Gordon Institute of Business Science
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Working between worlds: job embeddedness and retention in the age of hybrid work

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

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Abstract

The traditional organisational model for office-based working arrangements has undergone significant changes following the Covid-19 pandemic. Hybrid working arrangements require organisations to adjust their strategies, particularly in terms of staff retention. Traditional norms surrounding tenure, organisational structure, and job satisfaction are no longer primary indicators of employee retention. The business environment has shifted from a physical location to a digital landscape, which changes how employees perceive their personal and professional lives. The research study presented utilised a contemporary framework in the form of job embeddedness to assess whether hybrid working models for knowledge workers influence employee embeddedness. Job tenure, hybrid flexibility, on-the-job embeddedness, and total embeddedness were investigated in relation to turnover intention.

The study employed a quantitative survey with a cross-sectional approach, utilising regression, t-tests, and ANOVA statistical models to test the hypotheses presented. A total of 249 respondents were captured, who fit the parameters of hybrid knowledge workers.

The results confirmed that job embeddedness is a significant indicator for employees to remain in their roles. Hypothesis 1 demonstrated that an increase in job embeddedness will enhance an employee's intention to stay in a hybrid work setting. However, hypotheses 2, 3, and 4 were not supported. These hypotheses examined factors such as tenure, flexibility, and on-the-job embeddedness in relation to overall embeddedness. This indicates that the previously validated factors positively associated with job embeddedness are not applicable in a hybrid work context. The study's findings will contribute to the development of job embeddedness theory and help organisations shape retention strategies within a hybrid environment.

Key Words

Job embeddedness

Turnover intention

Hybrid work

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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1. Chapter 1: Research Problem

1.1. Introduction

This research proposal focuses on the impact of job embeddedness on the retention of knowledge workers in a hybrid work environment. This section outlines the problem the research will attempt to address and explains the purpose of the research for both academic and business audiences. An introduction to the theoretical base for this research will be discussed.

1.2. Problem Statement

Employee turnover has been a topic of academic research for more than a century. A systematic literature review just three years ago covered the evolution of theories and findings over the last century (Diemer, 1917; Fisher, 1917; Bolt et al., 2022).

Turnover, also academically referred to as voluntary or involuntary employee turnover, is the concept of an employee leaving their job or being let go (Bolt et al., 2022). Turnover in the context of organisations refers to the rate at which employees leave or are terminated by an organisation. In the context of this research paper, the focus will be on their voluntary resignation (Hom & Kiazad, 2024).

Retention, on the other hand, refers to an organisation's ability to keep its employees (Allen et al., 2010). High retention rates are generally viewed as a positive indicator, indicating a stable and committed workforce (Hom & Kiazad, 2024). By understanding why the turnover rate is high or low, an organisation can identify areas for improvement to mitigate employee turnover, resulting in improved employee retention (Hom & Kiazad, 2024). Identifying areas of improvement and mitigating the risks of turnover is regarded as a retention strategy (Allen et al., 2010).

Although this topic has been extensively researched, further academic studies are needed, particularly due to changes in working environments, culture, and additional factors in emerging markets (Bolt et al., 2022).

A knowledge worker can be defined as someone who utilises their knowledge as their primary means of performing their job. These are employees who utilise knowledge, create new knowledge, and continually learn while working. Typically, they work with people, information technology equipment and help organisations innovate. Most people who can work remotely or do work online may be classified as knowledge workers (Serenko, 2022).

The modern workplace has undergone a significant transformation, primarily accelerated by the COVID-19 pandemic, necessitating a re-evaluation of traditional work models and strategies for employee retention (Selvi & Madhavkumar, 2023). Technological progress has driven changes in the workplace, resulting in more flexible organisational structures and a shift away from traditional human resource management practices, which focused on physical locations. (Lauring & Jonasson, 2024).

The rise of hybrid work, characterised by a blend of on-site and remote work arrangements, has given organisations both opportunities and challenges in their efforts to maintain a competitive edge in attracting and retaining knowledge workers (Handke et al., 2024; Hopkins & Bardoel, 2023).

Many people have been evaluating their personal and professional lives since the onset of the pandemic (Hom & Kiazad, 2024; Serenko, 2022). Work-life balance has become a priority for them, along with a more meaningful career that offers flexibility and alignment with their values. As a result, many employees prefer working from home, and organisations which force employees into the office do face a risk of increased turnover (Serenko, 2022). Another effect of the pandemic is that many employees face burnout due to stress, which can lead to resignations in search of less stressful employment (Jiang et al., 2022).

Job embeddedness is a theory which goes beyond the traditional turnover factors, such as remuneration, and focuses on an employee's alignment or connectedness to the organisation (Mitchell & Lee, 2001). Research indicates that high job embeddedness is associated with lower turnover intentions (Takawira et al., 2014).

Job Embeddedness can be described by links, fit, and sacrifice, which can occur within the workplace or outside of it (Setthakorn et al., 2024).

1.3. Purpose of the Research

Hybrid work introduces complexities related to employee engagement, communication, and maintaining organisational culture (Lauring & Jonasson, 2024). Addressing these challenges is vital, as employee turnover can result in substantial financial losses, reduced productivity, and the loss of valuable institutional knowledge (Bolt et al., 2022). Therefore, understanding the key factors influencing knowledge worker retention in hybrid environments is essential for organisations aiming to optimise their workforce and ensure long-term success (Lauring & Jonasson, 2024).

A high turnover can harm an organisation's performance. Turnover will result in increased costs to replace employees, a lag in productivity when replacing them, and a drain on organisational knowledge. The cost of replacing an employee can easily exceed the annual salary of that employee (Allen et al., 2010; Kalayu et al., 2020).

A phenomenon known as the "Great Resignation" has been observed since 2021, characterised by an abnormally high number of employees resigning from their jobs (Serenko, 2022). This period has set the highest recorded number of monthly resignations to date in the last century (Hom & Kiazad, 2024). The knowledge economy is rapidly growing, thanks to the "Great Resignation," as knowledge becomes a competitive advantage for employees progressing in their organisations (Serenko, 2022).

Remote or hybrid work has become an especially important factor in staying at an organisation for women who have to balance career and family responsibilities (Selvi & Madhavkumar, 2023). Organisations have become more aware that they need to offer hybrid work and positive working environments, in addition to traditional benefits, to retain employees (Tessema et al., 2022).

Knowledge workers cannot be categorised with other types of employee segments, as they exhibit different turnover patterns. The education level of knowledge workers is a key nuance which gives them increased job mobility, which is further increased in a country like South Africa with a low supply of highly educated employees (Wöcke & Heymann, 2012). Thus, focusing on knowledge workers in this study will provide valuable insights for the body of research as well as organisations in emerging markets such as South Africa.

1.4. Research Objectives

The research aim is to understand the relationship between job embeddedness and turnover intention in the context of a hybrid working model. The research will provide a foundation for further academic research into the embeddedness theory and the relevance of sub-contracts. The objective is also to support businesses with empirical research that can inform their strategies.

- To measure the level of job embeddedness among hybrid knowledge workers.
- To determine the relationship between job embeddedness and turnover intention.
- To assess the moderating effect of hybrid work flexibility on the relationship between job embeddedness and turnover intention.
- To provide managerial recommendations for designing hybrid work policies that enhance retention.

1.5. Business Rationale for the Research

The labour market has become increasingly volatile post-COVID-19, and therefore employee retention is now more key in an organisation's strategy than before (Harvard Business Review, 2023). Poor management of employees during the transition from working at home to returning to the office has decreased productivity and led to employees becoming less engaged, thereby eroding trust (Harvard Business Review, 2024). On the other hand, there are organisations which have adopted flexible hybrid models and have seen a decrease in employee turnover. A recent study found that implementing a work-from-home policy of at least two days a week results in 33% less turnover in the work-from-home group (Bloom et al.,

2024). The study also confirmed that there was no impact on employee performance and promotion rates for the work-from-home group.

Given that retention and turnover are well-studied fields, in a perfect environment where organisations control for financial incentives and culture, job embeddedness provides an additional opportunity for organisations to design a strategy. A recent meta-analysis found that job embeddedness is a strong indicator of turnover intention ($r = -0.44$) and has become a significant predictor of turnover intention (Setthakorn et al., 2024). However, the rise of hybrid working models may necessitate reassessment of the job embeddedness model, particularly for sub-constructs such as sacrifice or links (John et al., 2025).

Organisations are still uncertain about what the ideal working location policies are and the nuances that affect the organisational context. They are still deciding whether to enforce a return to the office or adopt a hybrid model. Unfortunately, there is insufficient empirical evidence to guide their decision, as management exercises its own discretion (Harvard Business Review, 2024). Aiding organisations with research on job embeddedness, which is a contemporary concept, can help managers quantify the return on investment when making decisions on hybrid work strategies and assessing their impact on employee retention (Setthakorn et al., 2024).

Additionally, organisations in countries like South Africa are dependent on empirical evidence studies from other countries in the West or Asia, and therefore may have different contextual relevance (Wang et al., 2025).

This further justifies the need for this study on how embeddedness is impacted in a hybrid working model, allowing businesses to reassess strategies for increasing job embeddedness among employees.

1.6. Conclusion

The conclusion to the above is that it remains vital for organisations to retain employees in order to maintain a competitive edge and optimal organisational performance. With many factors influencing the current state of work, such as hybrid work and the environment post the COVID-19 pandemic. Therefore, expanding the theoretical research of a relatively new theory, which is more relevant to the current state of work and environment, will be beneficial to academic research and organisations.

2. Chapter 2: Literature Review

2.1. Introduction

This chapter offers a comprehensive review of the theoretical and empirical foundations of the key concepts in this study: job embeddedness (JE), turnover intention (TI), and hybrid work arrangements. It begins by exploring the main theoretical frameworks that explain employee retention and turnover behaviour. The section also reviews existing literature on turnover intention. It will cover the theory in which the main constructs of job embeddedness and turnover intention are developed. It will also cover how these constructs are measured, what has been discovered before and what the implications are of these constructs.

Empirical studies on the topic of turnover intention and intention to stay encompass numerous factors, including compensation, career opportunities, organisational culture, and work-life balance. The literature on turnover research is more mature, serving as the foundation for the formulation of retention strategies (Hom & Kiazad, 2024).

However, there is a lack of research that focuses on factors such as hybrid work environments, the subset of knowledge workers and emerging markets. The hybrid model combines the traditional in-office working model with the remote working model (Hopkins & Bardoel, 2023). This shift towards a more common hybrid working model has led to a call for further research on understanding employee commitment to the organisation (Lauring & Jonasson, 2024; Hanzis & Hallo, 2024).

As a result of having experienced working from home during the pandemic lockdown period, employees want the freedom and control post-pandemic, and this has become a desirable factor for employment (Lazarova et al., 2022). Therefore, organisations need to incorporate this into their offering in order to compete for skills. Organisations face the challenge of transitioning from traditional practices of monitoring employees within an office to adapting to online monitoring and performance (Lauring & Jonasson, 2024).

Digital technology is crucial for enabling hybrid working models, which include high-quality internet, video capabilities, instant messaging, and file-sharing software (John et al., 2025). This technology is not only important for enabling job and communication between employees, but also for assisting the organisation in promoting a culture and community for all employees working remotely.

A shift in human resource practices is now required to design and measure jobs, as they have taken on a different form with the emergence of hybrid models (Lauring & Jonasson, 2024). To ensure a level of success for hybrid jobs, tasks must be defined as either on-site or off-site capabilities (Hopkins & Bardoel, 2023).

2.2. Turnover Intention and Retention

An organisation's retention strategy is the execution of a plan that mitigates against the factors identified as contributing to turnover within the organisation. The goal of the strategy is to retain employees (Serenko, 2022). Turnover and retention can be seen as two sides of the same coin; one examines the reasons for an employee resigning, and the other focuses on preventing an employee from resigning.

Organisations employ multifaceted strategies, some of which cast a wide net and consider all employees, as well as other approaches that target a specific grouping (Bolt et al., 2022). Wide-spanning or across-the-organisation type strategies are regarded as systematic strategies (Allen et al., 2010).

On the other hand, a strategy that focuses on a specific group, such as engineers or executives, to ensure low turnover in that focused area is regarded as a targeted strategy. This can be argued as a more critical approach, as an organisation can target specialised skills or areas that are hard to replace and have a more significant impact on the organisation's performance (Allen et al., 2010). Understanding turnover types and implementing strategies can help organisations create a more attractive and retentive work environment.

Cultural context is an important consideration, especially for multinational organisations when considering retention strategies. Culture is a key factor influencing employee retention (Caligiuri et al., 2024). The same retention strategy may be proven ineffective when applied across different countries and regions. Countries differ in social norms, outlooks and what employees value. Work-life balance, along with both mental and physical health, is something organisations should invest in, particularly in the region (Caligiuri et al., 2024).

A study in South Africa found that the level of education was a more decisive factor in the mobility of employees, implying that more highly educated employees are at a higher risk for organisations to retain. Factors such as age, race, gender and tenure are also influential in the turnover experience in a South African context. Therefore, organisations should consider all these factors when designing a retention strategy (Wöcke & Heymann, 2012).

2.2.1. Theoretical Definition

The Theory of Planned Behaviour (TPB) offers the foundational framework for understanding the reasons behind employee resignations. It identifies three components that elucidate the decision-making process of an employee considering resignation: attitude, social norms, and perceived behavioural control (Ajzen, 1991). An individual is inclined to plan their resignation based on their personal feelings, societal acceptance of the action, and their perceived authority to make such a decision.

Research has found that the perceived behavioural control component has the strongest effect on the planned decision to resign. This could include the individual's financial position and access to other job opportunities before making the decision (Rubenstein et al., 2018). The takeaway is that an employee's intention to leave an organisation is planned and deliberate, depending on the outcomes of their decision.

The Unfolding Model was developed to expand on the concept of turnover and took a different direction by suggesting that “shocks” or “events” are the cause behind an employee's decision to resign (Lee & Mitchell, 1994). Events such as being passed up for a promotion, having conflict at work, or needing to relocate are triggers for the intention to leave. It can be further broken into an immediate reaction to an event or a prolonged decision. This depends on a personal, unforeseen event versus an event that can be digested over time while still employed.

The importance of this theory lies in its introduction of the concept that turnover is linked to more than just dissatisfaction at work. A more recent development is that employees are facing “shocks” in the form of organisations changing their policies post-COVID-19 to remote, hybrid, or office-based models. These are causing employees to reconsider their intention to stay at an organisation (Holtom et al., 2008).

