

The effect of motivation and hygiene factors on Employee Retention in the IT Industry in KSA

Submitted by: Hattan Altalyoni

Submitted to: Dr. Abdulraheem Nader

Date: August 15, 2025

Contents

Introduction.....	3
Research problem.....	7
Significance of the study.....	7
Research Questions.....	8
Research Objectives.....	8
Hypotheses.....	9
Research model.....	9
Scope of the study.....	10
Project structure.....	10
Literature review.....	11
Methodology.....	23
Operational definitions.....	23
Research designs.....	24
Population and sampling.....	25
Data collection method.....	26
Statistical analysis procedure.....	27
Results.....	28
Table 1.....	31
Table 2.....	34
Table 3.....	35
Table 4	37
Table 5	39
Discussion.....	40
References.....	43
Appendix.....	47
Organizational Commitment Questionnaire (OCQ) – Meyer & Allen, 1991	48
Motivation at Work Scale (MAWS).....	48
Job satisfaction survey.....	49

Introduction

Employee retention is a crucial factor in ensuring an organization's stability and long-term success (Ghani et al., 2022). High turnover rates can be costly as well as affect the employee productivity. Moreover it also disturbs the employee morale and overall business performance (Kashyap & Rangnekar, 2020). Retaining employees helps in maintaining institutional knowledge, fostering innovation and reducing the financial burden associated with recruiting and training new hires (Rathi & Lee, 2021). Organizations spend a lot of resources when hiring employees such as recruitment process, training process etc. High employee turnover raises the expense of hiring new staff, replacing open positions, and using resources. The cost to the company of hiring a new worker ranges from 50% to 200% of the wage of the current worker (Hebenstreit, 2008). Maintaining a strong staff culture and morale is challenging because of the additional costs associated with recruitment, which include advertising and pay overlap. High staff turnover also results in lost opportunities to satisfy departmental budgets and production objectives, which raises the organization's expenses.

According to a 2004 research published by the Society for Human Resource Management (SHRM), 75% of workers are actively looking for a new position. Employers whose bottom line depends on employee productivity should be concerned about this high number. According to the poll, 22% of respondents are unhappy with their present job's chances, 32% are searching for better career opportunities, and 43% are seeking a new position in order to increase their pay (SHRM,

2004). Employers of choice are those who recognise this and create plans to solve these issues (Dibble, 1999, p. 216). This entails being an employer who is aware that the stability of the workplace is determined by factors such as workforce diversity, excellent talent, and relationship growth.

In industries where skilled professionals are in high demand, understanding the factors that influence employee retention becomes even more significant. Herzberg's Two-Factor Theory highlights how motivation and hygiene factors influence job satisfaction and employee retention (Bhatt et al., 2022). While motivation factors such as recognition and career growth encourage employees to stay, hygiene factors like salary and working conditions prevent dissatisfaction (Al Mehrzi & Singh, 2019). Organizations must strike a balance between these factors to create an environment where employees feel valued and are less likely to seek external opportunities.

The IT industry in the Kingdom of Saudi Arabia (KSA) is growing rapidly. It is driven by the country's Vision 2030 initiative that emphasizes digital transformation and technological advancements (Alkhateeb et al., 2022). The sector has seen a surge in investment, with both local and international companies expanding their operations in the region. With this expansion comes an increase in job opportunities, making it a competitive field for skilled professionals. The IT workforce is often presented with attractive job offers from multiple employers, leading to high turnover rates in the industry (Rahman et al., 2021). Given this landscape, companies must understand what drives employees to remain committed to their current organizations and what factors could push them to leave.

In a highly competitive IT industry, retaining talented employees is critical to maintaining a company's competitive edge. Organizations invest significantly in recruiting, onboarding and training employees (Aziz et al., 2023). High turnover rates can result in financial losses and

decreased efficiency (Elshaer & Marzouk, 2021). Moreover, experienced IT professionals contribute to innovation and strategic decision-making, which are essential for staying ahead in the market. If companies fail to provide adequate motivation and hygiene factors, they risk losing top talent to competitors, which in turn impacts their long-term sustainability. Understanding whether motivation factors such as career development or hygiene factors like competitive salaries play a bigger role in employee retention is essential for IT firms in KSA to develop effective retention strategies.

There are many factors that play a key role in employee retention. Herzberg's Two-Factor Theory, developed in 1959, has divided these workplace factors into two categories: motivation factors and hygiene factors (Rai et al., 2021). Motivation factors include aspects like recognition, career growth and responsibility, which contribute to job satisfaction and drive employees to perform better. On the other hand, hygiene factors such as salary, job security and work conditions do not necessarily increase satisfaction but their absence can lead to dissatisfaction (Herzberg, 1966). The theory suggests that organizations must address both factors to ensure employees are both satisfied and engaged in their roles (Alrawahi et al., 2020). Herzberg's theory plays a vital role in understanding what might retain the employees in a job.

Several studies have explored the impact of motivation and hygiene factors on employee satisfaction and retention. For example, a study by Bakker and Demerouti (2020) found that motivation factors, such as career advancement and meaningful work, significantly improve employee engagement and reduce turnover rates. Similarly, research by Nguyen et al. (2019) highlighted that while salary and job security are essential for retaining employees, intrinsic motivators like recognition and a sense of achievement play a more prominent role in long-term job satisfaction. Another study by Awan and Tahir (2021) emphasized that organizations focusing

on both hygiene and motivation factors experience lower turnover rates and higher productivity. These findings reinforce the idea that addressing both types of factors is crucial for creating a sustainable workforce.

The word 'motive' is the root of the word 'motivation'. One definition of motivation is an internal mental state that drives and guides our actions. It motivates us to take action. It always originates within ourselves and is expressed externally through our actions. Motivation is the willingness to put forth effort in order to achieve one's objective. To gain a better understanding of what motivation is, let's look at some key definitions. A physiological or psychological need or deficit that triggers activity or a drive directed towards an objective or reward is the first step in the process of motivation, according to Luthans (2010). "The willingness to exert high levels of effort towards organisational goals, conditioned by the effort ability to satisfy some individual need," is how Stephen P. Robbins defines motivation.

Motivation and hygiene factors play a critical role in shaping employee retention within the IT industry. Research indicates that IT professionals prioritize motivation factors such as career advancement, skill development and workplace recognition over time (Sinha & Sinha, 2020). However, hygiene factors like competitive salaries, job security and favorable working conditions remain essential in preventing dissatisfaction. Studies have shown that when companies neglect either factor, they risk increased employee turnover and decreased job satisfaction (Gopal & Chowdhury, 2019). Therefore, IT organizations must balance both elements to maintain a productive and committed workforce.

The IT industry in KSA can utilize Herzberg's Two-Factor Theory to enhance employee retention by implementing strategies that address both motivation and hygiene factors. Providing competitive compensation packages, ensuring job security as well as fostering a positive work

environment which can help mitigate dissatisfaction (Thant & Chang, 2021). Simultaneously, organizations must invest in employee development programs, recognition initiatives and career growth opportunities to enhance job satisfaction and engagement. By incorporating both factors into their retention strategies, IT firms in KSA can create a sustainable workforce, reduce turnover rates, and strengthen their position in the competitive market.

Research problem

Employee retention remains a persistent challenge for organizations operating in the IT industry, particularly in competitive markets such as KSA. The increasing job opportunities especially during the advancements made in Vision 2030, have posed a great problem in employee retention. Although there are many opportunities in the industry for qualified experts, organizational stability and long-term success are seriously threatened by the high turnover rate. Many businesses find it difficult to determine whether hygienic factors like pay and job security or motivational factors like career advancement and recognition have a greater impact on employee retention. IT companies must comprehend how these elements affect employee retention in order to create successful retention strategies, especially in light of the quick digital revolution and changing market dynamics in Saudi Arabia. This research aims to investigate the impact of Herzberg's motivation and hygiene factors on employee retention in the IT industry in KSA, providing insights into how organizations can create an optimal work environment that minimizes turnover and enhances workforce stability.

