange information. They must be equipped to combine strategy and different resources for businesses to have superior productivity [65]. Enhancing the performance of the target organisation requires an understanding of the archaeology, cultural aspects, and behaviours and thinking processes that create and preserve organisational culture.

Additionally, how employees communicate at work is influenced by organisational culture. Healthy competition at work is also promoted by the atmosphere at work. As a result, a company's atmosphere brings out both good and bad qualities in all team members and boosts both individual and group effectiveness. There is an extensive amount of research on the connection between organisational efficiency and culture [66]. As a crucial factor in the link between organisational culture and success, organisational innovation has been overlooked by academics. Since organisational innovation is essential for a company to adopt new concepts, ideas, and perspectives towards innovation, this research looks at how it mediates this link. Meanwhile, innovative strategy emerges when a company identifies gaps in competitive positioning and merchandise offerings, and workers' efforts support the innovation procedure in the hopes of filling these gaps [67].

The goal is to expand the total amount of direct flights to different places worldwide and improve local transportation alternatives to strengthen air transport accessibility both inside the KSA local market and with additional countries. This has a direct bearing on the establishment of Riyadh Air and the plan to fortify Saudi Arabia to improve its market position and customer service in the international aviation industry [48]. The recent expansion of Saudi Arabia's tourist industry, which was shortly halted by the start of the Covid-19 outbreak, is significantly affecting the nation's aviation industry. The goal of Vision 2030 is to advance aviation policy in which the sector is essential to bolstering the expansion of travel to the Kingdom of Saudi Arabia. The initiative seeks to draw in more foreign visitors by enhancing airline operations, internet access, and air transport amenities [70]. Additionally, new cities and landmarks that have the chance to become highly travelled are to be built. For example, the growth of "Neom" in the northwest contributes significantly to the shifting environment while helping to promote tourism [67].

H3: Technological innovation can significantly impact employee performance.

Literature Gap

A host of previous research has emphasised how the rapid rate of airport privatisation is mostly associated with positive outcomes or at most how it contributes to the economic development aspects. Similarly, several research has also highlighted the overall improvement in operational efficiency brought about by technological integration and innovation but none of them has explored the interplay of technology innovation on the performance of the employees.

Similarly, numerous literary sources have discussed the privatisation of airports in Saudi Arabia. However, the majority of the studies do not provide a holistic view of the privatisation process as the majority of the studies are primarily focussed on specific regions or have presented the case of individual airports across various geographical regions.

Furthermore, it is a generalised notion that the economic, social, and regulatory environment of the Kingdom is vastly different from the rest of the world and can be influential in the process of establishing a public-private partnership. There is a significant dearth of exploration along this aspect where its influence on the perception of the employees in the airports in Saudi has not been explored given that their perception is integral to their performance.

The incorporation of technological innovation imposes several positive effects on employee productivity. However, its impact on employee productivity, satisfaction, and performance in the context of Saudi airports demands additional focus as there is no adequate information on the skills and competence of the employees in privatised airports.

One of the most interesting aspects that have not been explored extensively is any potential occurrence of employee resistance that might have hindered the pace of adoption of technology. There is a lack of research on

any occurrence of employee resistance to technology adoption in airports undergoing privatisation as employees who are not proficient in technology might exhibit a certain degree of disinterest. Despite the potential and benefits, exploring these facets could provide it remains an underexplored area.

Furthermore, a prevalence of a common vein of opinion reflects across the majority of the previous research where the benefits of technology innovation have been established repeatedly. However, none of the research seems to delve into exploring the negative aspects of technology integration such as the possibility of job displacement, which deserves acute attention but has somehow not gathered much attention in contemporary research. Exploring this aspect is integral as it can be a determinant of the attitude and intent of the employees towards technology adoption.

Furthermore, the integration of technology is presumably subject to the skills and competence of the employees. Wherein there is a dearth of data regarding how the authorities support the employees with possible training programs, what are initiatives taken in the process, and the behavioural outcomes of the same. In this regard, there is no studies conducted aiming to explore how management practices affect the employees, whether, in a positive or a negative manner.