It has since been suggested that the turnover intention can change over time and the employee will base it on other job opportunities, their embeddedness or current satisfaction (Holtom et al., 2008). An employee's personal requirements and changes in the organisation are reasons that can change an employee’s intention to stay over a long period of time (Lazzari et al., 2022). A meta-analysis of turnover intention found that 40% of actual turnover variance can be attributed to an employees turnover intention. Meaning that turnover intention is the single largest predictor for employees leaving (Rubenstein et al., 2018).

Hybrid working models have created a new context for studying turnover intention. The initial behaviour control is now changing based on the change in norms and physical presence. The relationships between colleagues and the organisation can be seen to weaken; however, the work-life balance of the employee can be seen to strengthen (John et al., 2025).

This provides a strong case for the continued research into turnover intention and all the contextual factors which affect the behavioural decision making of employees.

2.2.2. Measurement

The measure of turnover intention forms the foundation of academic research for explaining actual turnover and determining retention strategies, as it serves as a gauge for actual turnover (Hom et al., 2017). Longitudinal studies are not practical in most cases; therefore, the majority of studies have used employee-reported intentions to measure turnover intention.

The first measurement using a quantitative tool was conducted in 1978, based on the logical sequence of steps that would be taken to make the decision to resign. This included not being satisfied, thoughts of resignation, reviewing other options, and behavioural changes (Mobley, 1978).

In response, the Michigan Organisational Assessment Questionnaire (MOAQ) was developed, which remains a widely used tool for measuring turnover intention. The tool has three items/questions which are rated on a five-point Likert scale, the questions are: “I often think about quitting my job”, “I will probably look for a new job in the next year” and “If I could, I would quit my job” (Cammann et al., 1983).

Follow-up studies have validated that the MOAQ shows signs of strong internal reliability, with a Cronbach’s α of approximately 0.85, and this consistency continues over a number of months (Tett & Meyer, 1993). Its compact design makes it particularly advantageous in multivariate models, especially when turnover intention is treated as a factor, such as job satisfaction, organisational commitment, and job embeddedness.

As the research matured, the intention to search and quit were separated to measure (Hom et al., 2017). Searching job portals and updating curriculum vitae are measures for search intention prior to deciding to resign. Studies now contain both elements with anchoring, such as “…in the next 6 months” (Rubenstein et al., 2018).

Variable modelling in recent research has used factor analysis and structural equation modelling to validate turnover intention as a construct to other constructs such as embeddedness, job satisfaction and commitment (Holtom et al., 2008).

In the post-pandemic world of hybrid work, turnover intention remains theoretically applicable but requires contextual adaptation. Factors such as the fairness of the work model, support for working remotely, and the availability of technology must be considered in the modelling (John et al., 2025).

2.2.3. Relationship to Job Embeddedness

The framework for Conservation of Resources (COR) can serve as a bridge in explaining the link between job embeddedness and turnover intention. COR explains turnover intention in the frame of an employee protecting their title, relationships, and incentives by staying in their current job (Hobfoll, 2011).

Job embeddedness tests what employees are willing to give up if they leave their jobs, using three sub-constructs: “fit”, “links”, and “sacrifice” (Mitchell et al., 2001). Therefore, we can link the two theories as they share similar explanations of turnover intention.

2.3. Job Embeddedness

Job embeddedness encompasses three dimensions that measure how an employee fits into the organisation and community, the links and connections they have within the organisation and community, and the sacrifices they would have to accept if they were to leave their job or community. The three dimensions are categorised as on-the-job embeddedness and off-the-job embeddedness (Mitchell et al., 2001). A later adaptation of job embeddedness eliminated the three dimensions and two categories, measuring job embeddedness as a single construct (Crossley et al., 2007).

2.3.1. Theoretical Foundation

Mitchell and Lee introduced the theory of job embeddedness to describe the level at which employees are “stuck” in their jobs and thus do not leave (Hom & Kiazad, 2024; Mitchell & Lee, 2001). This was built due to the limitations of traditional turnover and retention strategies. The theory examines turnover intention from a different perspective; instead of focusing on why employees leave, it considers why employees stay (Mitchell & Lee, 2001). The theory is broken down into three categories: links, fit, and sacrifice, which apply both on and off the job (Setthakorn et al., 2024).

Mitchell and Lee’s theory suggests that the degree of an employee’s connection to either the community, the organisation, or both influences their likelihood of remaining employed at the organisation (Setthakorn et al., 2024). This theory looks beyond the traditional factors of retention, such as contentment and satisfaction, to the degree to which an employee feels they belong at the organisation (Peltokorpi & Allen, 2024). Job embeddedness has become a key focus for retention strategies, as it elucidates why employees stay in their jobs and how mediating constructs can be improved to enhance job embeddedness (Setthakorn et al., 2024).

The theory of job embeddedness was created pre-pandemic, when traditional employment working models were the norm. In the new hybrid working context, the theory is being challenged as to whether community, physical and geographical links and sacrifice are still valid. Researchers suggest that the job embeddedness bias, which is often associated with physical presence, will need to evolve into a virtual context (John et al., 2025).

Thus making it a good choice for this study. Not without its limitations, though, the entire complexity of factors as to why employees stay, such as factors not related to attitude or external, is not considered (Mitchell & Lee, 2001).

2.3.2. Dimensions

The theory of job embeddedness is based on employees' ties to the organisation or community. These ties can be described as the degree to which employees feel they fit within their job or community, such as values, goals and skill set. The links which they have created with other employees and projects, either at the organisation or in the community. Finally, the sacrifices that employees must make when leaving their job can take the form of psychological or material losses (Mitchell & Lee, 2001; Hom & Kiazad, 2024).

Off-the-job describes an individual's ties to their community, while on-the-job describes an individual's ties to their organisation (Peltokorpi & Allen, 2024). The current body of literature has not thoroughly explored off-the-job embeddedness, although it remains an important factor (Mitchell & Lee, 2001).

It is worth noting that an employee's decision to resign can have a multifaceted impact on both the organisation and the community, which are independent entities. For example, an employee can choose to resign and remain in the community or region or an employee can choose to relocate but remain with the organisation and work from a different location (Mitchell & Lee, 2001).

2.3.3. Measurement

The composite measure with six sub-dimensions was first introduced by Mitchell et al. (2001). This structure remains a popular choice in numerous empirical investigations due to its theoretical depth. Conversely, the global measure (Crossley et al., 2007) simplifies the evaluation of embeddedness as a unidimensional affective construct, thereby enabling the conduct of large-scale survey research. The selection of one of these measures is contingent upon the research context and the intended level of precision in construct measurement.

Dimension	Domain	Description	Example Item
Links (On-the-job)	Organisation	Formal & informal work connections	"I feel well-connected to my team members, even when working remotely."
Links (Off-the-job)	Community	Social & community connections outside work	"How many non-work groups are you a member of?"
Fit (On-the-job)	Organisation	Perceived compatibility with job, values, skills & culture	"My job utilises my skills and talents well."
Fit (Off-the-job)	Community	Compatibility with living environment, lifestyle, climate	"I feel like I am a good match for the community."
Sacrifice (On-the-job)	Organisation	Perceived psychological & material cost of leaving the job	"I would sacrifice a lot if I left this organisation."
Sacrifice (Off-the-job)	Community	Non-work losses if one relocates	"Leaving this community would be very hard for me."

Table 1: Job Embeddedness dimensions

2.3.4. Research Findings

Job embeddedness is a strong predictor of measuring a negative turnover intention, which has been validated through a recent meta-analysis study (Setthakorn et al., 2024). Negative turnover can then be flipped to describe an employee's intention to stay.

Additional studies in the healthcare industry has reported that both on-the-job and off-the-job embeddedness have a material impact on turnover intention (Wang et al., 2024). This is also the case with information technology (Džambić et al., 2025) and for higher education (Artiningsih et al., 2023). However, measuring in a hybrid working model or remote working context is limited.

When using job embeddedness in a retention strategy, organisations can try to improve employee connections by promoting team relationships, assisting employees with community projects, and through mentoring initiatives (Allen et al., 2010). Organisations can also start from the onboarding stage by ensuring that an

employee’s personality, skill set, and values align with the job. Post this phase, an organisation can ensure that employees have a well-structured career development plan and strong financial incentives to increase the sacrifice component if the employee leaves (Allen et al., 2010).

2.4. Hybrid Work

The hybrid working model is a combination of remote and on-site working arrangements, allowing employees to benefit from both models. Although employees have generally received this model of hybrid work positively, it is not entirely up to the employee (Lauring & Jonasson, 2024).

For an employee to be effective in a hybrid job, it depends on the nature of the job, the organisational culture, and the organisation's preferences (Lauring & Jonasson, 2024). Organisations have a unique opportunity to fundamentally change the landscape of how work is performed. However, organisations must consider the human element when designing jobs, which should include the tasks of the job, employee preferences and schedules, workflows, and project design, as well as strategies to ensure equality of opportunity and resources (Gratton, 2021).

There are both positive and negative outcomes from the hybrid working model. From an employee's perspective, they have the freedom to move between the office and home, which provides them with the flexibility to create a work-life balance and enhance their overall well-being. However, the negative is that it can be detrimental to teamwork and collaboration, which can also lead to weaker personal relationships between colleagues. The technology capabilities of an organisation will be critical to effectively implementing hybrid jobs (Lauring & Jonasson, 2024).

Advancements in technology, both hardware and software, have enabled online work from any location, resulting in some jobs that are entirely location-independent. Additionally, the capabilities of video, voice, and virtual support have facilitated easier collaboration between people (Bucher et al., 2024).

Furthermore, leaders play an important role in the success of hybrid working models. Leaders must be able to communicate effectively and drive the team in the same direction (Lauring & Jonasson, 2024).

Retention strategies must be enhanced to consider the future of work, which is characterised by a digital environment that offers hybrid and remote jobs, and will also necessitate changes in the skills required for these roles (Lazarova et al., 2022).

2.4.1. Covid-19

Before the Covid-19 pandemic, most organisations employed traditional working models with a set or flexible number of hours, requiring employees to be physically present in a workspace to execute their functions and collaborate with colleagues (Fayard et al., 2021). Although technology has made remote working a more possible solution for organisations, the preferred model was still aligned to traditional physical in-office work. However, there were organisations that became early adopters of hybrid or remote work before COVID-19 (Gratton, 2021).

When organisations faced the consequences of the pandemic in the form of strict lockdowns worldwide, they were forced to find remote models that would allow them to remain operational (Fayard et al., 2021). It was critical for organisations to increase their technological capability in order to sustain their workforce's productivity while working from home (Gratton, 2021).

As lockdown restrictions were relaxed, organisations began bringing employees back to the office on a hybrid basis, which means that employees could now work a few days from home and the remaining days from the physical office (Fayard et al., 2021). This created a challenge for managers, as they needed to reimagine how to assess employees beyond traditional measures and also how policies should be amended to cater to the new way of working (Parker et al., 2020).

2.4.2. Benefits and Challenges

Organisations are now offering employees the option to work from home for a fixed or flexible number of days. This has a beneficial effect for both the employee and the organisation. Employees can improve their work-life balance thus being more happy (Gratton, 2021). Working from home allows employees to balance their focus between personal or family responsibilities and work commitments without needing to physically be in different locations (Fayard et al., 2021). Additional benefits for employees include the fact that they can save time and money that would have been previously spent on commuting to and from work. This time can also allow employees to become more productive in their function (Gratton, 2021).

Organisations are also reaping benefits from hybrid working models; the organisations' costs of physical office space and supporting costs can be reduced. Organisations can downscale their physical office space by coordinating employee hybrid schedules and creating shared working spaces, unlike the traditional approach (Mortensen & Haas, 2021). Organisations can also benefit in productivity and retention by having employees who are happier with the new working model. Furthermore, organisations can now recruit from geographic locations which they previously could not due to the rigid working models (Gratton, 2021).

However, there are challenges with hybrid working models, especially for organisations to maintain alignment with all their employees. Employees will rely on various technologies to communicate and collaborate with one another, which can lead to miscommunication, which is detrimental to the organisation. This risk is further increased when the direction of miscommunication is between different job levels, for example, a manager and a subordinate. It makes performance management and alignment to company strategy a lot harder (Gratton, 2021).

In remediating this, managers may choose to start micromanaging employees, which can lead to dissatisfaction among employees. The perception can be that staff who are in the office more often are favoured over those who are not. Organisations must combat this risk to create a fair and productive hybrid model (Mortensen & Haas, 2021).

2.4.3. Hybrid Work Relationship to Job Embeddedness

Hybrid working models have altered the context for traditional embeddedness in organisations, and research has argued for the evolution of the theory to accommodate this hybrid context.

Research suggests that physical location ties must be re-examined to consider a digital environment instead of a hybrid employee context (John et al., 2025). It has also been argued that organisational links will be negatively affected due to the reduced amount of time employees spend working physically together (Lauring & Jonasson, 2024). However, the direction of the embeddedness is dependent on the organisation's implementation.

2.5. Conclusion

Chapter two highlights the changing landscape of work post-COVID-19 and how employee retention remains key to organisational performance. The theory of job embeddedness has been introduced as the contemporary framework for this study, to be used in testing how retention factors are changing in a hybrid context (Mitchell et al., 2001).

Research on turnover theory has found that testing for turnover intention remains the best practice for predicting actual turnover (Rubenstein et al., 2018). However, many of the studies conducted are from a Western or Asian context rather than a country like South Africa, which has a serious supply concern for knowledge workers (Wöcke & Heymann, 2012).

Research on turnover also underscores the importance of investigating the impact of hybrid work on the field of study (Lauring & Jonasson, 2024). Yet not enough has been done on researching embeddedness in a hybrid context, which is a strong indicator of turnover intention.

The research presented proves a theoretical purpose for conducting this study in the context described below.