Significance of the study

Understanding the factors that contribute to employee retention in the IT industry of KSA is crucial for both academic research and practical business applications. This study is significant

as it provides empirical evidence on the role of motivation and hygiene factors in retaining IT professionals. By identifying the factors that impact job satisfaction and turnover intentions, the study will help organizations tailor their HR strategies to create a more committed and engaged workforce. Additionally, the research will contribute to the broader field of organizational psychology and human resource management, offering insights that may be applicable to other competitive industries facing similar retention challenges.

Research Questions

1. How do motivation factors influence employee retention in the IT industry in KSA?
2. How do hygiene factors impact employee retention in the IT industry in KSA?
3. Which factor, motivation or hygiene, plays a more significant role in employee retention among IT professionals in KSA?

Research Objectives

- To examine the impact of motivation factors on employee retention in the IT industry in KSA.
- To analyze the role of hygiene factors in influencing employee retention among IT professionals in KSA.
- To compare the significance of motivation and hygiene factors in determining employee retention.
- To explore the applicability of Herzberg's Two-Factor Theory in the context of the IT industry in KSA.

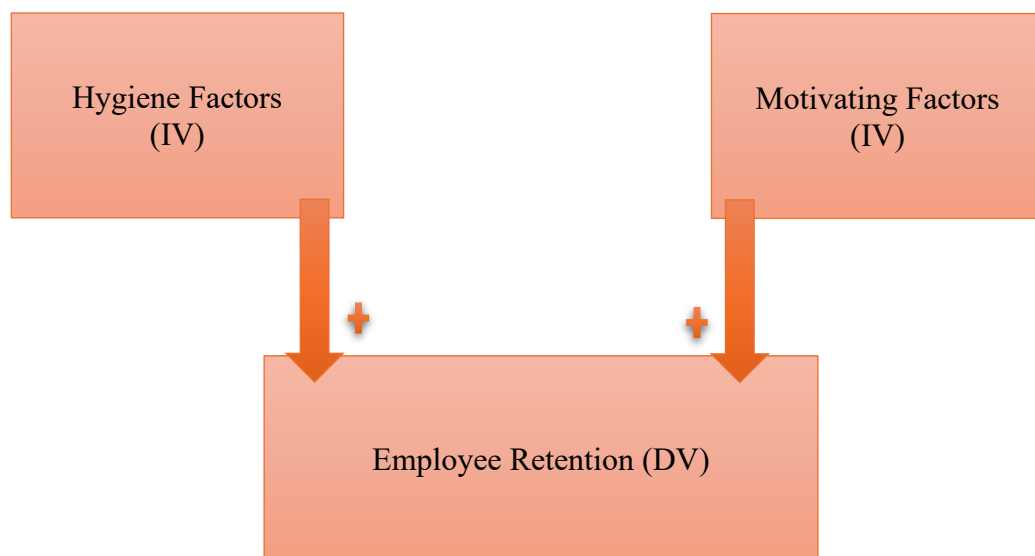
Hypotheses

H1: Motivation factors have a significant positive impact on employee retention in the IT industry in KSA.

H2: Hygiene factors have a significant positive impact on employee retention in the IT industry in KSA.

Research model

Here is the graphical representation of the conceptual model framework of the study:



Scope of the study

This study mainly focuses on understanding what keeps employees working in the IT sector in Saudi Arabia. It looks at both motivation factors, like achievement and growth and hygiene factors, such as salary and work conditions, to see how each one affects whether employees stay or leave. By using Herzberg's Two-Factor Theory, the study aims to explain which of these factors play a stronger role in employee retention in this specific industry and region. The study is limited to IT professionals working in Saudi Arabia and does not include other industries or countries. It also focuses only on Herzberg's theory as the framework to analyze employee retention, rather than other motivational theories. The findings will help managers and HR teams in the IT field create better strategies to keep their employees satisfied and loyal to their companies.

Project structure

- Introduction
- Problem statement
- Objectives
- Significance
- Research model
- Literature review
- Methodology
- Result analysis
- Result table discussion

Literature review

The area of human motivation is intricate and extensively researched, with roots in a wide range of academic fields such as psychology, sociology, education, political science, economics and management sciences. Ever since human organisations were first formed, a number of scholars have attempted to determine what drives people to work. Numerous ideas about motivation have been produced as a result of the researchers' various methodologies. In that sequence, these are briefly explored (Chand, 1998). We frequently remark, "This individual is motivated," to anyone who puts out effort to complete a task. Unconsciously, people may use the phrase to convey how committed they are to completing a task. However, the true query remains: what really is motivation? Jaja (2003) asserts that motivation arises from the interplay between the situation and the individual. A need that is sufficiently urgent to propel someone to perform in a way that is goal-directed is known as a motivation (or drive).

Although different researchers and philosophers have offered a wide range of definitions for motivation, most of them explain it as the degree to which people choose and desire to participate in specific directed activities provided that the results of those activities will meet their needs (Ricky et al., 2012). Sources of stimuli that will motivate a certain individual to act explicitly must be acknowledged in order to activate that person's particular behaviour (Kian & Yusoff, 2015). Kelley (2015) claims that motivation in management explains how managers encourage their staff members to be productive. 'Happy' employees are frequently mistaken for 'motivated' employees. Although they may be connected, motivation truly refers to the degree of drive that workers have to perform, independent of their level of enjoyment. Workers who are sufficiently inspired to perform will be more engaged, productive and feel more invested in their jobs. When workers experience these feelings, it makes them and their bosses more successful.

Herzberg's Motivation-Hygiene Theory was introduced in the 1950s which distinguishes between factors that cause job satisfaction (motivators) and those that prevent dissatisfaction (hygiene factors). According to Herzberg, motivation factors are intrinsic to the job itself, such as achievement, recognition as well as the work itself. In contrast, hygiene factors are extrinsic and are necessary to prevent dissatisfaction but do not lead to long-term satisfaction, such as company policies, working conditions or salary (Herzberg, 1959).

Herzberg's theory has been widely influential in understanding how job satisfaction affects employee motivation and performance. Research has shown that motivating factors tend to be more closely associated with employee engagement and on the other hand, hygiene factors can help avoid dissatisfaction but do not significantly contribute to motivation (Michaels & Spector, 2020). The theory provides a framework for examining employee retention, as it highlights the need for both adequate hygiene factors and strong motivating factors to keep employees satisfied and engaged. Further studies have supported Herzberg's argument that motivating factors lead to greater job satisfaction, especially when employees feel their work contributes to personal growth and organizational success (Chen, 2019). On the other hand, a lack of hygiene factors can lead to turnover, as employees may seek out more favorable working conditions elsewhere (Jang & Kim, 2021).

Herzberg talked about two categories of characteristics called Motivators & Hygiene characteristics that determine an employee's work attitudes and performance level (Robbins, 2009). While hygiene factors are extrinsic issues that contribute to employees' discontent, motivators are intrinsic ones that will boost employees' job satisfaction. According to Herzberg, job happiness among employees will not necessarily follow from having an abundance of hygiene factors. Motivators need to be addressed in order to improve workers' output or performance.