MATERIALS AND METHODS

The Methodology chapter in quantitative studies is a crucial chapter for understanding the different methods, tools or procedures, which are used for the collection and analysis of all the relevant data for the study. Certain key components must be understood for carrying out an entire quantitative study such as the current study here. Among this first is the research philosophy to be used for the study. It includes all the beliefs or values, which are kept in consideration before beginning research. Among different research philosophies, positivism research is the one which is most used for the conduction of quantitative study such as the current study.

Based on this research philosophy the researcher of a study using the same can also make necessary hypothesis testing into practice for the study based on the quantitative or numerical data collected. The same research philosophy is also used for the current study based on which factual or numerical data have been collected through the survey questionnaire used.

After this, the same research sets certain specific hypotheses based on the relationships between these variables. The study further uses specific data analysis techniques or tools for the analysis of the data collected that enables the current research to achieve conclusive results related to theoretical understanding as well.

The use of the deductive research approach is also being done in the current study here. Using this the study has used the theoretical underpinning of the Technological Adaptation Model or TAM and based on the same developed certain variables [74]. Further, based on this approach the study also has developed specific independent variables, mediating variables and a dependent variable for the study. Different hypotheses have also been formulated in the previous section, which are tested using certain data analysis techniques in research. This makes a deductive research approach the most suitable one for the current study.

Along with this, the next component to be kept in mind is the research design that includes the proper blueprint to be followed for answering the developed research questions of a study. Among the different research designs used, descriptive research design is the most common to be used for quantitative study such as the present study here. Descriptive research design enables a researcher to answer the "what" type of questions rather than focusing on "how" type of questions. The blueprint prepared with the help of this research design helps a researcher to have a proper framework to test the hypotheses using numerical methods to be tested and reach conclusive answers for the study.

The current study has also used the descriptive research design for answering the different "what" type of questions. This is also done with the help of using proper data analysis techniques, which are explained, in the sections below.

The study here is also a quantitative study, which means that all the data collected for the study, is numerical in nature. The collection of the primary data is taking place with survey questionnaires. The survey method is commonly used for primary studies such as the current study for the collection of all the data to gather greater amounts of data in less time from the targeted population. The survey questionnaire for the current study also consists of different items, which are questions, related to the different variables of the study [75]. These items have been placed through a five-point Likert's scale which decodes 1-5 for strongly disagree, disagree, neutral, agree and strongly agree.

The questionnaire also consists of proper questions related to the demographic profiling of the different participants considered for the current study. The following sections below explain the specific population and sample members, which have been chosen for the study here for the collection of all the relevant data.

Specimens

The specimens for a study such as the current study refers to the target population and the unit of analysis for the collection of data for the study. The target population for a research study such as the one being conducted here includes all the individuals, groups of individuals and organizations which are impacted by the conduction of the study. This means that the target population also includes the people from whom the most relevant and updated data can be collected for a study.

The target population for the current study here includes the different Saudi Arabia airports called the Bisha domestic airport employees. To shrink further, the study here has decided to pick the target for the study to be the employees who have a minimum experience of 2 years with the airport. Based on this population size the further selection of sample size and the sample members is made.

Sample preparation and observation procedure

Sample for a study such as the current study here includes a specific representative number of participants chosen from the target population [76]. It is a very important aspect to choose a suitable number of samples for a study such as the current study to improve the overall observation of the population being studied, which is often quite large to collect data.

A very common method or tool for choosing the sample size for a study such as the current study is called the Krejcie and Morgan Table, which consists of the specific sample sizes for a specific population for a study. The table is shown below with two specific columns with names "N" and "S" representing population and assigned sample size for the same respectively.

