

**EXPLORING JOB MISMATCH AMONG MALAYSIAN GRADUATES: A JOB
DEMANDS-RESOURCES (JD-R) MODEL PERSPECTIVE WITH
PERSON-JOB (P-J) FIT AND CAREER DECISION-MAKING
SELF-EFFICACY (CDMSE) AS PSYCHOLOGICAL EXTENSIONS**

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By

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ABSTRACT

Exploring Job Mismatch among Malaysian Graduates: A Job Demands-Resources (JD-R) Model Perspective with Person-Job (P-J) Fit and Career Decision-Making Self-Efficacy (CDMSE) as Psychological Extensions

LI, QING

This study explores the causes of employment mismatch among Malaysian college students. Although higher education is generally considered to increase employment opportunities, many college students still face difficulties in finding jobs that match their qualifications and expectations. This problem is of great significance to personal career development and the effective utilisation of human capital.

In order to study this problem, this study uses the job needs-resource (JD-R) model and the Person-Job Fit theory, and considers the role of career decision-making self (CDMSE). This study adopts the cross-sectional quantitative survey method, and the survey subjects are 350 Malaysian college graduates who have graduated and entered the workplace in the past 8 years. Data analysis adopts the partial least squares structure equation model (PLS-SEM).

The results show that job resources, such as autonomy and leadership support, have a positive impact on the recognised P-J Fit. In contrast, the cognitive workload will

increase the perception of mismatch with work. Interestingly, the results of the study also show that P-J Fit is positively related to job mismatch, which shows that even if individuals feel that they are qualified for the job, they may still feel that their work does not match their broader career goals or background education. In general, this study enriches the existing literature on JD-R models and labour employment by providing relevant evidence from Malaysia.

The research results also provide practical suggestions for organisations and policymakers to improve job design and support college students to achieve better employment results.

Keywords: Job Mismatch, JD-R Model, P-J Fit, CDMSE, Malaysian Graduates, PLS-SEM.

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SUBMISSION OF THESIS

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Yours truly,

LI, QING

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LIST OF ABBREVIATIONS

A	Job Autonomy
SS	Supervisor Support
CW	Cognitive Workload
ED	Emotional Demands
GS	Goal Selection
JM	Job Mismatch
OI	Occupational Information
PJF	Person–Job Fit
PL	Planning
PS	Perceived Support
SA	Self Appraisal

PREFACE

This thesis, titled "Exploring Job Mismatch among Malaysian Graduates: A Job Demands-Resources (JD-R) Model Perspective with Person-Job (P-J) Fit and Career Decision-Making Self-Efficacy (CDMSE) as Psychological Extensions" represents the culmination of my academic journey and professional reflection. The primary objective of this research is to explore the complex interplay between job demands, organizational resources, and individual psychological agency in shaping the employment outcomes of fresh graduates in the contemporary Malaysian labor market.

The inspiration for this study stems from the persistent challenge of graduate underemployment and skill mismatch in Malaysia. Observing the transition from higher education to the job market, we find that "finding a job" is only the first difficulty; the real challenge is to find a job that matches personal skills, educational background and career aspirations. Drawing on the Work Needs-Resources (JD-R) model and career decision-making self-efficacy (CDMSE), this study aims to provide empirical insights to help policymakers and graduates better understand and cope with these structural challenges.

At the time of this study, the global and local employment environment was undergoing significant changes. Collecting data from 350 Malaysian graduates and

using the partial least squares structure equation model (PLS-SEM) for analysis is not a smooth sailing, but it is a valuable learning experience. It provides an opportunity to combine theoretical ideas with the actual situation faced by young job seekers.

It is hoped that the results of this research can make useful contributions to human resource development and occupational psychology. More importantly, this study aims to reflect the experience of graduates trying to find an ideal job that matches their skills and expectations in an increasingly competitive employment environment.

CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter introduces the main ideas of this study and elaborates on the key issues explored. First of all, the problem of job mismatch among graduates is summarised, especially in the context of Malaysia. This chapter also explains the importance of the issue to individuals and the labour market. In addition, this chapter briefly introduces the main theories applied in this study, including the JD-R model, P-J Fit theory and CDMSE. These theories help explain how job characteristics and individual factors affect the work experience of graduates and the perception of employment mismatch. Finally, this chapter also explains the research objectives and research problems, as well as the scope and significance of the research.