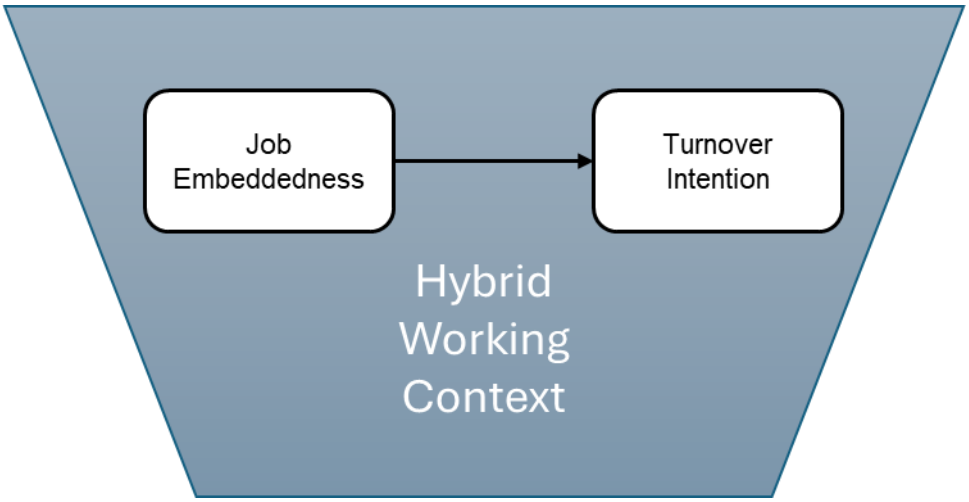

Figure 1: Literature constructs

3. Research Question and Hypotheses

3.1. Introduction

In this chapter, the research objectives and hypotheses will be presented. This will be based on the literature and job embeddedness theory presented in the previous chapter. The Job Embeddedness Scale (JES) will be used to model the relationship between embeddedness and an employee's intention to remain with an organisation during hybrid work.

3.2. Research Question

What is the impact of job embeddedness on the retention of knowledge workers in a hybrid workplace?

3.3. Research Objectives

- To determine the impact of hybrid workers' job embeddedness affect their intention to stay with an organisation
- To assess whether hybrid work flexibility affects an employee's job embeddedness
- To determine if on-the-job embeddedness is more critical to hybrid workers than off-the-job embeddedness
- To provide business recommendations on employee retention strategy for knowledge workers in a hybrid workplace

3.4. Research Model

This conceptual model illustrates the relationship between various factors and Total Job Embeddedness (JE), and subsequently, the relationship between JE and Intention to Stay (ITS).

Hybrid work flexibility (two levels: low vs high) and tenure (four bands) are treated as grouping variables, each tested using ANOVA or t-tests to determine if the mean JE differs between groups.

An independent-samples t-test compares on-the-job (OJE) and off-the-job (OffJE) embeddedness to see which more strongly contributes to overall JE.

Finally, JE predicts ITS, suggesting that greater embeddedness correlates with a stronger intention to stay.

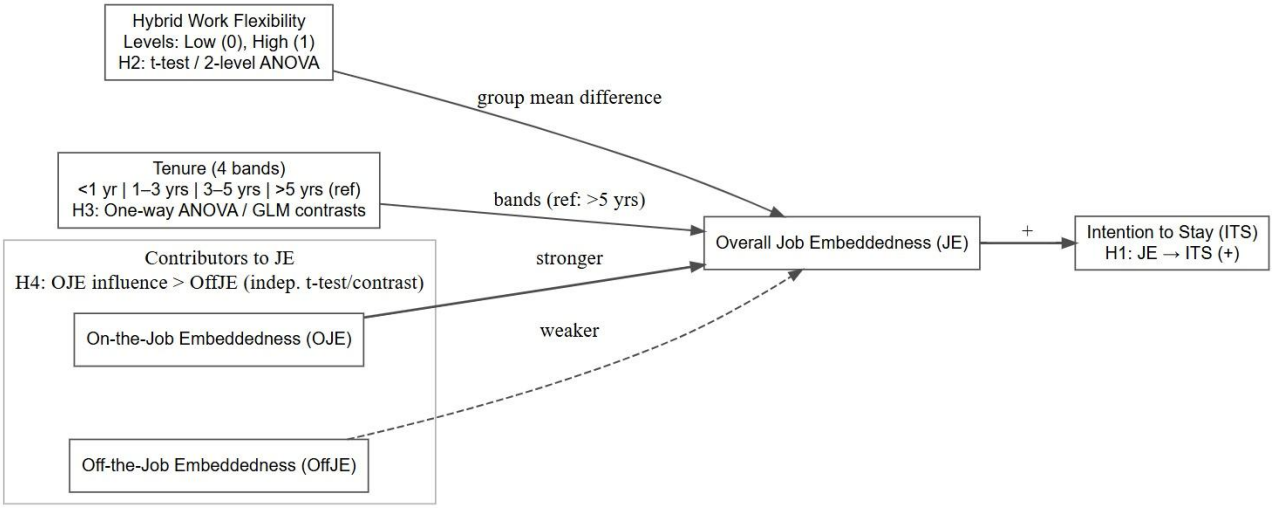

Figure 2: Conceptual model

3.5. Hypotheses

H1: Higher job embeddedness (JE) is associated with higher intention to stay with the organisation.

The theory of job embeddedness posits that an increase in job embeddedness will lead to an increased intention to stay with an organisation (Mitchell & Lee, 2001). Using an employee turnover intention will enable the study to predict the inverse, which is the intention to stay (Hom & Kiazad, 2024). The hypothesis aims to demonstrate that the theory is applicable to hybrid working models for knowledge workers.

H2: Higher hybrid work flexibility is associated with higher job embeddedness among knowledge workers

Hybrid working models, which provide increased fit and work-life balance, will become a leading indicator of increasing an employee's job embeddedness. (Peltokorpi & Allen, 2024). The hypothesis proposes to explore this relationship in the context of knowledge workers in a hybrid model.

H3: The longer the tenure of an employee the higher their job embeddedness

Multiple studies suggest that factors such as tenure explains a strong relationship to an increase in job embeddedness for employees (Mitchell & Lee, 2001). The hypothesis aims to verify this relationship in the context of a hybrid working environment.

H4: On-the-job embeddedness has a high influence than off the job embeddedness on overall job embeddedness in a hybrid working context

On-the-job embeddedness has been consistently reported as a stronger indicator of overall embeddedness than off-the-job embeddedness. This hypothesis proposes testing the theory in a hybrid work context (Jiang et al., 2012; Allen et al., 2010).

4. Research Methodology

4.1. Introduction

This chapter outlines the research methodology used to test the hypotheses defined in the previous chapter.

4.2. Philosophy, Design and Approach

The research question and goals, along with the researcher's perspective, determined the research philosophy (Saunders & Lewis, 2018). The positivist philosophy considers scientific data for relationships between variables. Therefore, this philosophy was well-suited for the study, which aims to test the hypotheses on the impact of job embeddedness in a hybrid working environment on employee turnover (Bucher et al., 2024).

Furthermore, the research aims to gather details and traits from the respondents in reference to the constructs being tested in the hypotheses presented in Chapter 3; therefore, the research design is descriptive (Saunders & Lewis, 2018). The three primary constructs for this research are employees' job embeddedness, hybrid working conditions, and turnover intention.

The deductive research approach aligns with a method that tests a theory using a structured strategy to collect and test data (Saunders & Lewis, 2018). This approach is used to build on existing research (Mitchell & Lee, 2001) and is therefore a logical choice for this study.

4.3. Methodology Choice

A mono-method quantitative research methodology is aligned with the deductive research methodology and a positivist philosophy (Saunders & Lewis, 2018). A monomethod was chosen due to the study's time constraints. The methodological choice aligns with the original methodology used to create the job embeddedness scale, which was designed to test the theory (Mitchell & Lee, 2001).

4.4. Research Strategy

A survey was conducted to collect data from knowledge workers who are employed and work in a hybrid model. This strategy is viable with accessing a large number of participants who work from home or the office in order to collect standardised (Bell et al., 2022)

This strategy aligns with the philosophy, design, and approach defined. A survey instrument was well-suited for reaching the required number of participants in a quantitative method within the allocated time for this research (Saunders & Lewis, 2018).

The survey was adapted from the Job Embeddedness Scale survey, previously used in academic research (Mitchell & Lee, 2001). It was further adapted to include questions on the other constructs of turnover intention and hybrid work (Bolt et al., 2022). To reach a diverse group of hybrid workers, the survey was distributed through social media platforms, including LinkedIn, WhatsApp, and Facebook.

4.5. Time Dimension

A cross-sectional time approach enables a researcher to collect data over a short duration to test a theory at a given point in time, unlike a longitudinal study, which may be argued to be a superior method (Pallant, 2020). However, given the context of the study, to build on an academic theory created 14 years ago on the context of hybrid knowledge workers, a cross-sectional approach may be the appropriate approach for future studies to build on, as this study is being performed post the Covid-19 pandemic (Selvi & Madhavkumar, 2023).

The data collection took place between August and September 2025 and therefore followed a cross-sectional timeline. This was mainly attributed to the time allocation of the research project.

4.6. Population

The research constructs and hypotheses determined the population for this study. The population is described as knowledge workers who are formally employed and work in a hybrid model. The industry, size of the organisation and tenure will not be limited, but these have been used as control variables in the analysis. This is due to not all industries having been able to adopt a hybrid working model, which is more suited to an organisation with a majority of knowledge workers (Serenko, 2022).

Employees must work a minimum of one day a week from home to be considered as a hybrid working employee. Due to the broad description of knowledge workers who can work a hybrid model, it will not be possible to describe the full population in detail, as this spans across industries and geographic locations.

4.7. Unit of Analysis

The research question and hypotheses will guide the selection of the unit of analysis. Job embeddedness theory typically focuses on the employee (Mitchell & Lee, 2001). The study aims to explore the extent to which employees are embedded in their organisation or community and the impact this has on their decision to stay with the organisation (Peltokorpi & Allen, 2024). Therefore, the unit of analysis for this research will be the individual employee. The survey questionnaire is designed to gather data specifically on the employee's individual perspective, rather than that of the organisation, community, or country.

4.8. Sampling method and size

Due to the above, when a complete population cannot be described and selected randomly, the non-probability sampling method is the logical approach (Saunders & Lewis, 2018). The non-probability sampling method will also aid the research timeline.

A purposive sampling method will be employed initially, as it is better suited for targeting individuals with a specific description relevant to the research (Mukherjee et al., 2023). Initially, the researcher's professional network will be targeted. Working

in the consulting industry, the researcher can target colleagues, clients, and partner organisations. Additionally, the researcher will use personal social platforms to target participants.

Convenience sampling will be used to target participants who are willing and ready. This will include friends, colleagues and fellow students (Stratton, 2023). Additionally, social and professional media platforms may be used to distribute the data collection tool.

Finally, a snowballing sampling method will be used to target referrals from initial participants. Participants will be encouraged to refer individuals who meet the population criteria within their networks (Saunders & Lewis, 2018).

However, this sampling method limits the generalizability of results to the larger population, although it is appropriate for theory-driven quantitative analyses aimed at exploring correlations between variables rather than estimating population parameters. Steps such as distribution through generic social media platforms and purposeful targeting of participants from different industries were taken to mitigate against the bias (Baker et al, 2013)

A sample size of 120 participants was selected as it was slightly higher and achievable than the calculated required size for such a quantitative research study (Hair et al., 2009). The data collection exceeded the target of 120, with 346 respondents to the survey. Upon analysis and cleaning of the respondents' data, 97 respondents were excluded, leaving 249 respondents for testing. This was 129 more respondents than initially anticipated.

4.9. Measurement Instrument and Data Gathering

To achieve maximum efficiency, an online questionnaire will be used as the measurement instrument, employing survey methodology. This instrument allowed the researcher to collect data inexpensively from a large number of participants. This is a relevant method, as it involves the construct of hybrid work in the population (Nor & Abdullah, 2020).

Verified questionnaires to measure job embeddedness were used to design the questionnaire for this research. The questionnaires were also adapted to include factors such as knowledge workers and hybrid work models (Clinton et al., 2012; Reitz, 2014). Further questions were added to test the construct of turnover intention, which is a mature field of study with academically validated items for survey purposes (Mobley et al., 1978; Hom & Griffeth, 1991).

The survey was created on the Google Forms platform and distributed using the URL link. The survey included the required university disclosures, a confidentiality clause, a description of the study, and the prerequisites that respondents must meet to participate in the survey. A copy of the survey questions is available in Appendix B.

A pilot survey was conducted using 10 preselected participants. The pilot required to test the survey for any errors and ambiguities in the questions. The second requirement was to confirm the time it takes to complete the survey (Kunselman et al., 2024). Feedback from the pilot group was generally positive, with one or two suggestions to include an “other” option for control variables. The pilot group was also able to complete the survey on average in five minutes.

4.10. Ethical Clearance

Ethical Clearance was approved by the university on the initial request and signed by the research supervisor. The data was gathered using ethical practices, and only aggregated data was analysed. The data gathered did not contain any personal identifying information that could be linked back to an individual respondent.

The raw data and analysed results will be stored on Google Drive, which is access-controlled by two-factor authentication, for a minimum of ten years. All data submission requirements by the university will be adhered to.

4.11. Data Analysis and Transformation

Once the deadline for respondents had passed, the data from Google Forms was downloaded into a Microsoft Excel workbook. A copy of the raw output was saved as an original. A copy was then reviewed, and no missing data was identified.

Data cleaning and coding are essential for obtaining a reliable statistical result; therefore, a process was employed to check, clean, and code the data (Sharifnia et al., 2025). The survey clearly stated that only individuals who work a hybrid model should respond. Three questions in the survey were used to identify individuals who failed to meet those requirements. The first question was “Are you currently employed?” Three respondents answered “No” and were removed from the dataset. The second and third questions for verifying legitimacy were: “How many days a week do you work in the office?” and “Is the number of office days mandated by the organisation?”. If the respondent replied '5 days a week' and 'Yes' to these questions, they were removed from the dataset. Therefore, 94 respondents were removed from the dataset, as it would not have been ethical to include them, as they work from the office every day of the week and their organisation's policy mandates this, making them ineligible for classification as hybrid workers.

Metric	Count
Total rows (original)	346
Dropped: Unemployed	3
Dropped: 5-day & Mandated	94
Kept: Hybrid-eligible	249

Table 2: Data clean up

The next step was to code the dataset before importing into SPSS for statistical testing. All 5-point Likert items mapped to numeric: Strongly Disagree=1, Disagree=2,

Neutral=3, Agree=4, Strongly Agree=5. Only one item to test turnover intention was reverse-coded, reverse-scored “I intend to stay with this organisation for the foreseeable future” (ti_stay→ti_stay_r via 6 − x).

For H2: hypothesis tests whether knowledge workers with a higher intensity of hybrid work (coded as High HBLevel = 1) exhibit significantly higher levels of job embeddedness than those with a lower intensity of hybrid work (coded as Low HBLevel = 0). Responses 0-2 = 1 and responses 3-5 = 0.