Table 1 Target population

N	Company	No of employees
1	King Khalid Airports	800
2	King Abduluziz Airports	1600
3	Clusterz	2000

The above table is considered to choose the number of sample members from the study. As per different statistical reports. The total number of employees in the chosen airport in Saudi Arabia is 4400 including King Khalid Airport, King Abduluziz Airports, and Clusterz. This means that choosing a sample of more than 384 would be appropriate for the current study here. Hence, the study has decided to go with a total number of 402 sample members constituting the employees [77].

After the choice is made related to the number of sample members, it is crucial to understand who all will be the part of that sample group. For this, different researchers are found to be using certain specific types of sampling methods including random sampling, which is the one, which is mostly used for quantitative studies [76]. Based on this sampling technique, the researcher picks random sample members from the target population.

The use of this sampling technique is most suitable for quantitative studies such as the current study because it reduces the chances of any form of error in the result findings for the study.

Post the decision about from whom the data for the study can be collected a proper framework for the data analysis is to follow as well. This includes using proper software for the data analysis process for a study such as the current study here. For the current study, IBM SPSS software is being used for conducting the different numerical tests and analysis for all the collected data for the study from the mentioned sample members.

Using this software enables quantitative research to conduct different necessary numerical tests such as reliability analysis, multiple regression test, Pearson's correlation test, hypothesis testing and more.

The results of the multiple regression analysis below are also being used for the judgement of the hypothesis testing which enables declaring the relationships between the different variables to be either accepted or rejected.

The data analysis procedure is preceded by conduction of a pilot test, which enables research such as the current research to understand the reliability and validity of the research methods being used for the study's data collection and analysis process [79]. The pilot test enables the research to identify the gaps or errors in the choice of the research methods before conducting the actual study.

Reliability and validity are both very important aspects in quantitative study, which are the two measurements, which must be tested properly for indicating proper findings for the study. Reliability is the statistical measurement of the consistency with which specific research methods are enabled to generate consistent results for a specific

study topic [80]. With achieving higher reliability, a study ensures that the same research methods can be used for other studies like the present study in the future as well under similar situations to generate similar results.

Validity on the other hand is the statistical measurement of accuracy with which the research methods can measure what they are intended to measure from the beginning of the study such as the current study. Once a study can display higher reliability, the validity of the same research methods automatically is ensured for the same research as well.

For the testing of the reliability for any quantitative study such as the current study here, methods such as the calculation of the Cronbach Alpha value are often considered. The results of this value must be within the range of 0.7 and 0.9 which enables in portraying higher reliability for the study. Once reliability is shown to be greater than 0.7 or within this mentioned range, it is also understood that the research methods used for a study are also valid in nature.

All the steps mentioned here in the methods section need proper scrutiny of rules to be followed to ensure that there is no form of discrepancy in the data collection as well as the data analysis process. For this, studies such as the current study use specific ethical guidelines to be followed for the entire conduction of the study.

For the current study, the Personal Data Protection Act, 2010 of Malaysia is used as the ethical guidelines, which have been followed during the entire data collection and analysis process for the study. First, based on these guidelines, informed consents for each of the participants were taken before the data collection process began for the study [81]. The participants were also informed that they could withdraw their participation at any point as per their own willingness.

Furthermore, following these mentioned ethical guidelines also enabled the research to maintain confidentiality of each of the participants, keeping as much of their data anonymous as possible. It is also ensured as per these guidelines to securely protect all the data provided by each of the sample members of the study with proper software used for security maintenance for the same. Along with that, it is also made sure that all the data for the study which is collected from each of the participants of the study are used only for the study' purpose and deleted after the conduction of the study.

Moreover, the following of these ethical considerations mentioned for the current study also ensure that the participants have complete understanding of the different aspects of the study. This means that complete transparent information about the entire study has been provided to each of the participants of the study.

The researcher of the current study has also ensured that no harmful questions, which are too personal for the participant, have been included in the questionnaire for the study for the collection of data. The participants in the study have participated voluntarily and have not been forced into providing any type of data for the study.