1.2 Overview of the study

In current economic climate globally, the transition from the university environment to the career is no longer a 'direct train'. Although people usually expect a college degree to help graduates prepare for their careers, this expectation is not always realised in practice. Many new graduates face many challenges in finding jobs that match their qualifications and skills and meet their long-term career expectations (Sun & Dagogo, 2025). Such phenomenon, often referred to as "career mismatch", has attracted increasing attention in recent years because of its potential impact on personal well-being and organisational performance. Wibowo et al. (2026) pointed out

that occupational mismatch is not only affected by the labour market situation, but also by workplace characteristics and personal cognition.

In this regard, the **JD-R** model provides a useful perspective for understanding how different job characteristics affect employee experiences. The model classified job characteristics into job demands and job resources, both of which have an important impact on employee's motivation, happiness, and work-related results (Bakker & Demerouti, 2023)

Job demands, such as cognitive workload and emotional pressure, usually require continuous mental labor and may cause stress, especially for fresh graduates who are still adapting to the workplace (Venz & Boettcher, 2021). When such demands are high, individuals may feel that their abilities do not fully match job requirements, thus weakening their sense of P-J Fit (Kim, Schuh, & Cai, 2020). On the other hand, **job resources**, including supervisor support and job autonomy, can help employees respond to these demands and improve their perception of the fit of their roles (Bakker & Demerouti, 2023).

P-J Fit is another important concept in understanding job mismatch. It refers to the degree to which a person's skills, abilities and expectations match the job requirements. When the degree of matching is high, individuals are more likely to be

satisfied and comfortable with their work. However, when the match is low, they may feel that the work does not match their qualifications or career goals, thus exacerbating the feeling of job mismatch. This is especially important for fresh graduates, because they are still adapting to the workplace and exploring their career paths. Even if they are already employed, they will still feel mismatched if the work does not match their major or expectations. Therefore, P-J Fit helps to explain how graduates evaluate their jobs and why some people still feel that job mismatches even if they are competent to do the job.

In addition to workplace factors, personal psychological resources are also crucial. The CDMSE reflects the self-confidence of individuals when making career-related decisions (Onnual, 2025). Graduates with higher levels of CDMSE are usually more adaptable to workplace challenges and maintain a stronger sense of career matching.

Based on these views, this study adopts a comprehensive approach, combining the job JD-R model, P-J Fit theory and CDMSE to explore how these factors jointly affect the occupational mismatch encountered by fresh graduates in the early stage of their careers.

1.3 Background of the Study

In today's knowledge-based and globalised economy, higher education is widely regarded as an important way for career development and economic growth.

Governments around the world have invested heavily in expanding the universal coverage of higher education, hoping that a higher level of education can bring better employment opportunities, more effective human capital and long-term economic growth (Zeshan et al, 2025).

In this study, Malaysian graduates are defined as individuals who have been awarded a bachelor's degree from at least a recognised higher education institution and have entered or are entering the labour market. This definition is consistent with the classifications commonly used in employment and labour market research (OECD, 2023)

Despite the rapid development of higher education, evidence in many countries shows that employment opportunities are not growing at the same pace, especially in the high-skilled industry. Therefore, job mismatch is becoming more and more common (Wei & Yew, 2024). Job mismatch refers to a situation where an individual's education level, skills or career expectations do not match the job requirements. Job mismatch can be manifested in many forms, such as excessive education, professional mismatch or skill mismatch, each of which can lead to different economic and psychological consequences (OECD, 2024).

In Malaysian , job mismatch among graduates has become a long-standing problem. Although the number of graduates has continued to grow steadily in recent years,

many people's positions cannot give full play to their academic advantages (Malaysia Statistics Bureau, 2024). This shows that the evaluation of employment results should not be based solely on the employment rate, but should also consider the quality of employment and the degree to which the job is matched with personal skills and educational background. From a broader perspective, international organisations point out that there is an supply-demand imbalance between the rapid growth of graduates and the slow growth of high-skilled employment opportunities (Low & Mah, 2024). This imbalance raises concerns about the underutilisation of human capital and may have long-standing impact on economic growth and competitiveness.