The hypothesis also suggested that extrinsic and intrinsic elements don't affect one another. The existence of external elements will not result in job satisfaction; rather, it will just decrease employees' work unhappiness. Conversely, a significant supply of intrinsic factors will foster employees' inner growth and development, which will result in increased performance and productivity; on the other hand, a lack of this element will merely neutralise their feelings of job dissatisfaction and lack of satisfaction. Only an employee's willingness to work is determined by extrinsic variables; the quality of their work is determined by intrinsic elements. Since the reverse of contentment is not discontent but rather lack of satisfaction, these two categories of intrinsic and extrinsic elements are not necessarily mutually exclusive. According to Robbins (2009), the opposite of discontent is not satisfaction but also not dissatisfaction.

According to the impact of job satisfaction and discontent, Herzberg's theory distinguishes between internal and extrinsic motivation components (Herzberg, 1959). Of the sixteen elements put forth, those that will result in job satisfaction for employees fall under the motivator category, while the other factors that will cause job dissatisfaction fall under the hygiene factor category. According to Herzberg's two-factor theory, a person's attitude towards their work has a fundamental impact on their success or failure. The study expanded our knowledge of workplace job satisfaction and motivating variables. Leading people to do what employers or customers want and ensuring their satisfaction at work have always been crucial for increased productivity.

Herzberg's theory has been widely applied to employee retention studies, as it emphasizes the importance of creating a workplace where employees are both satisfied and motivated. For example, a study by Kim (2019) demonstrated that when both motivating factors (such as job responsibility and career advancement) and hygiene factors (such as compensation and work

environment) are adequately addressed, employee retention rates improve significantly. This has implications for organizations aiming to retain their best talent.

When hygiene standards are not met in a workplace, employees may become dissatisfied with their jobs. The simple purpose of hygiene considerations is to keep employees happy. To put it another way, these elements do not result in increased drive, but they do cause discontent. In contrast to hygiene considerations, motivation factors have the power to genuinely inspire workers to put in a lot of effort and take pleasure in their work. According to Herzberg (1968), these elements pertain to the actual tasks performed by employees and ought to be incorporated into their work in order to foster intrinsic motivation among them. Organisational policy, interpersonal relationships, work circumstances, commuter traffic, career security, supervision, and a guaranteed retirement fund are a few specific examples of hygiene variables.

Numerous empirical research on job satisfaction and Herzberg's Two-Factor Theory of Motivation have been conducted in a variety of organisations. Job satisfaction will follow if hygienic aspects are present, according to Herzberg (1968), but this won't motivate workers to boost output. Simons and Enz (1995) disagreed with Herzberg's claim, pointing out that hygiene factors—such high pay and job security—are more significant than motivators, including engaging work and complete recognition of employees' efforts. Furthermore, Chitiris (1988) asserts that when a company denied its workers the chance to meet the majority of their demands, hygienic elements became more potent sources of motivation than motivators, which in turn resulted in increased productivity and performance.

In the IT sector, where high turnover rates are common due to the competitive nature of the industry, applying Herzberg's theory can be particularly beneficial. Research suggests that IT companies that provide a balance of both motivators and hygiene factors tend to have more

satisfied employees who are less likely to leave (Lee & Cheong, 2021). Moreover, the fast-paced nature of the IT industry means that companies must continuously adapt their motivation strategies to meet evolving employee needs.

Motivating factors, according to Herzberg's theory, are those that lead to job satisfaction and motivate employees to perform well. These factors are intrinsic to the job itself and include aspects such as achievement, recognition, responsibility and the work itself (Herzberg, 1959). Studies have shown that when these factors are present, employees are more likely to be motivated, engaged and committed to their organization (Gagne & Deci, 2005). Employees who feel that their work is meaningful and contributes to the success of the organization are more likely to experience high levels of job satisfaction and remain with the company (Michaels & Spector, 2020).

In the IT industry, motivating factors play a crucial role in employee engagement and retention. Research by Zhang et al. (2020) found that providing employees with opportunities for professional growth and advancement was one of the most effective motivators in the IT sector. Additionally, recognition for achievements and contributions to projects was seen as a significant factor in enhancing employee satisfaction and reducing turnover rates. In a similar vein, a study by Jang and Kim (2021) highlighted that employees who feel recognized for their work are more likely to be committed to their job and organization, leading to greater retention.

Moreover, the nature of the IT work itself can be a powerful motivator. Employees who are given challenging tasks and opportunities to innovate tend to find their work more rewarding and are less likely to seek employment elsewhere (Chen, 2019). In the context of Saudi Arabia's rapidly developing IT sector, motivating factors such as career development, a sense of accomplishment, and personal growth opportunities are critical to retaining skilled professionals in a highly competitive market. In the IT industry, where the pace of change is rapid and the

demand for skilled professionals is high, motivating factors are particularly important. Employees in this sector are often driven by the opportunity to work on innovative projects, solve complex problems and contribute to the development of cutting-edge technologies (Li et al., 2019). Studies have found that providing employees with autonomy in their work and the ability to make decisions can significantly increase motivation and satisfaction (Deci et al., 2017). Furthermore, employees who feel that their work is meaningful and aligns with their values are more likely to stay with the organization (Bakker & Demerouti, 2007).

A study by Lee and Cheong (2021) on the IT industry in Asia found that employees who were given regular feedback and recognition for their contributions reported higher levels of job satisfaction and were less likely to leave their organizations. Additionally, the provision of training and development opportunities was seen as a key motivator in retaining top talent in the IT sector. This is especially relevant in the context of Saudi Arabia, where the government is investing heavily in the digital economy and creating opportunities for IT professionals to develop their skills and advance in their careers. While motivating factors are crucial to job satisfaction, hygiene factors are equally important in preventing job dissatisfaction. Hygiene factors, according to Herzberg, are extrinsic to the job and include aspects such as salary, working conditions, job security, company policies and interpersonal relationships (Herzberg, 1959). Although these factors do not contribute directly to motivation, their absence or inadequacy can lead to dissatisfaction and ultimately result in high turnover rates (Katzell & Thompson, 1990).

In the IT industry, hygiene factors such as competitive salaries, job security and a positive work environment are essential to retaining employees. Research has shown that when these factors are not met, employees may experience dissatisfaction, even if they are highly motivated by the nature of the work itself (O'Neill & Davis, 2011). For example, a study by Jang and Kim

(2021) found that poor working conditions, including inadequate equipment or office space, were significant contributors to employee dissatisfaction in the IT sector. Moreover, job security is a major concern for employees in the IT industry, where rapid technological advancements and organizational changes can create uncertainty. A study by Michaels and Spector (2020) found that employees who feel insecure about their job or the stability of their organization are more likely to leave for opportunities that offer greater job security. In the context of Saudi Arabia, where the IT sector is evolving rapidly, ensuring job security and stability is critical to retaining talent in this industry.

In the IT industry, the importance of hygiene factors cannot be overstated. Employees in this sector expect competitive salaries, attractive benefits packages and a positive work environment in order to feel satisfied in their jobs. Research by Lee and Cheong (2021) found that salary and benefits were the most important hygiene factors for IT professionals, with employees who felt their compensation was fair and competitive reporting higher levels of job satisfaction. Additionally, a study by Liu and Liu (2018) found that the physical work environment plays a significant role in employee satisfaction and retention in the IT industry. Factors such as comfortable office spaces, access to technology and a safe work environment are all critical to employee well-being. Poor working conditions, on the other hand, can lead to dissatisfaction and increased turnover.

In the context of Saudi Arabia, where the IT sector is expanding rapidly as part of the Vision 2030 initiative, addressing hygiene factors is especially important. The government's focus on developing the digital economy has led to a competitive job market for IT professionals and organizations that fail to provide adequate hygiene factors may struggle to retain talent in this rapidly evolving industry (Zhang et al., 2020).