It is even ensured with the help of these ethical guidelines for the current study that the study's data collection and analysis is done for the overall benefit of the target population of the study, which includes the employees of the chosen airport of the study. Overall, the following of the ethical guidelines mentioned is crucial for ensuring that the findings of this study are beneficial for the society in which the target population have been chosen for the data collection.

RESULTS AND FINDINGS

Demographic Information Test

The main purpose of demographic information is to collect information regarding the background characteristics of selected respondents. Moreover, to understand the perspectives, points of views, feedback of selected respondents- demographic information test is conducted here. Similarly, here in this study the researcher also developed some survey questions on background characteristics of participants, such as- age, gender, monthly income, and experience level.

Table 2 Demographic information Test

		Count	Column N %
Age	21 to 30 years	35	8.7%
	31 to 40 years	137	34.1%
	41 to 50 years	120	29.9%
	More than 50 years	110	27.4%
Gender	Male	193	48.0%
	Female	209	52.0%
Monthly Income	SAR 4,000 to 8,000	189	47.0%
	SAR 8,001 to 12,000	109	27.1%
	SAR 12,001 to 20,000	79	19.7%
	More than 20,000	25	6.2%

Experience Level	3 to 5 years	69	17.2%
	6 to 8 years	90	22.4%
	9 to 11 years	63	15.7%
	More than 11 years	180	44.8%

Following the outcome of table 1- demographic information test, the response rate for this research work is identified. It is identified that 402 employees participated in the survey. Among all of these, 193 (48.0%) respondents are male and 209 (52.0%) are female. Based on this result, it can be proposed that the number of female respondents is highest for this study. A majority of participants from the age group between 31 to 40 years participated in the survey, and this rate is 137 (34.1%). Similarly, a few employees 35 (8.7%) are also responding against the survey questionnaire who are from 21 to 30 years of age group. Along with this, the researcher also determined that 120 respondents (29.9%) between 41 to 50 years, and 110 (27.4%) participants more than 50 years-shared their opinion on the proposed research topic.

A demographic question is also designed on the monthly income of selected participants. Most of the employees 189 (47.0%), who participated in the survey have a monthly income of SAR 4,000 to 8,000. The number of respondents who have more than 20,000 SAR salary per month are also involved with the survey questions and this rate is only 25 (6.2%). A total of 109 (27.1%) employees have a monthly income of between SAR 8,001 to 12,000. Meanwhile, some participants 79 (19.7%) also have a monthly income of SAR 12,001 to 20,000.

Experience level of employees is one of the crucial elements that represent their professionalism in a specific job role. Observing the above-generated outcome, it clearly seems that 180 employees (44.8%) have participated in the survey who have more than 11 years. Therefore, it can be said that more experience of participants helps the researcher to collect more relevant and accurate information on the proposed research topic. A few employees 63 (15.7%) also participated in the survey, who have an experience level between 9 to 11 years. On the other hand, 90 employees shared their opinion about privatisation who have an experience level of 6 to 8 years. In this way, by collecting data on demographic characteristics of respondents, it helps to understand the attitudes of participants about this proposed research topic.

Reliability

Reliability analysis is one of the effective quantitative statistical tools that help to identify the stability, consistency, and dependability of a measurement instrument. Apart from that, to evaluate the significance of proposed items, a reliability test is also very effective.

Table 3 Cronbach Alpha

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.988	.988	3

Cronbach alpha is one kind of reliability test that is performed here by the researcher to assess the significance of survey items. As per the statement of statistical experts, it is defined that if the Cronbach alpha value becomes 0.7 to 0.9, then the significance of study is excellent or acceptable. It can be seen from Table 2 that the Cronbach Alpha value was generated to be 0.988 that falls within the necessary range for satisfying reliability of a study. This reliability value is extremely high because all of the three items are highly correlated. Furthermore, the researcher can also ensure that the implemented measurement scale (Likert scale) is consistent and reliable. Due to high Cronbach alpha value (.988) it also means that measurement error in this research work is minimal, and the selected scale is capable of capturing the underlying change or construct of technological innovation.