For H4: The total score for “On the job embeddedness” was coded as 1 and the total score for “Off the job embeddedness” was coded as 2.

Once the clean-up and coding of that data was completed, the dataset was loaded into IMB SPSS (“SPSS”). Upon confirming that the data had loaded correctly without any errors, descriptive statistics were run to create a view of the data traits through control variables. This would provide important information in identifying the sample characteristics and any possible bias that could become a limitation.

4.12. Quality Controls

Using existing peer-reviewed theory, which is grounded in the constructs and framework being employed, lends the research credibility from a reliability perspective. Furthermore, utilising questionnaires from the existing body of research will enhance the reliability of the collected data (Saunders & Lewis, 2018).

Further statistical reliability tests will be considered, such as Cronbach’s alpha mentioned above, as well as inferential tests. Reliability is the check that ensures a similar method for collection and analysis yields similar results(Saunders & Lewis, 2018). A Cronbach’s alpha of 0.65 and above will be set as the acceptable value. (Pallant, 2020). Cronbach’s alpha values for job embeddedness and turnover intention will be measured against this.

Additionally, the questionnaire underwent a pilot phase to verify that the data received aligns with expectations, as well as to gather feedback from the pilot group (Saunders & Lewis, 2018).

An Exploratory Factor Analysis (“EFA”) was performed across the constructs to test validity further. The Kaiser-Meyer-Olkin (“KMO”) and Bartlett’s test of sphericity were used to verify that an EFA can be completed. The thresholds for testing were set at > 0.5 and $p < 0.5$, respectively, for the tests (Pallant, 2020).

Additionally, the constructs will be tested using histograms to assess normality, and histograms will be provided to verify whether the data is normally distributed. A symmetrical distribution which forms a bell shape around the mean can be classified for normal distribution (Saunders & Lewis, 2018).

4.13. Hypotheses Testing

Below is a detailed plan for the statistical tests selected for each hypothesis from Chapter 3. The tests are also justified in terms of their appropriateness for the specific hypotheses.

Hypothesis	Test Selected	Justification
H1: Higher job embeddedness is associated with higher intention to stay.	Simple Linear Regression	Regression is appropriate when testing predictive, directional relationships between continuous variables (Hair et al., 2019; Field, 2021).
H2: Higher hybrid work flexibility is associated with higher job embeddedness.	Independent-samples t-test	An independent samples t-test can compare mean differences between two unrelated groups (Pallant, 2020; Field, 2021).)
H3 (revised): Job embeddedness differs across tenure groups.	One-way ANOVA	ANOVA tests mean differences across independent groups(Hair et al., 2019)
H4: On-the-job embeddedness has a greater influence than off-the-job embeddedness.	Independent-samples t-test	A t-test is suitable when comparing two related dimensions of the same construct (Pallant, 2020; Field, 2021).

Table 3: Hypotheses testing

A simple linear regression statistical test is appropriate for testing the effect of an independent variable on a dependent variable. The test will provide direction on the strength of the relationship between variables and is more suitable than a simple correlation test (Hair et al., 2019).

An independent sample t-test is an appropriate model for testing the mean differences of a variable between two independent groups. A t-test is recommended when the two independent groups are categorical data types (Pallant, 2020).

4.14. Limitations

A detailed explanation of the methodology and results limitations will be discussed in Chapter 7. Below is a summary of the methodology chapter limitations.

- Cross-sectional study
- Purposeful sampling cannot yield generalised results
- Bias in data characteristics (Descriptive statistics)
- Job embeddedness is only one theory of preventing turnover intention

4.15. Conclusion

The chapter aims to describe the methodology for this research and highlight the limitations that may affect the results in the subsequent chapters. Below is a summary of the methodology.

Methodology	**Choice**
Philosophy	Positivism
Approach	Deductive
Method	Mon-method Quantitative
Measurement instrument	Questionnaire/Survey
Time Line	Cross-sectional
Population	Employed knowledge workers who are working in hybrid models
Unit of Analysis	Individual Employee
Sample	Purposeful, convenience, snowball
Data Analysis	SPSS: Difference and Regression

Table 4: Research Methodology

5. Results

5.1. Introduction

This chapter presents the results from the data collection methodology outlined in Chapter 4 and also reports the statistical test results for the hypotheses presented in Chapter 3. This chapter will also cover the testing results for validity and reliability, as well as the assumptions underlying the testing.

5.2. Descriptive Statistics

The section below will provide characteristics specifically on the make-up of the respondents in this study. Only significant descriptive statistics were selected for reporting.

Variable	Description	N	Mean	SD
d_kids_num	No. kids	249	0.791	1.018
hw_days_office	No. days in office	249	2.470	1.332
hw_pref_days	No. days prefered	249	2.000	1.125
ti_quit	Intention to quit	249	2.474	1.178
ti_look	Intention to look	249	2.671	1.333
ti_stay	Intention to stay	249	3.474	1.231
je_on_fit	je_on_fit	249	3.977	0.687
je_off_fit	je_off_fit	249	4.076	0.584
je_on_links	je_on_links	249	4.027	0.777
je_off_links	je_off_links	249	3.974	0.777
je_on_sac	je_on_sac	249	3.494	0.997
je_off_sac	je_off_sac	249	3.740	0.770
je_on	je_on	249	3.868	0.586
je_off	je_off	249	3.925	0.557
je_all	je_all	249	3.891	0.501

Table 5: Descriptive mean and SD values

5.2.1. Organisational Industries

The question to allow respondents to select the industry in which they work was a list of common industries, with the option to capture if not available on the list. After analysing the responses, a decision was made to summarise all respondents with fewer than 7 in each category into the other classification. The summary ranks the two main industries covered in the study to be representative off financial services and information technology.

Industry	Total
Financial Services	91
Information & Communication Technology (ICT)	79
Other	79

Table 6: Industry breakdown

5.2.2. Country of Residence

Ten respondents who were not living in South Africa participated in the survey. The majority of respondents have been classified as employed and residing in South Africa.

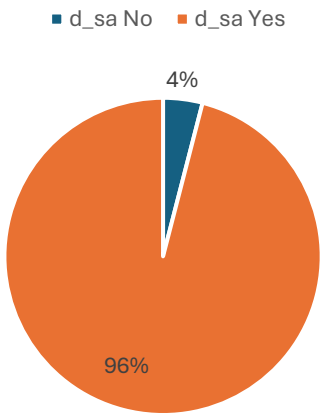

Figure 3: SA residents

5.2.3. Gender

There were 151 male respondents compared to the 98 females. Thus making the results slightly skewed towards males.

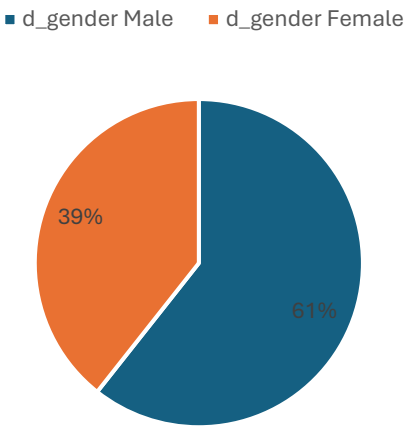

Figure 4: Gender split

5.2.4. Age

Six age categories were provided for respondents to select from. This stated from the legal working age of 18 up to 65 and older. 73% of the respondents where between the age of 25 and 44 with the lowest category being 55 to 65 and older.

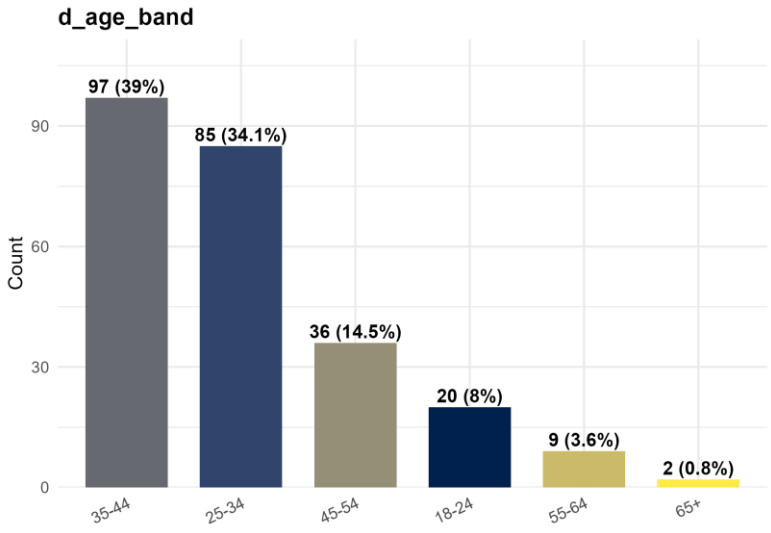

Figure 5: Age stats

5.2.5. Education

Four options for education level were presented to the respondents. The majority of the respondents (211) had an education level of undergraduate or postgraduate. Only 15% of the respondents had an education level under tertiary education.

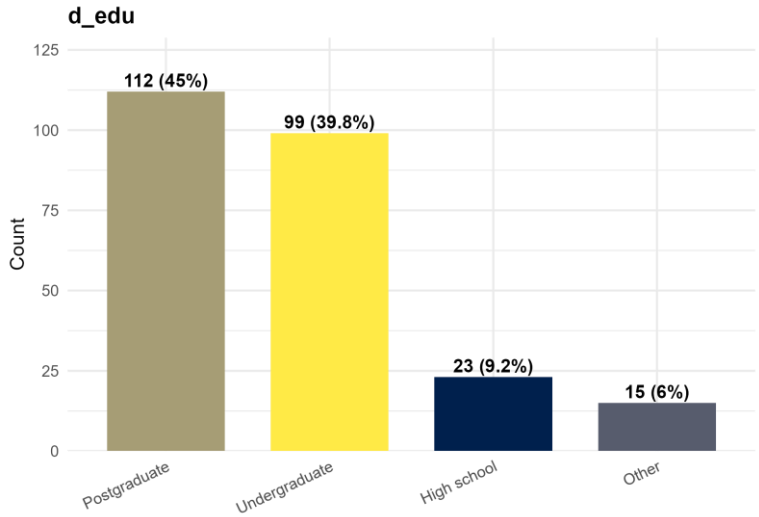

Figure 6: Education stats

5.2.6. Tenure

The largest sample of respondents replied as being employed for more than 5 years with their current organisation (43%). The next largest sample of 27% reported being employed between 1 and 3 years. A similar proportion reported being employed between 3 and 5 years or for less than 1 year.

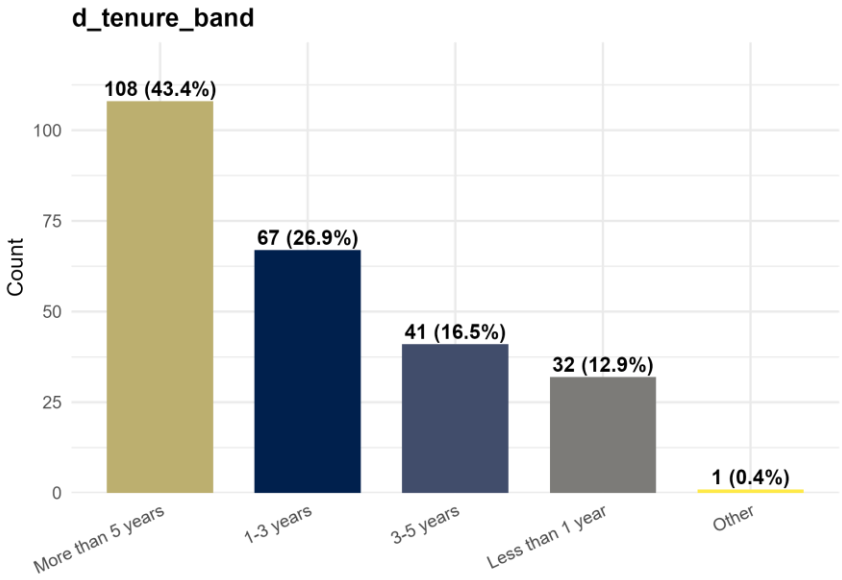

Figure 7: Tenure stats

5.2.7. Job Level

Managers were reported at the highest rate, with 34% of the sample holding senior or expert-level positions, and 27% of the sample holding senior or expert-level positions. The smallest samples came from junior and executive level respondents.

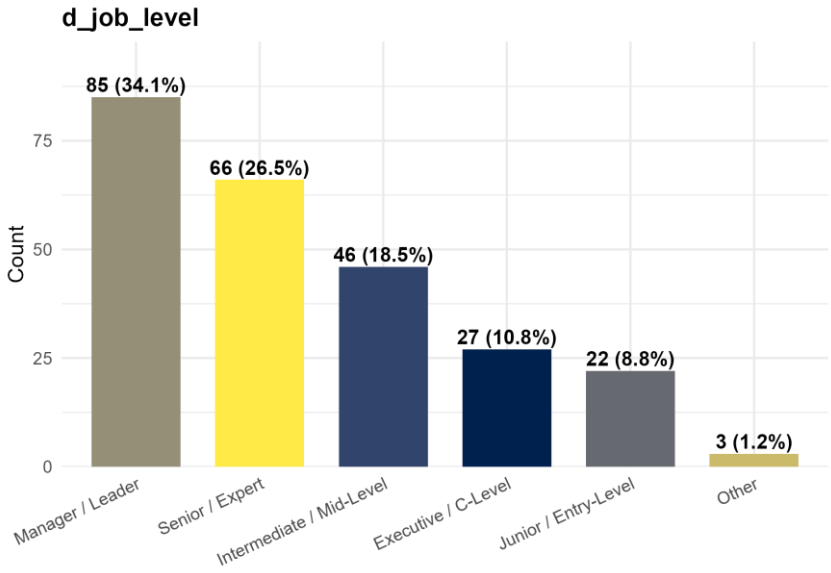

Figure 8: Job Level stats

5.2.8. Size of Organisation

43% of the respondents can be classified as employees of large or enterprise-sized organisations with fewer than 5,000 employees. The following largest sample can be grouped as mid-sized companies and medium enterprises, making up 43% combined.