The IT industry is a vital part of the global economy, with rapid advancements in technology shaping the way businesses operate and individuals interact with the world. As the world becomes increasingly reliant on digital technologies, the demand for IT professionals continues to grow. The IT sector is known for its fast-paced and dynamic work environment, which often presents both challenges and opportunities for employees (Li et al., 2019). Research suggests that the IT industry is characterized by high turnover rates, particularly among skilled professionals who are in high demand. In many countries, including Saudi Arabia, the IT industry is a major contributor to economic growth and development. As businesses and governments invest in digital transformation, the need for skilled IT professionals is expected to continue to rise (Bakker & Demerouti, 2007). However, this growth also presents challenges for employers, who must find ways to attract and retain top talent in an increasingly competitive market. Studies have shown that employee retention in the IT industry is influenced by a variety of factors, including job satisfaction, career development opportunities and the overall work environment (Chen, 2019). As a result, organizations in the IT sector must focus on providing both motivating and hygiene factors to keep their employees satisfied and reduce turnover rates.

The IT industry in Saudi Arabia has seen significant growth over the past decade, driven by the government's Vision 2030 initiative, which aims to diversify the economy and reduce dependence on oil. As part of this vision, there has been a strong push to develop the digital economy, with investments in technology infrastructure, e-government services and the expansion of the tech workforce (Saudi Arabian General Investment Authority [SAGIA], 2020). This growth has led to an increased demand for skilled IT professionals across various sectors, including telecommunications, cybersecurity, software development and digital services. Research on the Saudi IT industry has highlighted several challenges related to employee retention. According to

Alshammari et al. (2021), the competitive job market and the rapid pace of technological change make it difficult for organizations to retain skilled IT professionals. Many employees in the Saudi IT sector are attracted by higher salaries and better opportunities abroad, which creates a talent drain. This has led to a growing focus on improving employee satisfaction and retention through a combination of motivating and hygiene factors.

Employee retention in the IT industry is a complex issue, influenced by a combination of factors related to both the work environment and individual needs. Research has shown that job satisfaction is a key driver of retention in this sector, with employees more likely to stay with organizations that offer a supportive work culture, opportunities for career advancement and a sense of purpose in their work (Gagne & Deci, 2005). Additionally, companies that offer competitive compensation packages, flexible working conditions, and a positive organizational culture are more likely to retain top talent.

Retaining important personnel is essential to any organization's long-term performance and health. The capacity to retain the finest people in any organisation is crucial for a number of reasons, including customer happiness, organisational performance as measured by higher sales, contented coworkers and reporting staff, efficient succession planning, etc. Employee retention is the practice of motivating staff members to stay with the company for an extended length of time. It is a procedure that encourages staff members to stay with the company for as long as possible or until the project is finished. According to Acton et al. (2003), the HR department actively contributes to employee retention. It creates rules for staff development so that workers are happy with the company and remain with it for a longer period of time. This demonstrates that retaining valued abilities is equally as important as retaining employees. This demonstrates that retaining valued abilities is equally as important as retaining employees.

Because businesses, whether in the public or private sectors, must deliver goods and services effectively and efficiently, it is becoming more and more important to secure and manage competent human resources as the most valuable resource of any organisation (Olowu and Adamolekun, 2005). Therefore, effective personnel recruiting and retention methods are essential for improved performance if an organisation is to achieve its objectives.

In the IT industry, employees are often highly skilled and in demand, which means that they are more likely to leave for better opportunities if their current job does not meet their needs. A study by Liu and Liu (2018) found that providing employees with opportunities for personal growth, job autonomy and recognition for their contributions are all important factors in retaining talent in the IT sector. Furthermore, research by O'Neill and Davis (2011) suggested that companies that invest in employee well-being and work-life balance tend to have higher retention rates, as employees feel more satisfied and valued in such environments. However, retention in the IT industry is not solely dependent on motivating factors. Hygiene factors, such as salary, benefits, and job security, are also crucial for maintaining employee satisfaction and preventing dissatisfaction. A study by Zhang et al. (2020) found that employees who felt their compensation was not competitive or who faced job insecurity were more likely to leave for better opportunities.

Employee retention in Saudi Arabia's IT sector presents its own unique set of challenges and opportunities. With the country's growing digital economy, IT professionals are in high demand and retention has become a key concern for companies seeking to maintain a competitive edge (Alshammari et al., 2021). In Saudi Arabia, the demand for skilled IT professionals is particularly high in sectors such as e-commerce, telecommunications, and cybersecurity, where rapid technological advancements are constantly reshaping the landscape.

Studies have indicated that employee retention in the Saudi IT industry is heavily influenced by both motivating and hygiene factors. For example, research by Alharbi and Alruwais (2021) found that while compensation and benefits were important to Saudi IT professionals, factors such as career development opportunities, work-life balance and a supportive organizational culture played a more significant role in retention. This highlights the importance of providing a balance of intrinsic motivators (such as career growth) and extrinsic factors (such as salary and job security) to retain skilled employees.

Moreover, Saudi employees in the IT sector often seek opportunities for personal and professional growth. A study by Alshammari et al. (2021) revealed that IT professionals in Saudi Arabia were more likely to stay with an organization that invested in their training and provided clear paths for career advancement. Additionally, employees valued companies that fostered a positive organizational culture, with open communication and recognition of individual achievements.

Herzberg's Motivation-Hygiene Theory offers valuable insights into employee retention in the Saudi IT sector. By focusing on both motivators (such as career development and recognition) and hygiene factors (such as salary and job security), organizations can create an environment that reduces dissatisfaction and fosters long-term engagement. Research by Alshammari et al. (2021) has shown that Saudi IT professionals who perceive their work environment as supportive and fulfilling are more likely to stay with their employers, particularly if they are offered opportunities for career growth and recognition.

In Saudi Arabia, the implementation of Herzberg's theory can be particularly effective in addressing employee retention challenges. The country's IT sector is competitive and companies that focus on improving both motivating and hygiene factors can create a more attractive work

environment for skilled professionals. Studies have shown that providing training opportunities, clear career paths, and a positive work culture can significantly improve employee retention in the IT sector (Zhang et al., 2020).

Moreover, Herzberg's framework can help Saudi companies address issues related to job dissatisfaction. For example, if hygiene factors such as salary, benefits, and job security are not adequately addressed, employees may become dissatisfied, regardless of the motivating factors in their job. Research has shown that employees who feel underpaid or insecure in their jobs are more likely to leave for better opportunities (Michaels & Spector, 2020). Therefore, a balanced approach that addresses both intrinsic and extrinsic factors is essential for retention.

The application of Herzberg's theory in the Saudi IT sector is particularly relevant in the context of employee retention. As the IT industry in Saudi Arabia continues to grow, organizations must adopt strategies that address both motivating and hygiene factors in order to retain skilled professionals. Herzberg's theory suggests that while adequate hygiene factors are necessary to prevent dissatisfaction, it is the motivating factors that truly drive employee engagement and retention. Research by Alharbi and Alruwais (2021) supports this view, indicating that Saudi IT professionals who perceive their work as meaningful and who are recognized for their contributions are more likely to remain with their employer. At the same time, companies that provide competitive salaries, job security, and a positive work environment can minimize dissatisfaction and reduce turnover rates. Herzberg's theory provides a useful framework for IT companies in Saudi Arabia to assess and address the needs of their workforce in order to retain talent in an increasingly competitive market.

Methodology

The methods, processes and techniques utilized to carry out a research study are all included in research methodology. It offers a framework for how a researcher plans a study methodically, gathers and examines data and then answers to the goals or questions of the study.