Pearson Correlation Coefficient

The main purpose of Pearson Correlation Coefficient test is to measure the linear correlation between two sets of data. Apart from that, in order to measure the direction and strength of the relationship between two variables- Pearson Correlation coefficient test is also very beneficial. The outcome of Pearson correlation coefficient test also indicates that if any changes occur in any variable, then the correlation of other variables also changes toward the same direction.

Table 4 Pearson Correlation Coefficient

Correlations				
		SAP	TI	EP
SAP	Pearson Correlation	1	.957**	.950**
	Sig. (2-tailed)		.000	.000
	N	402	402	402
TI	Pearson Correlation	.957**	1	.988**
	Sig. (2-tailed)	.000		.000
	N	402	402	402
EP	Pearson Correlation	.950**	.988**	1
	Sig. (2-tailed)	.000	.000	
	N	402	402	402

**. Correlation is significant at the 0.01 level (2-tailed).

The Saudi Arabia Privatisation (SAP) is the independent variable for this research work. The sig value for this variable is .957, and .950. The correlation between SAP and Technological Innovation (TI) refers to a strong positive linear relationship, as its value is between 0.7 to 0.9. Similarly, the sig value for the relation between SAP and Employee Performance (EP) is also greater than 0.7 that is .950. Therefore, it also indicates a strong positive linear relationship between SAP and EP. It means that if the privatisation in the aviation industry will be increased, then technological innovation will also increase. On the other hand, it also helps to understand that if technological innovation will be boosted up then, the employee performance will be better. These findings help to understand a strong positive linear correlation among SAP, TI, and EP.

Technological Innovation (TI) is the mediating variable for this research work that also has a significant positive correlation with independent and dependent variables. The sig value between TI and Employee Performance (EP) becomes .988 as per the outcome of table 3. It helps the researcher to ensure that through bringing advancement in technological innovation, it allows to evaluate employee performance in the context of Saudi Arabia Privatisation (SAP).

Multiple Regression Analysis

Multiple linear regression analysis is applied here to identify the value of dependent variable based on the sig values of more than one independent variable. Here, in this study the researcher figured out the value of a dependent variable through one independent and one mediating variable. It is defined that the sig value should be 0.05 or less to understand whether the selected variable is significant with this study or not.

Table 5 Multiple Linear regression

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.007	.024		-.294	.769	-.055	.041
	SAP	.059	.027	.058	2.158	.032	.005	.113
	TI	.940	.027	.932	34.618	.000	.886	.993
a. Dependent Variable: EP								

Based on the outcome of table 4, it is figured out that two constructs out of two become satisfied in this study, as its values are less than .05. The sig value for Saudi Arabia Privatisation (SAP) is .005 that is less than .05, and it means SAP has a significant impact on the dependent variable- Employee Performance (EP). It is shared by the selected respondents that a strong accountability and commitment in the sector can help in privatisation as well as improve the employee performance. On the other hand, maintenance of a legal framework and a good governance within the company allows the employees to perform better toward airport privatisation. In this way, the value of SAP has a significant impact on employee performance.

Another variable Technological Innovation (TI) that is considered as a mediating variable of this study has a sig value of .000. It is also lower than .05, that indicates a significant correlation between Technological Innovation (TI), and Employee Performance (EP). Many responses strongly agreed that through help of blockchain technology, employees in Saudi Arabia airport could ensure long-term performance. Apart from that, technological innovation also helps in the development of aviation reliability, security, and effectiveness that have a positive impact on employee performance. In this way, the value of multiple variables has a direct impact on dependent variables that also influence the research outcome.

Sobel Test

The sobel test is a statistical testing method that allows the researcher to understand the significance of mediating effects. This specialised t test also helps to understand whether there raised any change or not in independent variables after including the mediating variable.