At the personal level, job mismatch is associated with a variety of negative results. Graduates facing job mismatches tend to show lower job satisfaction, slower career development and reduced sense of happiness (Jiang & Guo, 2022). These effects are particularly significant in the early stages of career, because initial work experience often affects long-term career development.

Given the complexity of employment results of graduates, it is important to consider not only structural conditions but also the potential mechanisms that affect individual work experience. In this regard, the JD-R model provides a useful framework for examining how different job characteristics influence employee outcomes.

According to the JD-R model, job characteristics can generally be categorized into job demands and job resources. Job demands refer to aspects of a job that require sustained physical or mental effort, such as workload, complexity, or emotional pressure (Bakker & Demerouti, 2022). When these demands are high, they may cause stress, especially for fresh graduates who are still adapting to workplace expectations. In this case, individuals may begin to feel that their abilities are not fully match the job requirements, thus weakening their perception of the fit of their ability and work.

However, job resources, including supervisor support and job autonomy, can help individuals deal with job demands and improve their work experiences. When resources are sufficient, employees are usually better able to cope with challenges and maintain a stronger sense of job identity (Bakker & Demerouti, 2022). However, the balance between demands and resources is not always obvious, and its impact may vary depending on individual and situational factors.

Closely related to the JD-R perspective is P-J Fit theory, which focuses on the degree of matching between individuals and specific jobs. This includes the degree of matching between an individual's skills, abilities, and needs, with the requirements and characteristics of the job itself (Kim et al, 2020). High P-J Fit are usually associated with positive outcomes such as job satisfaction, performance, and career development. In contrast, poor matching is more likely to lead to dissatisfaction,

willingness to leave, and instability in early career stages (Shah & Ayub, 2021).

From this perspective, job mismatch can not only be understood as a structural problem but also as a manifestation of misalignment between individual attributes and job requirements. This highlights the importance of considering how graduates view their own roles, rather than relying only on objective indicators.

In addition to job characteristics and matching, individual psychological resources also play an important role. CDMSE, which is originated from Social Cognitive Career Theory, defined as individual's confidence in making effective career-related decisions. This includes identifying suitable job opportunities, setting career goals, and adapting to uncertainties in the labour market (Lent & Brown, 2020). Graduates with higher levels of CDMSE are generally more proactive in exploring career options and better able to cope with uncertainty. Therefore, It is more possible for them to recognize their career ambition and match their existing employment opportunities. In contrast, individuals who lack such confidence may feel more uncomfortable to cope with the challenges at the beginning of their careers and are more likely to be engaged in mismatched jobs for a long time (Anyango, 2024).

Overall, the JD-R model, P-J Fit theory, and CDMSE offer a comprehensive framework for understanding job mismatch among early-career graduates. The JD-R model explains how job characteristics affect work experiences, P-J Fit focuses on

matching between individuals and their roles, While CDMSE captures the individual's ability to make effective career decisions. By considering job mismatch through the combined perspectives of JD-R model P–J Fit, and CDMSE, this research attempts to offer a more integrated explanation of the reasons leading to graduate employment outcomes in Malaysia. Rather than focusing on a single dimension, this approach gives a clearer interpretation of how structural conditions and individual factors interact in shaping early-career experiences.

1.4 Problem Statement

Recent reports highlight the persistent problem of job mismatch among Malaysian graduates. For example, data from the Khazanah Research Institute (KRI) shows that only about 43.4% of graduates in 2021 were engaged in jobs consistent with their qualifications (Khazanah Research Institute, 2024a). Similarly, statistics from the Social Security Organisation (SOC SO) show that a large proportion of graduates registered on the MYFutureJobs portal were working in semi-skilled or low-skilled positions as of mid-2023. These figures suggest that job mismatch remains a persistent concern within the Malaysian labour market (BERNAMA, 2023).

Although structural factors such as an oversupply of graduates and limited growth in high-skilled employment are widely discussed, little attention has been paid to the psychological processes that affect the experience of employment and skills mismatch. In fact, many graduates are employed in positions below their academic

levels, but how they view job matching, how to use existing resources and how to make career choices is still not fully understood (Choon Wei, 2025). Evidence also suggests that early experiences of mismatch may persist, and some graduates will stay mismatched positions for a long time (Khazanah Research Institute, 2024a).