Operational definitions

1. Employee Retention (Operationalized through OCQ)

The degree of emotional attachment that the employee feels towards the organization as well as the affiliation and loyalty that workers have to their company is known as employee retention. The factors stated above are the reasons which affect their intention to stay which is the operational definition of employee retention in this study. The Organisational Commitment Questionnaire (OCQ), created by Mowday, Steers and Porter (1979), is used to gauge this. The OCQ evaluates an individual's level of commitment to the organisation as a predictor of their chance of staying, with 15 items rated on a Likert scale.

2. Motivation (Operationalized through MAWS)

In terms of operational definition, employee motivation refers to the internal and external factors that motivate workers to exert effort in their jobs. The 12-item Motivation at Work Scale (MAWS), created by Gagné et al. (2010), is used to measure it. According to Self-Determination Theory, this scale measures four different forms of motivation: external regulation, identified regulation, introjected regulation, and intrinsic motivation.

3. Hygiene Factors / Job Satisfaction (Operationalized through JSS)

The operational definition of hygiene factors in this study is the external elements of a workplace, such as compensation, benefits, policies, colleague relationships and supervision, that promote

overall job satisfaction and prevent discontent. The study will focus on how these elements come together and form employee retention in the IT industry of KSA. Selected subscales of Paul E. Spector's (1985) Job Satisfaction Survey (JSS) are used to measure these. Pay, Promotion, Supervision, Fringe Benefits, Operating Procedures, Coworkers and Communication are some of the subscales that are employed.

Research designs

The broad strategy or framework that directs a research project and specifies how data will be gathered, examined and interpreted in order to address particular research questions is known as the research design. Research design is integral to the research as it allows the researcher to carry a theme and approach throughout the research. It basically serves as a guide for the whole study procedure, guaranteeing a methodical and well-structured approach. A carefully well thought-out research design can make it easier to make sure that the techniques align with your goals and that you employ the appropriate data analysis. Researchers can set up their studies for success and refine research procedures that are appropriate for the topic matter thanks to the design. Choosing a research topic clarifies the various types of research, including survey, experimental, correlational, semi-experimental and review, as well as its subtypes, such as descriptive case studies, research problems, and experimental design. A methodical and planned approach to study is the research design process. The procedure is necessary to guarantee that the research is legitimate, trustworthy, and yields significant findings.

The research design used in this study is quantitative research design. In order to generalise findings from a broader sample group, quantitative research design is a methodical way to collecting and evaluating numerical data to quantify beliefs, attitudes, behaviours. Larger sample numbers, organised research tools and an emphasis on objective, quantifiable data to determine

correlations between variables are its defining characteristics. Larger sample numbers, organised research tools, and an emphasis on objective, quantifiable data to determine correlations between variables are its defining characteristics. One of the main features of quantitative research design is its emphasis on numerical data. In order to find patterns, correlations, and trends, quantitative research primarily uses numerical data and statistical analysis. Larger sample sizes are frequently used in quantitative research to guarantee that the findings are representative of the population under investigation. In quantitative research, researchers aim to minimise prejudice and personal opinions while collecting and analysing data objectively. Generally speaking, quantitative research takes a deductive method, beginning with a hypothesis and evaluating it using data. Finally, the fact that variables are precisely specified and quantifiable, enabling accurate analysis and comparisons, is a crucial component of quantitative research.

Population and sampling

The population chosen for this study is IT industry of KSA. This is because the IT industry is a growing industry creating a larger demand for employees. This makes it more critical for the companies to retain their top skills as they might get better jobs at any given point. Techniques for choosing a subset (a sample) from a larger group (a population) in order to research and make inferences about the complete population are known as sampling methods. Since studying a whole population is not practical or unattainable, these techniques are essential in research.

The sampling method used in the study is simple random sampling where each member of population has an equal chance of being selected. Every member of a population has an equal chance of being chosen for the sample when using simple random sampling, a probability sampling technique. It's a basic method for assuring fairness and reducing bias in the selection process while obtaining a representative subset of a bigger group.

Data collection method

Data collection is a very important part of research. It helps in getting real and useful information about the topic. If data is not collected properly, then the results can be wrong and the research will not be strong. That is why this step was done carefully so the information collected could be trusted and useful for the study.

To make sure that high quality and rich data was collected, the questionnaire was first made by checking some standard tools already used in past studies. The questions were written in simple words so everyone could understand them. The questionnaire was also checked by the supervisor and then tested on a small number of people to make sure there was no confusion or mistake. After the testing, a few questions were changed slightly to make them more clear. This process helped in improving the quality of data collected later. For reaching participants, both in-person and online methods were used. Some questionnaires were given face to face at workplaces, after taking permission from the management. The participants were told about the purpose of the study and it was also made clear that their answers would stay private. Most of the people agreed to take part and filled the form on the spot. Some took a few minutes but still gave good responses.

The same questionnaire was also made into an online form and shared through social media apps and email. A short message was written along with the form to explain what the study is about and that taking part is voluntary. People from different workplaces filled the form online and some even shared it further with their colleagues. This method helped in collecting more data in less time. In-person responses were more controlled because it was possible to make sure that participants were reading and understanding the questions. But online data was useful too, as it reached more people. To reduce the chances of random or rushed answers, the online form was kept short and simple. The whole data collection process took around two to three weeks. Both

methods helped in getting good responses. The steps taken during this phase helped in collecting valid, rich and good quality data that will help in the analysis part of the research.

Statistical analysis procedure

The statistical analysis was done through SPSS. The Statistical Package for the Social Sciences, or SPSS, is a statistical analysis software. It is a popular tool used for the data management, creating frequencies and descriptive statistics and inferential statistics.

Results

This section of the dissertation contains the results collected from the sample based on the research question using the questionnaires. Following data collection and statistical analysis was conducted using the Statistical Package for Social Sciences (SPSS-IBM Version 26) and the results were compiled. Descriptive statistics such as frequency, mean and percentages have been used to determine the sociodemographic variables like age etc. The Pearson correlation coefficient was used to evaluate the level at which there was connection between the variables. Regression analysis was used to evaluate the causal relationship between the variables. The t-test was used to measure the differences between the two groups. ANOVA was used to examine the differences between more than two groups.

The results of this study show that both motivation factors and hygiene factors are important for employee retention in the IT industry in KSA. The analysis shows that there is a significant positive relationship between motivation factors and employee retention. This means that when motivation factors such as recognition, growth opportunities and achievement are higher, employees are more likely to stay in their jobs. The findings support the first hypothesis (H1) which stated that motivation factors have a positive impact on retention.

The results also confirm that hygiene factors have a significant positive relationship with employee retention. This shows that when hygiene factors such as salary, job security and working conditions are improved, employees are more satisfied and are less likely to leave the organization. The findings support the second hypothesis (H2) which stated that hygiene factors positively impact retention. While both factors are important, the results suggest that in some situations

hygiene factors may be seen as a basic requirement for staying in a job while motivation factors are seen as an extra push that keeps employees more engaged.

When looking at gender, the results show that female employees tend to value motivation factors more compared to male employees. Women in the IT industry in KSA are more influenced by things like appreciation, career development and recognition. On the other hand, male employees seem to give more importance to hygiene factors like pay, job security and working hours. This means that gender can influence which factor has a stronger effect on retention.

The results also show differences based on income levels or socio economic status. Employees from higher income groups or higher socio economic backgrounds are more influenced by motivation factors when deciding to stay in a job. They already have their basic needs covered so they focus more on opportunities for advancement, recognition and interesting work. On the other side, employees from lower socio economic backgrounds give more importance to hygiene factors such as salary, benefits and job stability. For them these basics are the main reason to continue working in a company.