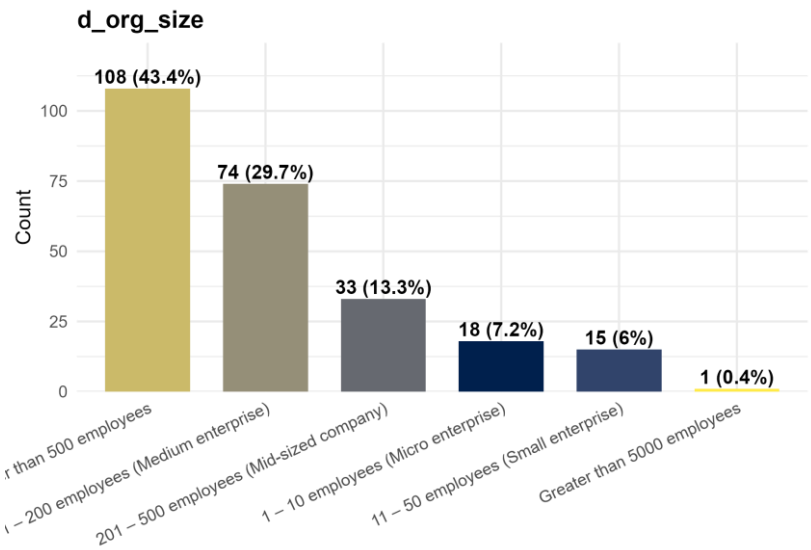

Figure 9: Organisation size

5.2.9. Office Days

The first question requested a respondent to indicate how many days a week do they work at the office. Eighty respondents reported working 3 days a week and 60 respondents reported working 2 days a week at the office. Some respondents worked 0 or 5 days a week from the office, but these were not mandated by the organisation.

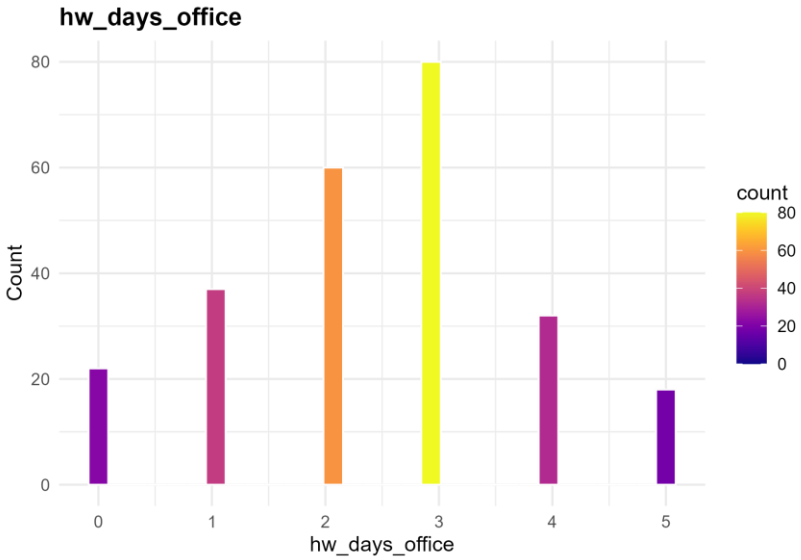

Figure 10: Office days

The second question was asked to understand how many days a week the respondent would prefer to work at the office. Almost all the respondents reported 1 day, and 75 respondents reported 2 days.

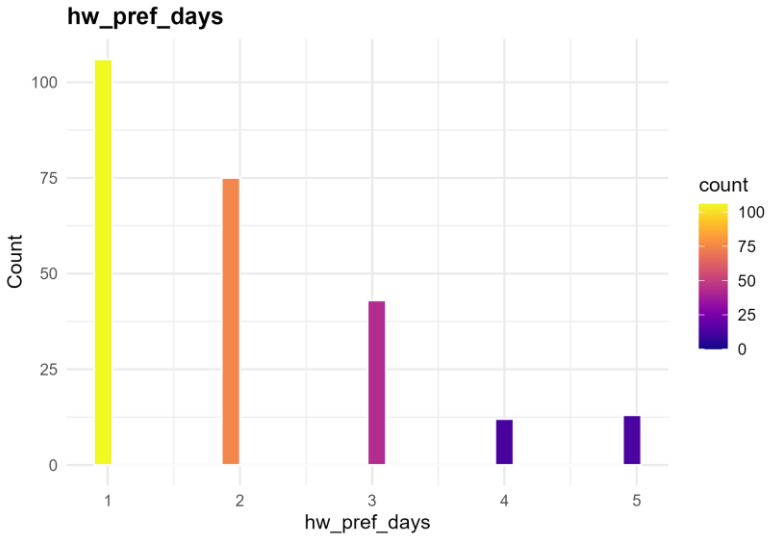

Figure 11: Preferred office days

5.3. Validity and Reliability

Reliability was assessed using a Cronbach's alpha value of above 0.65. All the constructs used in hypothesis testing, which are continuous, have been tested. Turnover intention (TI), total job embeddedness (JE_All_On_Off_Total), off-the-job embeddedness (JE_Off_Total) and on-the-job embeddedness JE_On_Total) were all over the required 0.65 and have therefore been accepted.

Scale	k	alpha_raw	alpha_std
TI	3	0,89877896	0,899844815
JE_On_Total	12	0,824249486	0,82998197
JE_Off_Total	8	0,742618415	0,750389398
JE_All_On_Off_Total	20	0,853223919	0,856919861

Table 7: Cronbach's alpha

5.3.1. Factor Analysis (EFA)

Sampling adequacy was good, with a KMO of .828, and the Bartlett's test of sphericity was significant, with a chi-square of 2702.65 on 325 degrees of freedom and a p-value of less than .001, which supported factorability.

Test/Measure	Value
KMO measure of sampling adequacy	.828
Bartlett test of sphericity	chi^2(325) = 2702.65, p < .001
Note: These indices indicate that the item set is suitable for factor analysis	

Table 8: Sampling adequacy

Principal components with Promax rotation were used. Seven components with eigenvalues greater than one were retained, accounting for approximately 63.95% of the total variance.

Item	Value
Number of retained components	7
Cumulative variance explained	63.95%
Rotation	Promax
Extraction	Principal components
Note: Retention based on eigenvalues greater than one	

Table 9: Retained components

The pattern matrix indicated clear clusters for on-job fit, on-job links, off-job fit and links, and off-job sacrifice, as well as a retention pressure signal. Smaller signals reflected the technology climate and a residual fit signal. Items were assigned by conceptual meaning with a loading threshold of 0.4, and all items were retained to preserve content validity and theoretical breadth.

Component	Primary Content Summary
On-job fit	Items that reflect fit with role and organisation
On-job links	Items that reflect ties and connections at work
Off-job fit and links	Items that reflect fit and ties outside work
Off-job sacrifice and conditions	Items that reflect costs of leaving outside work with fairness and balance signals
Retention pressure	Items that pair higher sacrifice with a lower wish to leave
Technology climate	Item signal on technology enablement
Residual fit signal	Single-word related fit signal
Note: Exact loadings are available in the EFA output. This table summarises dominant content for reporting	

Table 10: Pattern matrix

Reliability for each scale will be reported, and scores will be computed as row means with directions aligned.

Components showed positive correlations, which supports use of an oblique rotation
Note: Correlation matrix in Appendix C

Table 11: Correlated components

5.4. Normality

Normality was assessed using histograms. Distributions were unimodal and approximately bell-shaped with only mild skew in a few cases. There was no strong evidence of heavy tails or multiple peaks. On this basis, the normality assumption was considered satisfied for the planned analyses.

Based on the figure below, the je_on composite variable, which measures on-the-job embeddedness, appears to be normally distributed.

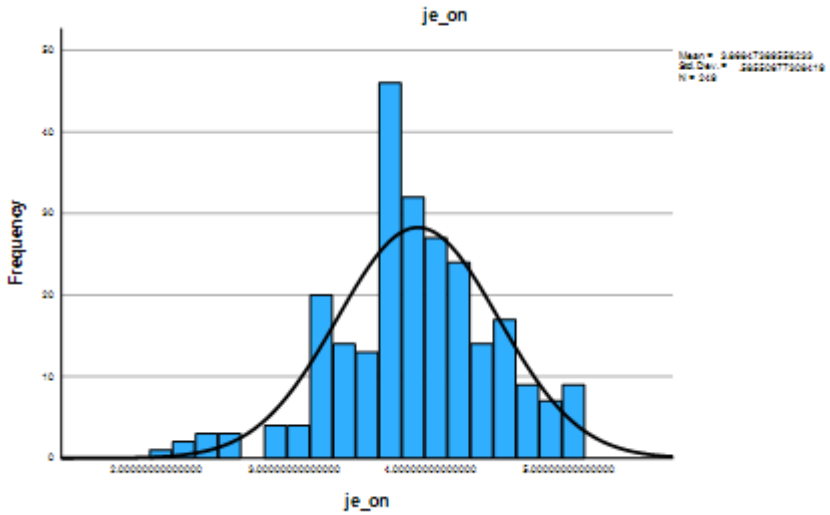

Figure 12: On-The-Job (JE)

Based on the figure below, the je_off composite variable, which measures off-the-job embeddedness, appears to be normally distributed.

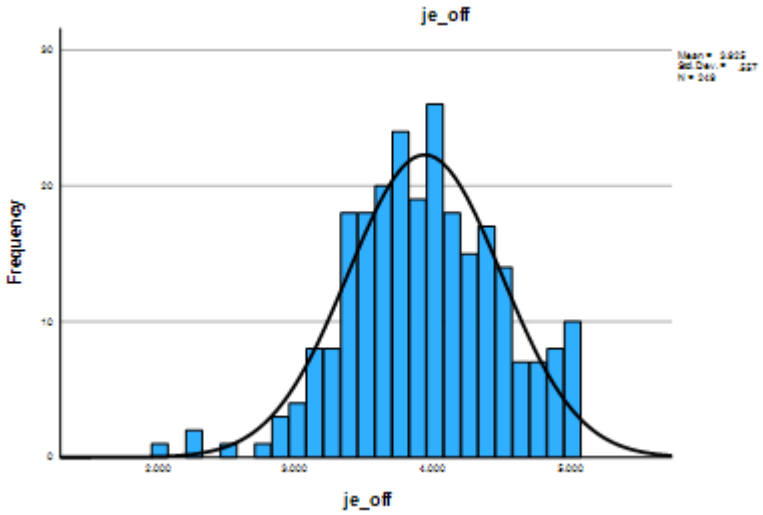

Figure 13: Off-The-Job (JE)

Based on the figure below, the je_all composite variable, which measures total job embeddedness, appears to be normally distributed.

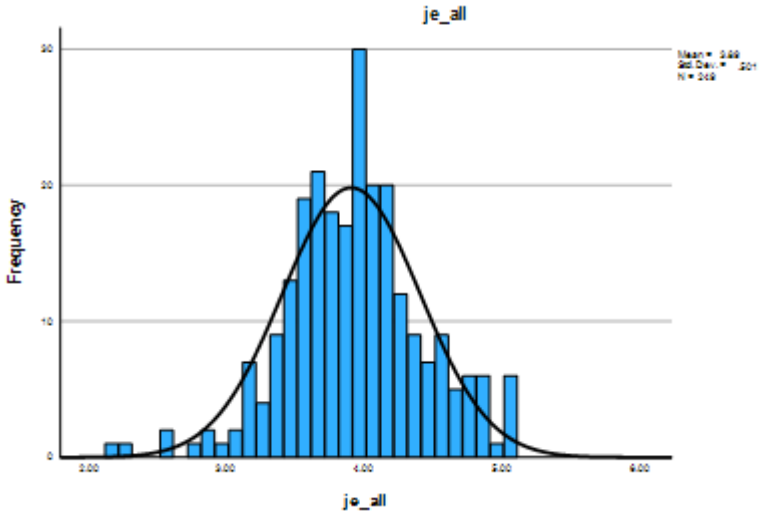

Figure 14: Total JE

Based on the figure below, the ti_index composite variable, which measures turnover intention, appears to be acceptably normally distributed.

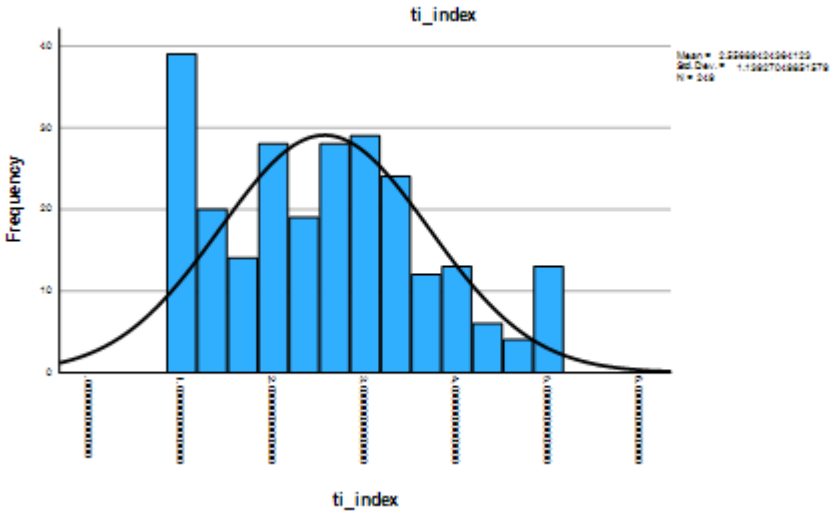

Figure 15: Turnover intention

5.5. Hypotheses testing

5.5.1. H1: Higher job embeddedness (JE) is associated with higher intention to stay with the organisation

The outcome measured in this analysis is turnover intention (TI; i.e., intention to leave). Therefore, higher intention to stay corresponds to lower TI scores. Under H1 we expect a negative association between JE and TI.

Below are the descriptive statistics for JE and TI. These include the mean and standard deviations.

Variable	Mean	SD	N
Job embeddedness (JE)	3.891	0.501	249.000
Turnover intention (TI)	2.557	1.139	249.000

Table 12: H1 Descriptive statistics

The regression model was significant, $F(1, 247) = 92.956$, $p < .001$, with $R2 = .273$ (Adj. $R2 = .270$). JE significantly predicted TI, $B = -1.189$ ($SE = 0.123$), $\beta = -.523$, $t(247) = -9.641$, $p < .001$, 95% CI [−1.431, −0.947].

Thus, for each one-unit increase in JE, TI decreased by about 1.19 units.

Effect size was medium-to-large ($f2 \approx .38$). Diagnostics indicated acceptable independence (Durbin–Watson = 1.438), no multicollinearity (VIF = 1.00), and well-behaved residuals.