The research results based on the JD-R model show mixed conclusions. On the one hand, high job demands and insufficient resources often lead to increased stress and reduced matching (Li et al., 2025). On the other hand, some studies show that when resources are sufficient, certain job demands may promote learning and skill development, thus reducing perceived mismatch (Bakker et al., 2023). These contradictory research results show that the relationship between job needs and mismatches is more complex than previously hypothesized.

Further inconsistencies can be observed when comparing objective and subjective measures of job mismatch (Senkrua, 2021). In some cases, individuals who are classified as mismatched according to objective criteria may not think so. Conversely, those who seem to be a good match may still report a sense of disharmony or a feeling that their abilities have not been fully exploited (Bischof, 2021). This suggests that subjective perceptions, rather than purely structural indicators, play an important role in shaping how mismatch is experienced .

Cross-cultural research also shows different results. Studies carried out in the Western context often show that work resources can effectively cushion the impact of high job demand because their organisational structure often provides greater autonomy and development support (Bakker, Demerouti and Sanz-Vergel, 2023). However, studies conducted in developing countries or collectivist contexts (such as China and Malaysia) have yielded inconsistent results. For example, a study concerning Chinese delivery drivers found that only when both job demand and resources are high, can job resources buffer the impact of job demand on positive emotions (Zhang, Sitar and Huang, 2022). This shows that the protective effect of resources may be conditional rather than universal. In addition, cultural values and hierarchical management practises may limit the access and utilisation of resources in these environments.

These differences indicate that conclusions derived from Western JD-R research may not be directly applied to Southeast Asian labour markets. In particular, institutional and organisational characteristics in developing economies, including limited job quality and restricted access to developmental resources, may further constrain the effectiveness of job resources (Khazanah Research Institute, 2024b). These background factors highlight the importance of examining JD-R mechanisms in a specific cultural and economic environments.

From a methodological perspective, many previous studies have focused on senior

employees rather than fresh graduates (Goda et al,2025). Therefore, these studies often capture relatively stable work environments while ignoring the transitional characteristics of early stages of career. For graduates, job roles, expectations, and skill utilisation may change rapidly during the first few years of employment (OECD, 2023). Moreover, limited research has incorporated personal resources such as CDMSE into the JD-R framework when examining job mismatch. Given that CDMSE may influence how individuals interpret job conditions and make career decisions, its role deserves further investigation (Liu, 2023).

1.5 Research Objectives

Job mismatch is not only related to labour market conditions, but also to how graduates experience their jobs. Job demands and resources, together with P–J Fit and CDMSE, may influence how graduates see their roles and career choices. Therefore, this study aims to:

- RQ1: Examine the effects of cognitive workload and emotional demands on perceived P–J Fit among Malaysian graduates.
- RO2: Investigate the effects of cognitive workload and emotional demands on Malaysian graduates' perceptions of job mismatch.
- RO3: Assess the role of supervisor support and job autonomy in enhancing perceived P–J Fit among Malaysian graduates.
- RO4: Examine the influence of CDMSE on Malaysian graduates' perceived P–J Fit.

- RO5: Analyse the relationship between perceived P–J Fit and job mismatch among Malaysian graduates.

1.6 Research Questions

Based on the research objectives, this study focuses on understanding how different factors influence job mismatch among graduates. It looks at the role of job demands, job resources, P–J Fit, and CDMSE in shaping their work experiences. Therefore, this study addresses the following research questions:

- RQ1: What are the effects of cognitive workload and emotional demands influence on perceived P–J Fit among Malaysian graduates?
- RQ2: What are the effects of cognitive workload and emotional demands on Malaysian graduates' perceptions of job mismatch?
- RQ3: What are the roles of supervisor support and job autonomy in enhancing perceived P–J Fit among Malaysian graduates?
- RQ4: What is the influence of CDMSE on Malaysian graduates' perceptions of person–job fit?
- RQ5: What is the relationship between perceived P–J Fit and job mismatch among Malaysian graduates?

1.7 Research Scope and Definition of Terms

This study focuses on early-career graduates in Malaysia who have worked for less than eight years after completing their degree (Anakor, 2025). It looks at graduates

from different industries, not just one specific sector. The study examines how job demands, job resources, and personal confidence in career decisions affect job mismatch. A quantitative survey method is used, and the data are analysed using PLS-SEM. This study mainly focuses on how graduates perceive job mismatch, rather than using objective measures like job titles or qualifications.