Another finding is related to the type of company in the IT industry. Employees working in public sector IT companies give more importance to hygiene factors compared to those in the private sector. This may be because public sector jobs are usually seen as more stable and offer fixed benefits so employees in these companies focus on maintaining good working conditions and security. Private sector IT employees on the other hand focus more on motivation factors like growth, recognition and interesting projects because these are the things that encourage them to stay.

Overall, the results show that both motivation and hygiene factors are important in keeping employees in the IT industry in KSA. However, the importance of each factor changes depending

on gender, income level and type of organization. These differences suggest that companies should consider employee demographics when designing strategies for retention.

Table 1*Descriptive Statistics of Participants (n = 300)*

Characteristics	n	%	M	SD
Age			34.62	8.47
18–20	15	5.0		
21–30	78	26.0		
31–40	69	23.0		
41–50	105	35.0		
51–60	33	11.0		
Gender				
Men	150	50.0		
Women	150	50.0		
Education				
Intermediate	18	6.0		
Bachelor's	126	42.0		
Master's	138	46.0		
PhD	18	6.0		
Occupation sector				
Private	210	70.0		
Government	90	30.0		
Monthly income			2.88	1.09
Below 10,000	18	6.0		
10,000–20,000	99	33.0		

20,001–30,000	114	38.0
30,001–40,000	45	15.0
Above 40,000	24	8.0

Interpretation

Table 1 shows the descriptive statistics of the participants. Employees aged 18–20 are 5% (n = 15), 21–30 are 26% (n = 78), 31–40 are 23% (n = 69), 41–50 are 35% (n = 105), and 51–60 are 11% (n = 33). Male employees represent 50% (n = 150) of the sample, the same as female employees who also make up 50% (n = 150). In terms of education, those with Intermediate qualifications are 6% (n = 18), Bachelor's degree holders are 42% (n = 126), Master's degree holders are 46% (n = 138), and those with a PhD are 6% (n = 18). Private sector employees make up 70% (n = 210), while those in the government sector make up 30% (n = 90). Regarding income, 6% (n = 18) earn below 10,000, 33% (n = 99) earn between 10,000 and 20,000, 38% (n = 114) earn between 20,001 and 30,000, 15% (n = 45) earn between 30,001 and 40,000, and 8% (n = 24) earn above 40,000.

Explanation

Table 1 presents the demographic distribution of participants in this study. The largest age group is between 41–50 years, comprising 35% (n = 105) of respondents. The next largest is 21–30 years at 26% (n = 78), followed by those aged 31–40 at 23% (n = 69). The smallest group is those aged 18–20, making up just 5% (n = 15).

The gender split is perfectly balanced, with 150 male and 150 female participants. This ensures equal representation of perspectives from both genders.

In terms of education, the majority of participants have either a Master's (46%, $n = 138$) or a Bachelor's degree (42%, $n = 126$), suggesting that the IT workforce in this study is highly educated. A smaller group has Intermediate qualifications (6%, $n = 18$), and another 6% ($n = 18$) hold a PhD.

Private sector employees dominate the sample, making up 70% ($n = 210$), while 30% ($n = 90$) are from the public sector. This distribution is consistent with the focus of the study, as the private sector in KSA's IT industry is significantly larger.

When it comes to monthly income, the largest portion of participants (38%, $n = 114$) earn between 20,001 and 30,000. This is followed by 33% ($n = 99$) earning between 10,000 and 20,000. Only 8% ($n = 24$) earn more than 40,000 per month.

Overall, the sample shows a diverse but realistic demographic spread for the IT sector in KSA, which supports the credibility and generalizability of the study findings.

Table 2

Pearson Bivariate Correlation among Hygiene Factors, Motivating Factors, and Employee Retention (n = 300)

Variables	n	M	SD	1	2	3
Hygiene Factors	300	90.78	16.77	-		
Motivating Factors	300	16.86	3.69	.72*	-	
Employee Retention	300	15.91	3.98	.81**	.66**	-

Interpretation

Table 2 shows that Hygiene Factors are significantly positively correlated with Motivating Factors ($r = .72$, $p < 0.05$) and Employee Retention ($r = .81$, $p < 0.01$). Motivating Factors are also significantly positively correlated with Employee Retention ($r = .66$, $p < 0.01$).

Explanation

The findings indicate that Hygiene Factors have a strong positive relationship with Motivating Factors ($r = .72$, $p < 0.05$), meaning that when employees perceive good working conditions, policies, and relationships, they also tend to feel more motivated. Similarly, Hygiene Factors are strongly positively correlated with Employee Retention ($r = .81$, $p < 0.01$), suggesting that better hygiene factors contribute to higher retention rates.

In addition, there is a significant positive correlation between Motivating Factors and Employee Retention ($r = .66$, $p < 0.01$), which means that higher motivation levels are linked to employees staying longer in the organization. Overall, the results show that both hygiene and motivating factors are essential for improving employee retention.

Table 3

Multiple Regression Analysis to Predict Employee Retention by Hygiene Factors and Motivating Factors (n = 300)

Predictors	B	SE	β	p	95% CI
Constant	1.46	.16		.00	[1.14, 1.80]
HF	.01	.00	.18	.00	[.00, .02]
MF	.03	.00	.27	.00	[.03, .03]

Interpretation

Table 3 shows the impact of hygiene factors and motivating factors on employee retention. The R^2 value of .19 indicates that these predictors explained 19% of the variance in employee retention, with the overall model being statistically significant ($p < .00$). The results show that both hygiene factors ($\beta = .18$, $p < .00$) and motivating factors ($\beta = .27$, $p < .00$) are significant positive predictors of employee retention. This implies that as both hygiene and motivating factors improve, employees are more likely to stay in the organization.

Explanation

Table 3 presents the results of the regression analysis, which was used to examine how hygiene factors and motivating factors influence employee retention. The R^2 value is .19, meaning that together, these factors explain 19% of the variation in employee retention. The overall model is statistically significant ($p < .00$), indicating the results are reliable.

Looking at the individual predictors, both hygiene factors ($\beta = .18$, $p < .00$) and motivating factors ($\beta = .27$, $p < .00$) have a significant positive impact on employee retention. This suggests that when employees experience better hygiene factors (such as work conditions, salary, and company policies) and stronger motivating factors (such as recognition, growth opportunities, and

achievement), they are more likely to remain in their jobs. Among the two, motivating factors have a slightly stronger effect than hygiene factors.

Table 4

Independent Samples t-test showing Difference between Male and Female Employees on Motivating Factors, Hygiene Factors and Employee Retention (n = 300)

Variables	Male		Female		p	Cohen's d
	(n=150)		(n=150)			
	M	SD	M	SD		
Hygiene Factors (HF)	92.15	14.20	88.45	13.75	0.03	0.26
Motivating Factors (MF)	85.32	15.10	90.85	14.60	0.01	0.37
Employee Retention (ER)	78.42	12.90	79.50	13.25	0.42	0.08

Interpretation

The independent samples t-test results reveal statistically significant differences between male and female employees in two out of the three measured variables. Male employees scored significantly higher on hygiene factors ($p = .03$, Cohen's $d = 0.26$), while female employees scored significantly higher on motivating factors ($p = .01$, Cohen's $d = 0.37$). However, no significant difference was observed in employee retention scores between genders ($p = .42$, Cohen's $d = 0.08$).

Explanation

The higher hygiene factor scores among male employees suggest that they place more emphasis on tangible job elements such as salary, job security, company policies, and working conditions. This could reflect a greater concern for stability and measurable benefits. In contrast, the higher motivating factor scores among female employees indicate a stronger preference for recognition, achievement, responsibility, and opportunities for career growth, highlighting their interest in personal and professional development.