Table 6 Relationship between Technological Innovation and Employee Performance

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.002	.024		.088	.930	-.045	.049
	TI	.996	.008	.988	125.342	.000	.980	1.011
a. Dependent Variable: EP								

The t value for Technological Innovation (TI) is determined as 125.342 by performing the sobel test. This high t value refers to strong evidence for mediating effect. Focusing on strong evidence for mediation, it also helps to ensure that technological innovation plays a crucial role to improve the employee performance in an organisation.

Table 7 Relationship between Saudi Arabia Privatisation and Technological Innovation

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.096	.044		2.157	.032	.008	.183
	SAP	.969	.015	.957	65.674	.000	.940	.998
a. Dependent Variable: TI								

The t value for Saudi Arabia Privatisation (SAP) has also become greater that is 65.674. This high value indicates that the indirect impact of Saudi Arabia privatisation on employee performance is not only statistically significant, but also it has a practical significance in this study. It also ensures that privatisation has a positive lead beyond technological innovation.

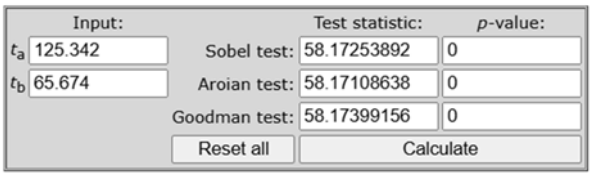

Figure 3: Sobel Test for Saudi Arabia Privatisation

In order to understand the mediating effect of technological innovation on the relationship between Saudi Arabia privatisation and employee performance, sobel test is mainly performed here. It is identified by that the value for the sobel test should be more than 1.96. Following the outcome of figure 2, it is figured out that the value for sobel test is 58.1725 that is greater than 1.96. This high value of Saudi Arabia privatisation refers to a positive mediating impact in this research work. This significant impact of mediating variables is also helpful for practical findings as it helps airport policymakers, management, and employees for better privatisation and employee performance.

Hypothesis Testing

A statistical hypothesis test that is implemented in this study to assess whether the data sufficiently supports the proposed developed hypotheses or not. This systematic interference procedure also helps to understand whether the responses collected from sample data evaluate the hypothesis or not.

Table 8 Hypothesis Testing

Hypotheses	**Status**
H1: Saudi airport privatisation can significantly impact employee performance	Supported
H2: Technological innovation mediates the relationships between the Saudi airport privatisation and employee performance	Supported
H3: Technological innovation can significantly impact employee performance	Supported

Based on the outcome of table 7, hypothesis testing refers that all of the three developed hypotheses become satisfied with this research work. It is explained by the researcher that a stable social and political environment in Saudi Arabia airport, can help to influence positively employee performance. Moreover, by offering multiple benefits to all stakeholders it also allows management to evaluate the employee performance at the time of airport privatisation. Therefore, following the collected data and its test through linear regression the first hypothesis (H1) becomes supported in this study.

The H2 refers to the significant mediating impact of technological innovation on the relationship between Saudi Arabia privatisation and employee performance. In this context, different kinds of technologies such as blockchain, artificial intelligence (AI), Internet of Things (IoT), electromagnetic and hybrid planes, and robots, become helpful in the process of airport privatisation. During the same period, using such kinds of technologies also help employees to provide better service that also promotes a higher level of employee performance. In this way, the linear correlation between Saudi airport privatisation and employee performance also influenced through technological innovation. Therefore, H2 also supported this research work.

Technological innovation as a mediating variable also has a direct impact on the dependent variable (employee performance). Following the outcome of the sobel test, the H2 and H3 also supported that influence by mediating variables. It is also explained that through integrating advanced technologies help in changes or privatisation in business activity. Moreover, selected respondents also agreed that constant technological training also helps to streamline their task in a more effective way that promotes better performance. The outcome obtained from hypothesis testing allows the researcher to build up the significance of Saudi Arabia privatisation and technological innovation on employee performance.