Predictor	B	SE	β	t	p	95% CI B
Intercept	7.183	—	—	—	—	—
Job embeddedness (JE)	-1.189	0.123	-0.523	-9.641	<.001	[-1.431, -0.947]

Table 13: H1 Regression test 1.1

Model Fit Statistics	R	R^2	Adj. R^2	F(1, 247)
Value	0.523	0.273	0.270	92.956

Table 14: H1 Regression test 1.2

Diagnostics	Durbin-Watson	VIF	Std. residuals
Value	1.438	1.000	[-3.042, 2.949]

Table 15: H1 Regression Test 1.3

- Independence: Durbin–Watson = 1.438. In cross-sectional, person-level data this is within acceptable bounds; no strong evidence of problematic serial dependence.
- Multicollinearity: Not applicable (single predictor). VIF = 1.000.
- Residuals: Standardised residuals ranged from −3.042 to 2.949 (mean ≈ 0, SD ≈ 1). One residual marginally beyond |3| suggests a potential outlier; given the magnitude of t and R2, inferences are unlikely to change.
- Linearity & homoscedasticity: The model SEs and residual spread are consistent with linear, homoscedastic patterns.

These findings support H1, which states that employees with higher embeddedness report lower turnover intentions (i.e., a greater intention to stay).

5.5.2. H2: Higher hybrid work flexibility is associated with higher job embeddedness among knowledge workers

This hypothesis tests whether knowledge workers with a higher intensity of hybrid work (coded as High HBLevel = 1) exhibit significantly higher levels of job embeddedness than those with a lower intensity of hybrid work (coded as Low HBLevel = 0). The dependent variable is the overall measure of job embeddedness (je all).

Below are the descriptive statistics for hybrid levels. These include the mean and standard deviations.

Hybrid Level	N	Mean (JE)	Std. Deviation
Low (0)	130	3.836	0.483
High (1)	119	3.951	0.515

Table 16: H2 Descriptive statistics

An independent samples t-test was conducted to assess whether the difference in means was statistically significant.

- Levene's Test: F = 0.241, p = 0.624, indicating equal variances can be assumed.
- t-test (equal variances assumed): t(247) = −1.812, p = 0.071 (two-tailed).
- Mean difference: −0.115 (SE = 0.063)
- 95% CI: [-0.239, 0.010]

Although the high hybrid group had a higher mean job embeddedness score, the difference was not statistically significant at the conventional α = 0.05 level. However, the one-tailed test produced a marginal p-value of 0.036, suggesting limited support for the directional hypothesis.

Effect sizes were computed to evaluate the practical importance of the observed difference:

- Cohen's d = −0.230 (95% CI: [-0.479, 0.020])
- Hedges' correction d = −0.229
- Glass's Δ = −0.223

These indicate a small effect size, implying that while the difference is in the expected direction (higher hybrid work associated with higher job embeddedness), the magnitude of the effect is relatively modest.

5.5.3. H3: The longer the tenure of an employee, the higher their job embeddedness

The test aimed to check if staff with longer tenure report higher job embeddedness. The overall difference across the four tenure groups was not statistically significant. Group averages were broadly similar. This means the hypothesis that embeddedness increases with tenure was not supported in this sample. Pairwise outputs are provided as descriptive context.

Average embeddedness is similar across groups. The three-to-five-year group shows a slightly higher average, but the pattern is not strong.

Tenure Group	Mean	SD	n
Less than 1 year	3.903	0.555	32
1 to 3 years	3.833	0.427	67
3 to 5 years	4.063	0.579	41
More than 5 years	3.858	0.488	109
Total	3.891	0.501	249
Note: Dependent variable is job embeddedness			

Table 17: H3 Descriptive statistics

Confidence intervals overlap across groups. This supports the view that any differences are minor and may not be reliable.

Tenure Group	Mean	Lower CI 95%	Upper CI 95%
Less than 1 year	3.903	3.730	4.076
1 to 3 years	3.833	3.713	3.953
3 to 5 years	4.063	3.910	4.217
More than 5 years	3.858	3.764	3.952
Note: Confidence intervals are the estimated marginal means from the provided output			

Table 18: H3 Confidence intervals

The overall comparison across the four tenure groups was not statistically significant. Therefore, the hypothesis was not supported in this sample. A partwise comparison table is provided below.

Group I	Group J	Mean diff	SE	p	Lower CI	Upper CI
1 to 3 years	3 to 5 years	-0.231	0.099	0.020	-0.425	-0.036
1 to 3 years	Less than 1 year	-0.070	0.107	0.512	-0.281	0.140
1 to 3 years	More than 5 years	-0.025	0.077	0.742	-0.178	0.127
3 to 5 years	1 to 3 years	0.231	0.099	0.020	0.036	0.425
3 to 5 years	Less than 1 year	0.160	0.117	0.173	-0.071	0.392
3 to 5 years	More than 5 years	0.205	0.091	0.025	0.026	0.385
Less than 1 year	1 to 3 years	0.070	0.107	0.512	-0.140	0.281
Less than 1 year	3 to 5 years	-0.160	0.117	0.173	-0.392	0.071
Less than 1 year	More than 5 years	0.045	0.100	0.654	-0.152	0.242
More than 5 years	1 to 3 years	0.025	0.077	0.742	-0.127	0.178
More than 5 years	3 to 5 years	-0.205	0.091	0.025	-0.385	-0.026
More than 5 years	Less than 1 year	-0.045	0.100	0.654	-0.242	0.152

Table 19: H3 Pairwise comparison

5.5.4. H4: On-the-job embeddedness has a higher influence than off-the-job embeddedness on overall job embeddedness in a hybrid context

The test compares on-job embeddedness and off-job embeddedness with an independent samples t-test. The independent samples t-test was not statistically significant, which indicates that the two forms of embeddedness are similar in this sample. Normality was assessed using box and whisker plots from the SPSS Explore output, and variances were similar, as indicated by the Levene results.

From the descriptive statistics, off-job embeddedness is slightly higher on average than on-job embeddedness; however, the means are close, indicating a small difference.

Group (JE_TYPE)	N	Mean	SD	SE Mean
1 = On-job embeddedness	249	3.868	0.586	0.037
2 = Off-job embeddedness	249	3.925	0.557	0.035
Note: Dependent variable is Job Embeddedness				

Table 20: H4 Descriptive statistics

Group variances look similar, which supports the use of the pooled result. The box and whisker plots do not suggest serious problems, so the main result can be read with confidence.

Check	F	Sig. (p)	t	df	p (two-tailed)
Levene test for equality of variances	0.109	0.741			
t-test using pooled variance			-1.098	496	0.273
Note: Assumption Checks for the t-test					

Table 21: H4 Levene test

The p-value is greater than 0.5, so the difference between on-job and off-job embeddedness is not statistically significant. Since the main comparison is not significant, no post hoc tests are required.

Assumption	F	Sig. (p)	t	df	p (two-tailed)	Mean diff	95% CI Lower
Equal variances assumed	0.109	0.741	-1.098	496	0.273	-0.056	-0.157
Equal variances not assumed			-1.098	494.786	0.273	-0.056	-0.157

Table 22: H4 Independent t-test

The effect size is very small, and the interval includes values close to zero. This supports the conclusion that the two contexts are similar in embeddedness

Effect Size	Point estimate (d)	95% CI Lower	95% CI Upper
Cohen's d	-0.098	-0.274	0.077
Hedges' g	-0.098	-0.274	0.077
Glass's Delta	-0.101	-0.277	0.075

Table 23: H4 Effect size

There was no significant difference in embeddedness between the on-job context and the off-job context. The hypothesis that embeddedness differs between the two contexts was not supported.

6. Discussion of Results

6.1. Introduction

This chapter will explore the results presented in Chapter 5. The results will be summarised and analysed for their significance to the objectives and hypotheses of this study. The chapter will cover the scope of the study, the demographics of the respondents, the validity and reliability testing, and finally, the outcomes of the hypotheses. Finally, the results will be linked back to the literature presented in Chapter 2 to draw conclusions that will be further elaborated upon in the next chapter.

6.2. Summary of Results

Segment	Report
Model Data	A pilot survey was conducted with 10 respondents. Post the pilot, a total of 346 respondents were recorded. Thereafter, 97 respondents were removed due to population requirements. Thus, leaving 249 respondents for the study.
Demographics	**Industries** ➢ Financial Services 36.55% ➢ Information Technology 31.73% ➢ Other 31.73% **Country of residence** ➢ South African 96% ➢ Non-South African 4% **Gender** ➢ Male 61% ➢ Female 39%

	Age ➢ 18-24 8% ➢ 25-34 34% ➢ 35-44 39% ➢ 45-54 15% ➢ 55-64 4% ➢ 65+ 1% **Education level** ➢ Undergraduate 40% ➢ Postgraduate 45% ➢ High school 9% ➢ Primary school 0% ➢ Other 6% **Job level** ➢ Junior / Entry-Level 8,8% ➢ Intermediate / Mid-Level 18,5% ➢ Senior / Expert 26,5% ➢ Manager / Leader 34,1% ➢ Executive / C-Level 10,8% ➢ Other 1,2% **Tenure** ➢ Less than 1 year 12,9% ➢ 1-3 years 26,9% ➢ 3-5 years 16,5% ➢ More than 5 years 43,4% ➢ Other 0,4% **Organisation size** 1 – 10 employees (Micro enterprise) 7,2%

	11 – 50 employees (Small enterprise) 6,0% 201 – 500 employees (Mid-sized company) 13,3% 51 – 200 employees (Medium enterprise) 29,7% Greater than 500 employees 43,4% Greater than 5000 employees 0,4% **Days in office** ➢ 0 - 8,8% ➢ 1 - 14,9% ➢ 2 - 24,1% ➢ 3 - 32,1% ➢ 4 - 12,9% ➢ 5 - 7,2% **Preferred days in the office** ➢ 1 - 43% ➢ 2 - 30% ➢ 3 - 17% ➢ 4 - 5% ➢ 5 - 5%

Table 24: Demographics

The above descriptive statistics provide a demographic view of the respondents. This will enable conclusions and limitations to be drawn from the sample collected, as well as how the results should be interpreted. The above table firstly concludes that the geographical context of the study can be ring-fenced to South African hybrid workers, with only 4% of the respondents outside of South Africa.

The second conclusion is that the study's results will favour males, as they comprise the majority of respondents at 61% of the sample. However, this does not mean the results are representative of males only, as this can be a purposeful sampling result due to the cross-sectional constraints. Regarding the age of the respondents, the

majority (71%) are between 25 and 44 years old. This can be seen as a good sample as it represents the primary working age of the workforce.

A majority of 85% of the respondents have a formal tertiary education above high school. The job level of 71% of the respondents is employed as an expert, manager, or executive in their organisation. This aligns with the study's aim to gain a contextual understanding of knowledge workers, as the respondents meet the criteria presented for classification as such (Serenko, 2022). It also supports the study's purpose, which argues that retaining knowledge workers is key to organisational success (Lauring & Jonasson, 2024). This further justified an economy like South Africa, which has a supply shortage of knowledge workers for organisations to hire (Wöcke & Heymann, 2012).

The organisational size at which the respondents are employed for large organisations is between 500 and 5,000 employees. However, a medium-sized organisation with between 51 and 500 employees is equally represented, with 43% of the respondents in each category.

Respondents were asked to indicate the number of days they work from the office and then the number of days they would prefer to work at the office. The results of these two questions can be analysed together in order to make a more insightful finding. More than half of the respondents (53%) indicated that they work between 2 and 3 days in the office per week. This indicates that a majority of organisations in the sample size in South Africa are adopting a hybrid policy, requiring their staff to come into the office on average 2-3 times a week (Lauring & Jonasson, 2024). On the contrary, the preferred number of days in the office was reported at 43% for 1 day a week and 30% for 2 days a week, as the majority requested. The mean for the first question was 2.46, and 2 for the second question. This indicates that the respondents would prefer if the policy was updated to reduce the number of days in the office (Parker et al., 2020).

Segment	Report
Normality	**Histogram Analysis** ➢ Turnover Intention = Bell-shaped ➢ Total Embeddedness = Bell-shaped ➢ On-job Embeddedness = Bell-shaped ➢ Off-job Embeddedness = Bell-shaped
Reliability	**Cronbach's Alpha** ➢ Turnover Intention = 0.89 ➢ Total Embeddedness = 0.85 ➢ On-job Embeddedness = 0.82 ➢ Off-job Embeddedness = 0.74
Validity	**Factor Analysis** ➢ KMO = 0.82 ➢ Bartlett p = 0.001 ➢ Cumulative variance = 63.95%

Table 25: Quality control

To test whether the collected data were normally distributed, histograms were used to verify that the graphs were unimodal and that no significant skew prevented a bell-shaped distribution. All testable constructs for turnover intention, total embeddedness, on-the-job embeddedness and off-the-job embeddedness were assessed to be normally distributed.

To test the reliability of the collected data, Cronbach's alpha was calculated for each construct. The acceptable value set in the methodology was 0.65 (Pallant, 2020), with some research specifically for turnover intention providing a consistent result of 0.85 (Tett & Meyer, 1993). All the constructs were determined to be acceptable, as they exceeded the acceptable value of 0.65.

As a form of validity, the questionnaire survey instruments were based on empirical research tools, which were not amended to warrant any validity concerns. The Job Embeddedness Scale was used to assess job embeddedness scores (Mitchell & Lee, 2001). To test for turnover intention, the questionnaire survey was based on the Michigan Organisational Assessment Questionnaire (Cammann et al., 1983) and early studies in the field of turnover intention (Mobley et al., 1978; Hom & Griffeth, 1991).

A second form of validity was assessed through an Exploratory Factor Analysis (Holtom et al., 2008). The Kaiser-Meyer-Olkin ("KMO") and Bartlett's test of sphericity were acceptable to continue factor analysis as set in Chapter 4 at >0.5 and $p < 0.5$, respectively (Pallant, 2020). Principal components with Promax rotation were used to calculate a total variance score of 63.95%, which satisfied the validity of the components.

6.3. Discussion of Hypothesis

This section presents the results of each hypothesis tested and provides a discussion based on the literature collected during the study. Below is a summary of the hypotheses and results to be discussed.