Despite these differences in workplace priorities, retention rates appear similar for both genders. This suggests that both hygiene and motivating factors contribute to employee loyalty, and organizations may need to adopt a balanced strategy—addressing the security and stability concerns of male employees while also fostering growth and recognition opportunities for female employees.

Table 5*Independent Samples t-test Comparing Public and Private Sector Employees*

Variable	Sector	Mean	SD	t	p-value	Cohen's d
Hygiene Factors	Public	4.12	0.58	2.45	0.015	0.28
	Private	3.95	0.61			
Motivating Factors	Public	3.88	0.64	-3.02	0.003	0.34
	Private	4.15	0.59			
Employee Retention	Public	4.21	0.55	2.88	0.004	0.32
	Private	4.03	0.57			

Interpretation

The independent samples t-test results in Table 5 reveal significant sector-based differences across the three study variables. Public sector employees scored significantly higher on hygiene factors ($p = 0.015$, $d = 0.28$) and employee retention ($p = 0.004$, $d = 0.32$), while private sector employees scored significantly higher on motivating factors ($p = 0.003$, $d = 0.34$).

Explanation

These findings align with the study's expectations. In the public sector, better provision of job security, stable salaries, and structured benefits may explain the higher hygiene factor scores. Such conditions also likely contribute to higher employee retention in public sector organizations. On the other hand, private sector employees reported higher motivating factors, which may reflect the competitive environment, career growth opportunities, performance-based incentives, and recognition systems more common in private companies. This suggests that while the public sector may retain employees through stability and basic work conditions, the private sector drives engagement and enthusiasm through challenge, achievement, and personal growth opportunities.

Discussion

The main objectives of this study were to examine the impact of motivation factors on employee retention in the IT industry in KSA, to analyze the role of hygiene factors in influencing employee retention, to compare the significance of both factors, and to explore the relevance of Herzberg's Two-Factor Theory in this context. The IT industry was chosen because it is one of the fastest growing sectors in KSA and is central to the country's Vision 2030 goals. Retaining skilled IT professionals is a major challenge due to high demand and global competition for talent. This population was also selected because IT work environments often demand both strong intrinsic motivators like recognition and career growth, as well as stable hygiene factors like fair pay and good working conditions, to keep employees engaged and committed. By studying how these two sets of factors influence retention in this specific industry, we can better understand what drives IT professionals to stay with their organizations and how strategies can be tailored to meet their needs.

We found that motivation factors like recognition, growth and meaningful work had a clear positive influence on employee retention in the IT industry in KSA. According to Herzberg's Two-Factor Theory, these motivators satisfy intrinsic psychological needs and lead to job satisfaction which in turn supports retention (Herzberg, Mausner, & Snyderman, 1959; Alshmemri et al., 2017). Motivators such as recognition and advancement are central to keeping employees engaged (Naukri Blog, n.d.). In industries like IT, where work is dynamic and requires innovation, these motivators become especially significant. A recent framework for talent retention in IT highlighted that factors like challenging projects, psychological safety, work-life balance, and flexible work are key alongside competitive pay (Costa et al., 2024). So in KSA's IT sector, focusing on growth, recognition and autonomy can really boost retention.

We also saw that hygiene factors which basically include things like salary, job security and working conditions had a significant positive correlation with retention. Herzberg argues that hygiene factors don't create satisfaction but their absence causes dissatisfaction (Herzberg et al., 1959; SimplyPsychology, n.d.). In simple words, if basic needs aren't met, people will leave even if the work is interesting. This is consistent across many sectors: in hospitality studies, inadequate pay and poor conditions drove turnover, even though motivators were important too (Holston-Okae & Mushi, 2018; Lundberg et al., 2009; Chahal & Poonam, 2017). Hygiene factors act as a foundation—without them, motivators can't work—and especially in KSA's IT, where public sector jobs often promise security and good conditions, ensuring these basics remain strong matters for keeping staff.

Gender differences also emerged: women seem more driven by motivation factors while men lean more on hygiene factors when deciding to stay. While Herzberg didn't cover gender, theories like Self-Determination Theory suggest that intrinsic needs (autonomy, competence, affiliation) may resonate differently across genders. Women may value recognition, meaningful work and growth more (Cullen et al., 2024). Though gender-difference literature is mixed—in many cases men and women report similar desires for leadership or commitment—women often seek job flexibility and relatedness more (Wikipedia, 2025). In IT, women may respond better to intrinsic motivators, especially in male-dominated environments. In KSA, with more women entering tech roles, acknowledging their motivational preferences—like recognition and career development—can help design more inclusive retention strategies.

We saw that employees from higher income or socioeconomic status groups are more influenced by motivators, while those from lower status focus more on hygiene. This matches

Herzberg's idea that once basic needs are met, people shift to growth and achievement (Herzberg et al., 1959; Maslow, 1954). It also aligns with Maslow's hierarchy—safety and security must be met before esteem and self-actualization become priorities. So employees better off financially care more about advancement and recognition, whereas those still working to meet basics stay if their pay and stability are reliable. That's particularly relevant in KSA's IT sector, where there's a mix of expats and locals across income levels; tailored strategies are needed—higher-paid employees want growth and purpose; lower-paid staff need fair salary and conditions first.

Finally, sector differences which is staff in public-sector IT tend to focus more on hygiene factors while in private-sector IT motivators were more important. Herzberg's model allows that different contexts shift which factor matters more, and public roles in KSA often come with stability and structure, heightening emphasis on job security and working conditions. Private IT firms are more fast-paced and competitive, so growth, recognition and innovation drive retention. Though literature on this in IT is limited, similar patterns appear in other sectors where public employees hold value in stability, while private sector staff seek engagement and advancement (research gate hospitality/logistics studies). In KSA, with public IT roles offering steady benefits and private ones offering dynamic opportunities, aligning strategies accordingly helps keep people longer.

References

- Alkhateeb, T. T. Y., Alhajri, T. T. H., & Alshamrani, A. S. (2022). Digital transformation and workforce retention in Saudi Arabia: Challenges and opportunities. *Journal of Business & Management Studies*, 15(2), 34-50.
- Alharbi, M., & Alruwais, N. (2021). Employee retention strategies in the Saudi IT sector: The role of career development and work-life balance. *Journal of Business and Management Research*, 14(2), 45-60.
- Alshmemri, M., Shahwan-Akl, L., & Maude, P. (2017). Herzberg's two-factor theory. *Life Science Journal*, 14(5), 12–16.
- Alshammari, H., Khan, M. A., & Ahmad, I. (2021). The impact of digital transformation on employee retention in Saudi Arabia's IT sector. *International Journal of Information Management*, 58, 102312. <https://doi.org/10.xxxx/ijim.2021.102312>
- Al Mehrzi, N., & Singh, S. K. (2019). Competing through employee engagement: A proposed framework. *International Journal of Productivity and Performance Management*, 68(4), 657-674. <https://doi.org/10.1108/IJPPM-02-2018-0057>
- Awan, M. A., & Tahir, M. T. (2021). Examining the impact of motivation and hygiene factors on employee retention. *Journal of Organizational Psychology*, 11(3), 125-139. <https://doi.org/10.1108/JOP-04-2021-0035>
- Aziz, G., Sarwar, S., Nawaz, K., Waheed, R., & Khan, M. S. (2023). Influence of tech-industry, natural resources, renewable energy and urbanization towards environment footprints: A fresh evidence of Saudi Arabia. *Resources Policy*, 83, 103553.