DISCUSSION

The objective of this research was to determine the influence of technological innovation taking place within Saudi airports affecting the privatisation of operations and influencing employee performance. A quantitative study was adopted for achieving the aim of the study that required collecting authentic information from selected respondents and interpreting such numerical data through graphs and tables for understanding the situation adopted for the study. Data was collected from employees having two years of experience from the Bisha domestic airport at Saudi Arabia for understanding how airport privatisation affects employee performance. The data was gathered from individuals who majorly had more than 11 years of experience. Since the majority of the sample involved highly experienced employees for the survey, the data collected ensures accuracy based on the high level of employees' experience. The employees would have depicted the scenario of privatisation based on their long term of experience within the industry and the changes in terms of benefits or adversities that technological innovation has brought in for Saudi Arabian airport privatisation.

The first research objective was determined for interpreting the influence of Saudi airport privatisation affecting employee performance. Various tests involving the Cronbach Alpha, Pearson's correlation coefficient and Multiple Linear Regression have been conducted for understanding the influence of this factor. The Cronbach Alpha analysis reflected how the selected items have a high consistency thus being able to reflect the actual scenario of Saudi Arabia airport privatisation affecting employee performance. High consistency proved that the items interpreting Saudi Arabian airport privatisation involving strong commitment and accountability of project partners or involvement of the Government have an impact over employee performance. This finding supports the literature discussion of Graham (2020), which identifies how government policies play an important role in privatisation of airports.

Privatisation of airports has also allowed the integration of expertise from international investors to influence operations, affecting employee performance as well (Jimenez, Ellis & Uyan, 2023). Pearson's correlation analysis has also depicted that a strong correlation is prevalent among the variable Saudi airport privatisation with employee performance. Hence, any form of change taking place in the privatisation process of airport operations in Saudi Arabia could be influencing employee performance as well. Analysing literature by previous researchers has identified how the vision of Saudi Arabia in terms of successful operations in the airport industry also aims at increasing employment for diversifying their operations by the year 2030. The existing strong relationship between Saudi Arabia airport privatisation with employee performance is further enhanced because of finding and previous research.

The second objective of the study was to determine how technology innovation plays a key role in influencing Saudi airport privatisation and the performance of employees. The high reliability of the study also plays a crucial role in proving the impact of this factor. Consistency of technological innovation in the study provides that such approaches can be effective in making strategic decisions regarding the employee performance. Additionally, it would also be possible that technological innovation contributes to the modernization of machinery that influences

employee performance. The strong relationship between Saudi airport privatisation and technological innovation with employee performance that is generated through the regression analysis further supports this finding.

The final objective of the study was to determine the impact of technological innovation on employee performance. The multiple regression analysis identifies a strong relationship to existing technological innovation and Saudi airport privatisation. In addition to this, a Sobel test was also performed for determining the strong relationship existing between technological innovation and employee performance. The strong t-value generator for interpreting the variables have highlighted how technology innovation taking place in Saudi Arabia airports in consideration with the privatisation process can enhance employee performance to a significant level.

Thus, the discussion of the result findings and comparing them with the literature of past researchers has provided a detailed understanding on the current situation of Saudi Arabia airport privatisation affecting the performance of employees. The scenario depicts mostly that the impact is positive as enhancement of equipment through technology and privatisation of operation with the interference of the government has brought in success for business. This development of airport operations has motivated employees for better performance in the end. All the hypotheses developed for the study were hence proven to be supported through the findings and successfully summarises the study.

CONCLUSION

This research has attempted to explore the intricate interplay of technology innovation, privatisation of Saudi airports, and employee performance dynamics. It can be estimated that it is a complex and multifaceted subject that necessitates a detailed exploration as the rate of privatisation of airports in Saudi Arabia is exemplary in the Middle East. It can be assumed that privatisation of the airports incurs positive impacts and can potentially transform the business landscape of airports by increasing the efficiency, wherein the availability of investment, and accessibility to better infrastructure helps them in providing customer-focused services.