Hypothesis	Test Selected	Outcome
H1: Higher job embeddedness is associated with higher intention to stay.	Simple Linear Regression	Supported
H2: Higher hybrid work flexibility is associated with higher job embeddedness.	Independent-samples t-test	Limited Support
H3 (revised): Job embeddedness differs across tenure groups.	One-way ANOVA	Not Supported
H4: On-the-job embeddedness has a greater influence than off-the-job embeddedness.	Simple Linear Regression	Not Supported

Table 26: Hypotheses outcomes

6.3.1. H1: Higher job embeddedness (JE) is associated with higher intention to stay with the organisation

The first hypothesis proposed that a higher level of job embeddedness would result in a higher intention to stay in the organisation. This was tested using the Job Embeddedness Scale score (Mitchell & Lee, 2001) and the respondent's turnover intention (Mobley et al., 1978; Hom & Griffeth, 1991). A decreasing or negative turnover intention indicates that an employee intends to stay in the organisation (Setthakorn et al., 2024).

The regression test performed confirmed the hypothesis, indicating that job embeddedness is a strong positive predictor of an employee's likelihood of remaining in the organisation. The confirmation of this hypothesis aligns with the theory of job embeddedness, which proposes that if an employee has a higher fit, link, and sacrifice with an organisation, they are more likely to remain in the organisation (Mitchell & Lee, 2001; Setthakorn et al., 2024).

The analysis of the hypothesis test reported that for every 1-point increase in embeddedness, there is a 1.19-point decrease in the intention to leave. This finding aligns with recent meta-analyses, which indicate that embeddedness is one of the strongest predictors of turnover intention (Setthakorn et al., 2024; Wang et al., 2024). This finding also supports the Conservation of Resources theory which argues that employees want to protect their current roles, incentives and social recognition (Hobfoll, 2011).

Studies have shown that there is a variance in turnover intention outcomes when viewed across different contexts or industries (Rubenstein et al., 2018). According to the embeddedness-turnover intention relationship, it has been validated in healthcare, education, and information technology (Artiningsih et al., 2023; Džambić et al., 2025).

This study aimed to fill the gap in understanding the relationship between embeddedness and turnover among knowledge workers in a hybrid work model.

6.3.2. H2: Higher hybrid work flexibility is associated with higher job embeddedness among knowledge workers

The second hypothesis proposed that a higher flexibility would result in higher embeddedness. The study determined that higher flexibility will be split into two categories, higher flexibility and lower flexibility, for the purposes of testing the embeddedness level between each category. Therefore, an independent sample t-test was selected for this hypothesis (Pallant, 2020). Employees who worked 0-2 days in the office were regarded as highly flexible, while employees who worked 3-5 days in the office were regarded as low flexibility.

The results from the test were not statistically significant between the two groups; however, the results did show a positive directional trend, indicating that employees with higher flexibility had a higher level of embeddedness. This suggests that a relationship proposed by the hypothesis exists, but it is weak at best in the context in which it has been tested.

A weak relationship is consistent with studies that suggest hybrid work will increase embeddedness by enhancing fit, work-life balance, and flexibility (Peltokorpi & Allen, 2024). However, the results of this study suggest that hybrid flexibility alone is insufficient to increase embeddedness significantly. This is consistent with the foundation of the theory, which posits a multi-dimensional model that combines fit, links, and sacrifice, rather than a single item (Mitchell & Lee, 2001; Setthakorn et al., 2024).

The result can be explained as a balancing effect resulting from hybrid flexibility. A knowledge worker in a hybrid job or with hybrid job opportunities has a reduced sacrifice in regard to off-the-job factors, as they will not be geographically affected. On the other hand, the higher flexibility will mean more family or personal time (Lauring & Jonasson, 2024)

A limitation in this study's approach to the hypothesis can be explained by the way the flexibility categories have been grouped. The descriptive statistics support the

outcome of this hypothesis, as the mean for preferred hybrid flexibility was reported slightly higher than the mean for current hybrid flexibility. Future studies should compare hybrid workers with non-hybrid workers and then conduct a larger-scale test with more categories to assess the significance of hybrid flexibility in building on this hypothesis.

6.3.3. H3: The longer the tenure of an employee, the higher their job embeddedness

The third hypothesis proposed that the longer an employee is at an organisation, the more embedded they will be compared to an employee who has a shorter period of employment at the organisation. Upon testing, it was concluded that there is no statistical significance. Therefore, the hypothesis is not supported; employee tenure does not impact embeddedness in the context of this study.

This result contrasts with earlier research, which suggests that an employee's fit and links will increase over the course of employment due to an increase in sacrifice if the employee leaves the organisation (Mitchell & Lee, 2001). Other studies have supported the notion that tenure leads to loyalty, stability, and stronger community ties, thus increasing an employee's embeddedness (Jiang et al., 2012; Allen et al., 2010).

Therefore, the result of this hypothesis may suggest that the time of employment cannot be used to infer job embeddedness, specifically for knowledge workers in a hybrid work context.

6.3.4. H4: On-the-job embeddedness has a higher influence than off-the-job embeddedness on overall job embeddedness in a hybrid context

The fourth hypothesis proposed that on-the-job embeddedness has a greater influence on total job embeddedness compared to off-the-job embeddedness. The hypothesis was tested using an independent sample t-test comparing the scores for the two sub-categories with total embeddedness, which was assessed for validity

and reliability (Pallant, 2020). The result of this indicates that the hypothesis is not supported.

This hypothesis, like the previous one, contradicts the findings of previous research. A meta-analysis on job embeddedness has found that previous studies have consistently shown a stronger relationship between on-the-job embeddedness and total job embeddedness compared to off-the-job embeddedness (Jiang et al., 2012; Rubenstein et al., 2018). It has been previously indicated that an employee's organisational link, perceived sacrifice and cultural or job fit have a stronger role in forming embeddedness than those measured in the community or off-the-job (Allen et al., 2010)

The context of hybrid working may challenge the traditional concept of on-the-job work, which is based on the perception that physical geographical location determines fit, links, and sacrifices for employees (Mitchell & Lee, 2001). Whereas hybrid work enables employees to work from home and blur the lines between office, home, and community, as an employee can be at home or in a community equivalent, but still be on the job.

Another explanation for this result can be found by analysing the mean values reported for fit and links between on-job and off-job. On-the-job fit and links mean values are 3.97 and 4.02, respectively. While Off-the-job fit and links mean values are 4.07 and 3.97. The data shows a balancing effect of the scales in way previous research context has not reported.

More recent research suggests that the traditional view of organisation and community is evolving in a digital world, where “digital embeddedness” must be considered as a key factor. A workforce which has a high regard for remote teams across geographic locations, professional networks, platforms and more virtual collaboration tools (John et al., 2025).

6.4. Conclusion

The results from the four hypotheses tell two different stories. On the one hand, the first hypothesis was supported, affirming that job embeddedness is a significant indicator of an employee's intention to stay at an organisation in a hybrid context, which aligns with previous research.

However, hypotheses 3 and 4 were not supported, contrary to previous research findings. Hybrid flexibility as an indicator of increased job embeddedness was slightly supported; however, further studies are required to justify its use in the context of this study. Job tenure and on-the-job embeddedness did not prove to be dominant indicators of job embeddedness compared to the alternatives.

The research confirms that job embeddedness remains a strong model for employee retention; however, in a post-pandemic world of hybrid working models for knowledge workers, some of its sub-dimensions and traditional assumptions will require further investigation.

7. Conclusion

7.1. Introduction to conclusion

The purpose of this study was to explore changes in retention considerations in light of post-pandemic working conditions, as organisations are offering hybrid models for employees to work. This model has introduced complexity to operationalise the job functions but also created a risk for retaining employees, which organisations require to maintain success, especially when it comes to knowledge workers (Lauring & Jonasson, 2024).

Traditional retention strategies, which focus on culture, incentives, and satisfaction, have been intensively studied; therefore, a more contemporary approach was selected. Furthermore, the job embeddedness theory focuses on understanding why employees stay rather than why they leave, and therefore, it was selected as the theoretical base of the study (Mitchell & Lee, 2001).

Four hypotheses were examined using quantitative survey data and statistical tests, which provided support for the embeddedness theory as a whole but revealed possible shifts in how job embeddedness may be formulated in a hybrid working context.

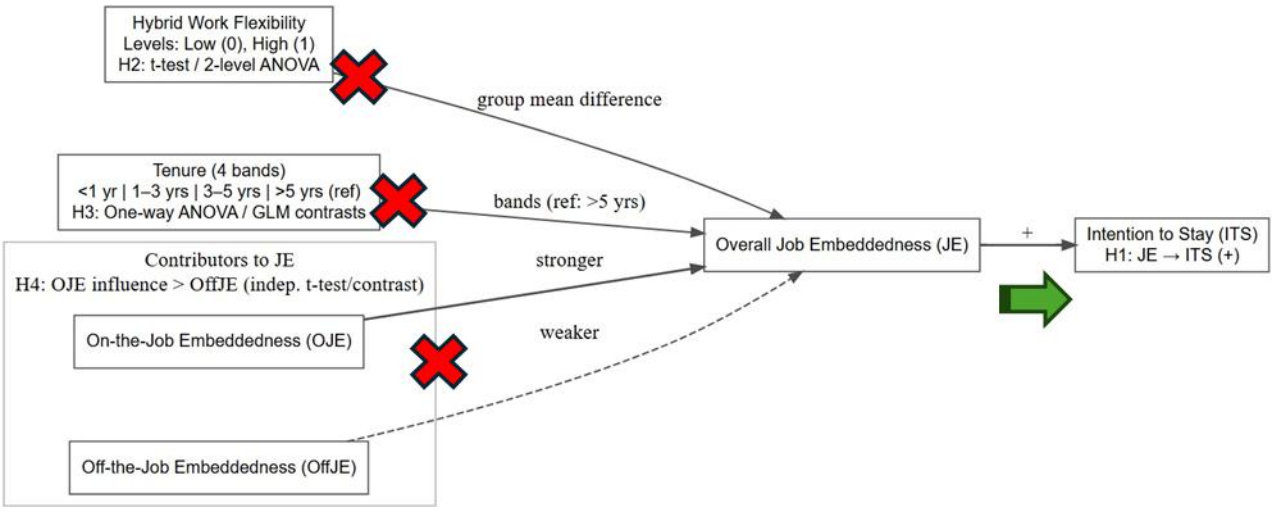

Figure 16: Hypotheses results

7.2. Hybrid Work and Retention

The findings indicate that the hybrid working context will change some of the norms surrounding employee retention. However, the study found no significant outcome for hypothesis 2 on the increase in flexibility (Hopkins & Bardoel, 2023). This may be due to the sample only including employees who are already working an average of 2.4 days from the office. The direction of the relationship may prove more significant if the sample included non-hybrid workers.

Nevertheless, in the context of a hybrid working model across the sample, the increase in flexibility has not proven beneficial in increasing job embeddedness. Hybrid working models are decreasing the physical connections and routines in a physical office environment (Lauring & Jonasson, 2024). This was noted in the decrease in on-job fit and an increase in off-job fit. This can be reconciled with the argument that employees are physically and socially detached, but remain operational within their organisation (Peltokorpi & Allen, 2024).

Rather than becoming a factor of embeddedness, hybrid work may prove to be a concept that shifts the theory to its next phase.

7.3. Theory Contributions

Overall, job embeddedness functions as a strong indicator for employees staying in the organisation, even in the context of hybrid knowledge workers and a South African context. This aligns with recently published research that confirms job embeddedness as a validated model (Hom & Kiazad, 2024).

Alternatively, the study challenges the assumption that some previously assumed drivers for job embeddedness, such as tenure and prioritising on-the-job embeddedness, may become irrelevant in the context of hybrid working models.

Given the strength of the overall model of job embeddedness in relation to employee retention, it warrants future research to help evolve the theory. The initial dimensions were defined more than two decades ago to form the composite tool (Mitchell et al., 2001); the rework of this took place six years later to develop the global tool (Crossley et al., 2007). However, since 2007, no enhancements to the tool have been made to measure job embeddedness.

Similarly, in the field of employee turnover, changes in context suggest that behaviour is shifting, and the Theory of Planned Behaviour can be referenced to reevaluate some of the assumptions that are changing in post-pandemic working environments. This is especially the case for knowledge workers in a hybrid environment.

7.4. Business Contributions

Organisations and businesses are concerned about how to improve and implement strategies to retain employees and help grow their businesses. By increasing employee embeddedness factors, organisations will still achieve the desired outcomes, as job embeddedness remains a very strong indicator of retention (Allen et al., 2010).

However, in a hybrid work context, organisations will have to reconsider how links are managed and created, as employees are not in a physical location together as they were previously (John et al., 2025).

Hypothesis 2 confirms that the number of days an employee works at the office will not influence embeddedness for an intensity perspective. The descriptive data indicate that employees are working an average of 2-3 days at the office, and they may prefer fewer days; however, the main takeaway is that this sample reported high job embeddedness, which means that in the hybrid context of the study, employees were overall embedded in their jobs, with working 2-3 days at the office.

Hypothesis 3, even though it was not supported, can provide very important information for organisations in practice. The finding suggests that businesses can no longer assume employees with longer tenure have a higher level of embeddedness in a hybrid context. The concept of tenure and loyalty may be evolving with changes in working models.

The final hypothesis, similar to the previous one, suggests that the traditional assumption that on-the-job embeddedness should be a focus area for strategy over off-the-job embeddedness may no longer be the case. Organisations will have to consider what off-the-job embeddedness strategies can be implemented, especially if the organisation operates in the context of this study, as the weighting has become equally important in the job embeddedness calculation.

7.5. Limitations

Due to the time constraints of the research, the study employed a cross-sectional approach, which limits the confirmation of strong causal relationships (Pallant, 2020). A longitudinal study will provide time for a larger data sample and measure how the relationship between job embeddedness and hybrid work develops over time.

The sample context for this study is limited to employees in South Africa who work a hybrid model, using a purposeful approach to gather the sample, which comes from a vast population (Baker et al., 2013). This further limits generalisation of the results. More so when considering that financial services and information technology industries where the predominant in the sample. The grouping methods for tenure and hybrid flexibility were created from category data samples and could be more valuable in testing a continuous-based data sample.

Furthermore, there could be a sample bias, as the theory examines employees who are currently still employed at their organisation, rather than employees who have resigned from the organisation. Additionally, only hybrid employees were sampled, and a comparison with non-hybrid employees should be studied with a time horizon that allows for it.