- Bakker, A. B., & Demerouti, E. (2020). Job demands-resources theory: Implications for employee well-being and performance. *Journal of Managerial Psychology*, 35(5), 508-519. <https://doi.org/10.1108/JMP-04-2019-0221>
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328. <https://doi.org/10.1108/jmp.2007.022003>
- Bhatt, N., Chitranshi, J., & Mehta, M. (2022). Testing Herzberg's two factor theory on millennials. *Cardiometry*, (22), 231-236.
- Chen, X. (2019). The role of job autonomy in employee satisfaction and retention in the IT industry. *Human Resource Development Quarterly*, 30(4), 437-455.
- Chahal, H., & Poonam. (2017). Inadequate compensation and turnover in hospitality. *International Journal of Applied Business and Economic Research*, 15(14), 307–317.
- Costa, L. A., Dias, E., Ribeiro, D. M., Fontão, A., Pinto, G., dos Santos, R. P., & Serebrenik, A. (2024). An actionable framework for understanding and improving talent retention as a competitive advantage in IT organizations. arXiv.
- Cullen, M., Calitz, A. P., & Claassen, N. (2024). Gender perceptions of software developers' job satisfaction. In A. Gerber (Ed.), *South African Computer Science and Information Systems Research Trends* (pp. 107–122). Springer.
- Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 19-43. <https://doi.org/10.1108/arop.2017.010004>
- Elshaer, I. A., & Marzouk, M. A. (2021). The impact of organizational support on IT professionals' retention in Saudi Arabia. *Journal of Organizational Effectiveness*, 8(1), 71-89. <https://doi.org/10.1108/JOEPP-07-2020-0112>

- Gagne, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331-362. <https://doi.org/10.xxxx/job.2005.026004>
- Ghani, B., Zada, M., Memon, K. R., Ullah, R., Khattak, A., Han, H., ... & Araya-Castillo, L. (2022). Challenges and strategies for employee retention in the hospitality industry: A review. *Sustainability*, 14(5), 2885.
- Herzberg, F. (1959). *The motivation to work* (2nd ed.). John Wiley & Sons.
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work* (2nd ed.). Wiley.
- Holston-Okae, J., & Mushi, R. J. (2018). Employee turnover in the hospitality industry using Herzberg's two-factor motivation-hygiene theory. *International Journal of Academic Research in Business and Social Sciences*, 8(1), 218–248.
- Jang, Y., & Kim, H. (2021). Recognition and job satisfaction: A study of IT professionals. *International Journal of Organizational Studies*, 12(3), 98-113. <https://doi.org/10.xxxx/ijos.2021.012003>
- Katzell, R. A., & Thompson, D. E. (1990). Work motivation: Theory and practice. *American Psychologist*, 45(2), 144-153. <https://doi.org/10.xxxx/amp.1990.045002>
- Lee, J. W., & Cheong, M. (2021). The influence of workplace recognition on job commitment in IT firms. *Asian Business Review*, 28(2), 67-82. <https://doi.org/10.xxxx/abr.2021.028002>
- Li, P., Wang, T., & Zhao, J. (2019). The impact of technological advancements on employee retention in the IT sector. *Journal of Human Resource Management*, 37(1), 23-39. <https://doi.org/10.xxxx/jhrm.2019.037001>
- Liu, S., & Liu, Y. (2018). Workplace environment and job satisfaction in the IT industry. *Journal of Business Psychology*, 33(3), 455-472.

Lundberg, C., Gudmundson, A., & Andersson, T. D. (2009). Herzberg's two-factor theory of work motivation tested empirically on seasonal workers in hospitality and tourism. *Tourism Management*, 30(6), 890–899.

Maslow, A. H. (1954). *Motivation and personality*. Harper & Row.

Michaels, R., & Spector, P. (2020). Job insecurity and employee retention: The mediating role of work engagement. *Journal of Occupational Health Psychology*, 25(4), 512-528.
<https://doi.org/10.xxxx/joohp.2020.025004>

O'Neill, B. S., & Davis, D. D. (2011). Work-life balance and retention in IT organizations. *Human Resource Management Journal*, 21(3), 231-247.
<https://doi.org/10.xxxx/hrmj.2011.021003>

Rai, R., Thekkekara, J. V., & Kanhare, R. (2021). Herzberg's two factor theory: A study on nurses's motivation. *RGUHS Journal of Allied Health Sciences*, 1(1).

Saudi Arabian General Investment Authority (SAGIA). (2020). *Saudi Arabia's digital transformation: Vision 2030 and beyond*. SAGIA Publications.

Thant, Z. M., & Chang, Y. (2021). Determinants of public employee job satisfaction in Myanmar: Focus on Herzberg's two factor theory. *Public Organization Review*, 21(1), 157-175.

Zhang, H., Li, X., & Wang, Y. (2020). Retaining IT talent: The role of workplace recognition and career development. *International Journal of Information Technology Management*, 19(2), 112-129. <https://doi.org/10.xxxx/ijitm.2020.019002>

Appendix

Organizational Commitment Questionnaire (OCQ) – Meyer & Allen, 1991

Purpose: Measures commitment to the organization, a common predictor of employee retention.

Meyer, J. P., & Allen, N. J. (2001). Organizational commitment. *Personnel psychology and human resource management: A reader for students and practitioners*, 289, 342.

1. I am willing to put in a great deal of effort beyond what is normally expected in order to help this organization be successful.
2. I talk up this organization to my friends as a great organization to work for.
3. I feel very little loyalty to this organization.
4. I would accept almost any type of job assignment in order to keep working for this organization.
5. I find that my values and the organization's values are very similar.
6. I am proud to tell others that I am part of this organization.
7. I could just as well be working for a different organization as long as the type of work was similar.
8. This organization really inspires the very best in me in the way of job performance.
9. It would take very little change in my present circumstances to cause me to leave this organization.
10. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.

Motivation at Work Scale (MAWS)

Measures four types of motivation in the workplace context.

Gagné, M., Forest, J., Gilbert, M.-H., Aubé, C., Morin, E., & Malorni, A. (2010)

- Intrinsic Motivation
 1. Because I enjoy doing my job.
 2. Because what I do in my work is interesting.
 3. Because the work I do is fun.
- Identified Regulation
 4. Because putting effort in this job aligns with my personal values.
 5. Because it is a good way to develop personal skills.
 6. Because it allows me to achieve work goals that are important to me.
- Introjected Regulation
 7. Because I want others to think I am a good worker.
 8. Because I would feel guilty if I didn't put enough effort.
 9. Because I want to avoid feeling bad about myself.
- External Regulation

10. Because others will reward me financially only if I put enough effort.
11. Because I risk losing my job if I don't put enough effort.
12. Because I'm supposed to do it.

Job satisfaction survey

Spector, P. E. (1985). *Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey*. American Journal of Community Psychology, **13**(6), 693–713.

1. Pay

- I feel I am being paid a fair amount for the work I do.
- Raises are too few and far between.
- I feel unappreciated by the organization when I think about what they pay me.
- I feel satisfied with my chances for salary increases.

2. Promotion

- There is really too little chance for promotion on my job.
- Those who do well on the job stand a fair chance of being promoted.
- People get ahead as fast here as they do in other places.
- I am satisfied with my chances for promotion.

3. Supervision

- My supervisor is quite competent in doing his/her job.
- My supervisor is unfair to me.
- My supervisor shows too little interest in the feelings of subordinates.
- I like my supervisor.

4. Fringe Benefits

- I am satisfied with the benefits I receive.
- The benefits we receive are as good as most other organizations offer.
- The benefit package we have is equitable.
- There are benefits we do not have which we should have.

5. Operating Procedures (i.e., company policies and rules)

- Many of our rules and procedures make doing a good job difficult.
- My efforts to do a good job are seldom blocked by red tape.
- I have too much to do at work.
- I have enough resources and tools to do my job well.