However, the integration of technological innovation can impart a positive impact on employee performance while at the same time can be a factor undermining their efficiency. It can be asserted that the business landscape in contemporary times is not static which eminently leads to organisational change in an attempt to enhance organisational viability. This same approach can be noticed with the increasing privatisation of airports that are not exclusive even in the context of Saudi Arabia but have been occurring on a global scale whether in European nations or Asia.

It has been identified that the social, political, and economic landscape in the Kingdom is vastly different when compared to that of the rest of the world. Hence, it can be presumed that this complex structure is bound to affect the private-public partnerships occurring in the country. However, its impact on employee performance can be significantly influenced by the integration of technological innovations, which serve as a key mediator in the context of this research. The inclusion of emerging technologies such as automation, biometrics, AI, data analytics, and others can play a crucial role in reshaping work processes, thereby enhancing productivity, and improving employee satisfaction.

Not only does the inclusion of technological advancements support operational efficiency but also serves as a major initiative toward the attainment of the Vision 2030. The technological innovation and integration have been instrumental in reducing manual labour, streamlining operations, and providing employees with new tools for efficiency. Despite the enormous advantages of technology such as its efficacy in boosting employee performance, satisfaction, and motivation, it is also associated with certain hindrances. The mediating effect of technology considered in this research in the privatisation process is particularly relevant, as it bridges the gap between organisational changes and their impact on employees.

Additionally, employees in privatised airports may face new demands and requirements for skillsets, with the integration of technology wherein the lack of it can hinder their performance. In this regard, technology can act as an enabler, which helps the employees in adapting to these changes, in turn improving their performance, and supporting their professional growth, which further highlights the ultimate motive for privatisation. While airport privatisation and its effects have attracted tremendous attention yet work practices that affect employee performance and productivity are still mostly disregarded.

The aviation industry has had an incredible expansion since the advent of globalisation and liberalisation, which are usually marked by large expenditures in infrastructure development. The digital revolution, along with the development of high-performance digital systems, has significantly contributed to increased productivity, which is characterised by cutting-edge technology and changing behaviours. PPP has increased significantly in the past decade at Saudi airports, calling for specialised strategies that can boost employee productivity wherein technological innovation has been estimated to be a fitting solution.

This study has attempted to explore the interrelationship between technological innovation, Saudi airport privatisation and employee performance. Therefore, when the aviation employees were enquired on various aspects related to this research such as the deliverance of consistent performance or their perception of the technology to be an enabler of their efficacy the viability of the queries have been established by the responses acquired highlighting a positive connection.

It has been established across various previous research that privatisation often introduces structural changes, including a focus on operational efficiency, customer satisfaction, and profitability. These changes are often entwined with structural transformation and may lead to the implementation of new performance standards, stricter productivity metrics, as well as, altered organisational cultures. These can suffice as a barrier to employee productivity, especially with the inclusion of private entities who might not be acquainted with the prevalent practices in the kingdom. As airports shift to private ownership or management, they often introduce processes that are more streamlined, more professional development opportunities, and performance-based incentives, all of which can motivate employees and influence their overall performance positively.

In addition to this, it is quite evident that privatisation brings about changes either in the work environment, wherein technological innovations might facilitate those changes and directly affect employee performance, positively or in a negative manner. Technology might enable employees to perform their tasks more efficiently, improve customer service, or enhance productivity by reducing the manual effort needed in their tasks. While this portrays potential for enhancement of operational efficiency yet at the same time poses the threat of job displacement. This in turn, can hinder the productivity of the employees, therefore, must be taken into consideration as a potent factor that influences employee performance and productivity.

Additionally, the benefits of technology integration are manifold as technological innovations can reduce the time needed for certain tasks, improve accuracy, enable better communication, and generally make work processes more efficient, which should, in turn, increase employee productivity, satisfaction, and overall performance. Furthermore, technology may increase job satisfaction by providing employees with modern tools, reducing frustration, and making their roles easier and more effective. When employees feel they have the right technology, their motivation and productivity are likely to improve, which results in better performance.

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