7.6. Recommendations for Future Research

The study has laid the groundwork for multiple lines of research, including those related to hybrid workers and beyond. More research, using both cross-sectional and longitudinal methods, should be conducted to define turnover constructs across full-time office-based workers, hybrid workers, and fully remote workers. These studies need to provide context for the type of employees (example: knowledge-based), industry and geographic differences.

Further research is required to adapt the job embeddedness model to consider a hybrid working context and possibly introduce a third dimension of digital embeddedness, as the original theory was developed two decades ago. This may call for qualitative research in the field of job embeddedness theory evolving.

This study is one of the few in non-Western or Asian geographic locations, and further research is needed in the context of other countries. Additionally, further contracts and mediating factors can be considered in relation to an employee's job embeddedness.

7.7. Conclusion

The research study has confirmed that, in a hybrid working context, the job embeddedness model remains a powerful tool for indicating employee retention. However, some of the model's assumptions may not hold in a hybrid working context. Although these assumptions, which were not validated, may require further investigation beyond the first hypothesis.

A strong case has been made to warrant significant effort, both by business and academics, to explore the residual impacts of COVID-19 and how it has specifically changed the landscape for traditional measures of employee behaviour, psychology and embeddedness.

Retention cannot depend solely on tenure, structure, and proximity, and should instead look to other factors. Therefore, in this context, retention is not based on the time employees spend in the organisation, but rather on their perception of being part of the organisation.

Knowledge workers who are employed in a hybrid working model are staying because they feel connected, not because they are confined to a physical environment.

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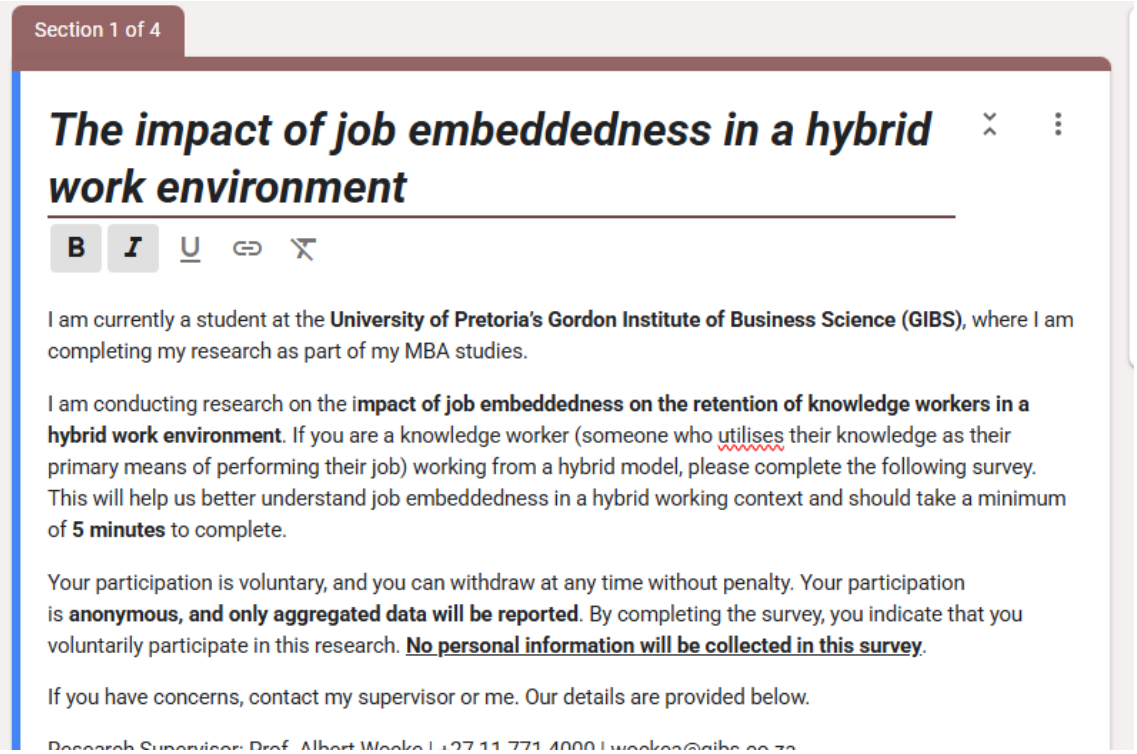
9. Appendix

9.1. Appendix A: Consistency Matrix

Hypothesis	Test Selected	Literature
H1: Higher job embeddedness is associated with higher intention to stay.	Simple Linear Regression	Bolt et al., 2022), Hom & Kiazad, 2024, Hom et al. (2017), Mitchell et al. (2001), Rubenstein et al. (2018), Serenko (2022), Setthakorn et al. (2024)
H2: Higher hybrid work flexibility is associated with higher job embeddedness.	Independent-samples t-test	Fayard et al. (2021), Gratton (2021), Lauring & Jonasson (2024), Peltokorpi & Allen (2024)
H3 (revised): Job embeddedness differs across tenure groups.	One-way ANOVA	Allen et al. (2010), Jiang et al. (2012), Pallant (2020), Mitchell et al. (2001)
H4: On-the-job embeddedness has a greater influence than off-the-job embeddedness.	Simple Linear Regression	Allen et al. (2010), Jiang et al. (2012), John et al. (2025), Pallant (2020), Mitchell et al. (2001)

9.2. Appendix B: Survey Questions



Section 1 of 4

The impact of job embeddedness in a hybrid work environment

I am currently a student at the **University of Pretoria's Gordon Institute of Business Science (GIBS)**, where I am completing my research as part of my MBA studies.

I am conducting research on the i**mpact of job embeddedness on the retention of knowledge workers in a hybrid work environment**. If you are a knowledge worker (someone who utilises their knowledge as their primary means of performing their job) working from a hybrid model, please complete the following survey. This will help us better understand job embeddedness in a hybrid working context and should take a minimum of **5 minutes** to complete.

Your participation is voluntary, and you can withdraw at any time without penalty. Your participation is **anonymous, and only aggregated data will be reported**. By completing the survey, you indicate that you voluntarily participate in this research. **No personal information will be collected in this survey**.

If you have concerns, contact my supervisor or me. Our details are provided below.

Are you currently employed? *

- ◯ Yes
- ◯ No

Do you work in South Africa? *

- ◯ Yes
- ◯ No

What is your gender? *

- ◯ Male
- ◯ Female
- ◯ Prefer not to say

How old are you? *

- ◯ 18-24
- ◯ 25-34
- ◯ 35-44
- ◯ 45-54
- ◯ 55-64
- ◯ 65+

Are you married? *

- ◯ Yes
- ◯ No
- ◯ Other (living with a partner)

How many kids do you have? *

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3 or more

What is your highest level of education? *

- ◯ Primary school
- ◯ High school
- ◯ Undergraduate
- ◯ Postgraduate
- ◯ Other

How long have you been employed at your current organisation? *

- ◯ Less than 1 year
- ◯ 1-3 years
- ◯ 3-5 years
- ◯ More than 5 years
- ◯ Other

What is your current job level? *

- ◯ Junior / Entry-Level
- ◯ Intermediate / Mid-Level
- ◯ Senior / Expert
- ◯ Manager / Leader
- ◯ Executive / C-Level
- ◯ Other

Which industry does your organisation belong to? *

- ◯ Information & Communication Technology (ICT)
- ◯ Financial Services
- ◯ Education & Training
- ◯ Government / Public Sector
- ◯ Telecommunications
- ◯ Media, Advertising & Creative
- ◯ Real Estate & Property
- ◯ Other: _____

What is the size of your organisation? *

- ◯ 1 – 10 employees (Micro enterprise)
- ◯ 11 – 50 employees (Small enterprise)
- ◯ 51 – 200 employees (Medium enterprise)
- ◯ 201 – 500 employees (Mid-sized company)
- ◯ Greater than 500 employees
- ◯ Other: _____

Hybrid Work

How many days a week do you work in the office? *

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 0

Is the number of office days mandated by the organisation? *

- ◯ Yes
- ◯ No

How many days a week do you prefer to work in the office? *

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5

Do you have sufficient work-life balance? *

- ◯ Yes
- ◯ No

Do you receive the required technical support to work remotely? *

- ◯ Yes
- ◯ No

I think the hybrid policy is fair. *

- ◯ Yes
- ◯ No

Turnover Intention

I frequently think about quitting my job. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I will actively look for a new job in the next 12 months. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I intend to stay with this organisation for the foreseeable future. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

On-the-Job-Fit

I feel that I am a good match for this organisation. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I fit with the organisation's culture and values. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I feel that my contributions are valued, whether I am working in the office or remotely. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I enjoy the work I do. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

The hybrid work model at my organisation aligns well with my personal work preferences. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

On-the-Job-Links

I feel well-connected to my team members, even when working remotely. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I have regular and meaningful interactions with my supervisor, regardless of my work location. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

My organisation's communication tools (e.g., Teams, Slack) help me feel connected. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

On-the-Job-Sacrifice

I would lose valuable benefits if I left this job. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

Leaving this job would require personal sacrifice. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

It would be a major disruption to leave my current job. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

Off-the-Job-Fit

I feel like I fit in with the local community. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

The flexibility of hybrid work suits my lifestyle. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I am happy with the amenities and environment outside of work. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

Off-the-Job-Links

Hybrid work helps me maintain personal/community connections. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I have family or close friends nearby. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

Off-the-Job-Sacrifice

Leaving this community would be difficult for me. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

I would lose valuable work-life balance benefits if I had to return to full in-office work. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

My life would be significantly disrupted if I left this area. *

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

9.3. Appendix C: Factor Analysis (EFA)

Component Correlation Matrix

Component	1	2	3	4	5	6	7
1	1.000	.341	.265	.227	.347	.191	-.189
2	.341	1.000	.424	.302	.164	.265	-.280
3	.265	.424	1.000	.430	.288	.276	-.102
4	.227	.302	.430	1.000	.356	.298	-.101
5	.347	.164	.288	.356	1.000	.227	-.028
6	.191	.265	.276	.298	.227	1.000	-.043
7	-.189	-.280	-.102	-.101	-.028	-.043	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

9.4. Appendix D: Code Book

Variable	Description / Levels	Type
Demographics & Work Context		
d_employed	Currently employed: {No, Yes}. (Filtered: kept Yes only.)	Categorical
d_sa	Works in South Africa: {No, Yes}.	Categorical
d_gender	Gender: {Male, Female}.	Categorical
d_age_band	Age band: [18-24, 25-34, 35-44, 45-54, 55-64, 65+].	Categorical (ordered)
d_marital	Marital status: {Yes, No, Other (living with a partner)}.	Categorical
d_edu	Highest education: {High school, Undergraduate, Postgraduate, Other, Primary school}.	Categorical (ordered)
d_tenure_band	Employment tenure: [<1 year, 1-3 years, 3-5 years, >5 years, Other}.	Categorical (ordered)

d_job_level	Job level: {Junior/Entry, Intermediate/Mid, Senior/Expert, Manager/Leader, Executive/C-level, Other}.	Categorical (ordered)
d_industry	Industry (verbatim; many categories).	Categorical (free text)
d_org_size	Organisation size (verbatim bands).	Categorical
d_kids	Self-reported children count (verbatim; may include "3 or more").	Text source
d_kids_num	Numeric children count parsed from d_kids; open-ended treated as lower bound (e.g., "3 or more" \rightarrow 3).	Numeric
Work Pattern and Supports		
hw_days_office	Days per week in office (0-5).	Numeric
hw_mandated	Are office days mandated? {No, Yes}. (Filtered: excluded 5-day & Yes).	Categorical
hw_pref_days	Preferred office days per week.	Numeric
hw_wlb_yn	Sufficient work-life balance? {No, Yes}.	Categorical
hw_tech_yn	Adequate remote technical support? {No, Yes}.	Categorical
hw_fair_yn	Policy perceived as fair? {No, Yes}.	Categorical
hw_wlb_5	Recoded from hw_wlb_yn: No=1, Yes=5 (for plotting).	Ordinal (2-point)
hw_tech_5	Recoded from hw_tech_yn: No=1, Yes=5.	Ordinal (2-point)
hw_fair_5	Recoded from hw_fair_yn: No=1, Yes=5.	Ordinal (2-point)

Turnover Intention (TI)		
ti_quit	I frequently think about quitting my job. (1=SD ... 5=SA)	Ordinal (Likert)
ti_look	I will actively look for a new job in the next 12 months. (1-5)	Ordinal (Likert)
ti_stay	I intend to stay with this organisation for the foreseeable future. (1-5)	Ordinal (Likert)
ti_stay_r	Reverse score of ti_stay: 6 - \text{ti_stay}.	Ordinal (Likert)
ti_index	Composite: \text{mean}(\text{ti_quit}, \text{ti_look}, \text{ti_stay_r}); requires \ge 3 of 3 items.	Composite (1-5)
On-the-Job Embeddedness		
oj_fit1..6	6 Fit items (org match; culture/values; valued contribution; compatibility; enjoyment; alignment with preferences).	Ordinal (Likert)
oj_link1..3	3 Links items (team connectedness; supervisor interactions; tools).	Ordinal (Likert)
oj_sac1..3	3 Sacrifice items (benefits lost; personal sacrifice; disruption).	Ordinal (Likert)
Composite On-the-Job Embeddedness		
je_on_fit	Mean of oj_fit1..6 (70% rule).	Composite (1-5)
je_on_links	Mean of oj_link1..3 (70% rule).	Composite (1-5)

je_on_sac	Mean of oj_sac1..3 (70% rule).	Composite (1-5)
je_on	Overall On-the-Job embeddedness: mean of all On-the-Job items.	Composite (1-5)
Off-the-Job Embeddedness		
off_fit1..3	3 Fit items (community fit; lifestyle; amenities).	Ordinal (Likert)
off_link1..2[+3]	2-3 Links items (personal/community connections; family/friends nearby; organisations/activities if present).	Ordinal (Likert)
off_sac1..3	3 Sacrifice items (difficulty leaving; WLB benefits lost; disruption).	Ordinal (Likert)
je_off_fit	Mean of off_fit1..3 (70% rule).	Composite (1-5)
je_off_links	Mean of off_link1..2[+3] (at least two items required).	Composite (1-5)
je_off_sac	Mean of off_sac1..3 (70% rule).	Composite (1-5)
je_off	Overall Off-the-Job embeddedness: mean of all Off-the-Job items.	Composite (1-5)
Combined Embeddedness		
je_all	Combined embeddedness: mean of all On- and Off-the-Job items (70% rule).	Composite (1-5)