Table 1.1 Definition of Terms

Terms	Definition	Sources
Cognitive Workload	Cognitive workload refers to individual's mental resources in certain situations.	Das Chakladar et al. 2024).
Emotional demands	Emotional demands at work refer to the extent to which a job requires continuous emotional regulation, particularly when dealing with emotionally demanding interactions, clients, or situations that may elicit stress, empathy, or emotional suppression.	Madsen et al. (2022)
Supervisor support	Perceived supervisor support reflects employees' beliefs that their supervisors acknowledge their efforts, show concern for their welfare, and provide necessary support to facilitate	Malik et al. (2020)

	effective job performance.	
Autonomy	Autonomy refers to whether individuals believe that they can do a job on their own.	Yagil et al. (2021)
CDMSE	CDMSE is conceptualized as individuals' beliefs in effectively engaging in tasks required for making informed career decisions, such as self-evaluation, information seeking, goal setting, and planning	Liu, Z. (2025)
P-J Fit	P-J Fit means the extent to which an employee's skills, knowledge, and abilities align with the demands and requirements of the job, reflecting the perceived compatibility between the individual and the work role, with higher fit supporting more favourable work outcomes.	Kim et al. (2020)
Job mismatch	Job mismatch reflects a misalignment between employees' skills and job	Kohnová et al. (2020)

	requirements, often caused by poor managerial competence, resulting in over skilling, underutilization of talent, and reduced employee satisfaction.	
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Table 1.1 Definition of Terms continued

1.8 Significance of the Study

This study helps to better understand job mismatch among Malaysian graduates by looking at both job factors and individual factors. It shows how job demands, job resources, P–J Fit, and CDMSE influence graduates’ work experiences. The findings can help organisations design jobs better, provide stronger support for employees. they may also be useful for policymakers and educators in improving graduate employability. Overall, the study highlights that both work conditions and personal factors play an important role in shaping early career outcomes.

1.9 Organization of the Thesis

This thesis is organised into five chapters. Chapter 1 introduces the background and context of the study, including the research problem, research objectives, and research questions. It also provides an overview of the study and explains the structure of the thesis. Chapter 2 reviews the relevant literature related to job mismatch, P–J Fit , job demands and job resources, and CDMSE. Based on the reviewed literature and theoretical foundations, this chapter develops the conceptual framework and proposes the research hypotheses.

Chapter 3 presents the research methodology adopted in this study. It describes the research design, population and sampling procedures, data collection methods, measurement of variables, and data analysis techniques using SmartPLS. Chapter 4 presents the empirical findings of the study. It starts with an overview of the respondents' demographic profile and descriptive statistics, before moving on to the evaluation of the measurement and structural models using Partial Least Squares Structural Equation Modelling (PLS-SEM). Chapter 5 presents the main findings and links them to past studies. It also explains the theoretical and practical implications, points out the limitations of the study, and suggests directions for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the key literature related to job mismatch among early-career graduates. It focuses on the main theories guiding this study, including the JD-R model, P-J Fit, and CDMSE. Additionally, the relevant empirical research results is also discussed to show the application of these concepts in previous studies.

Subsequently, this chapter builds a conceptual framework and puts forward hypotheses, which lays the foundation for the analysis of the following chapters.

2.2 Underlying Theories

This study applies three main theories: the JD-R model, P – J Fit theory, and CDMSE. The JD-R model explains how job demands and job resources affect employees' experiences and outcomes at work. P – J Fit focuses on how well an individual's skills and abilities match the requirements of the job. CDMSE, on the other hand, looks at how confident individuals are in making career-related decisions. Together, these theories help explain how both job conditions and personal factors influence job mismatch among graduates.

2.2.1 Job Demands–Resources (JD-R) theory

The JD-R theory provides a useful perspective on understanding how different workplace conditions affect employee performance, especially on the issue of job mismatch among Malaysian graduates. As pointed out by Bakker and Demerouti (2023), the theory believes that every profession contains certain risk factors related to work pressure, which can generally be divided into two categories: job demands and job resources.

Venz and Boettcher (2021) pointed out that when graduates are engaged in jobs that do not match their skills or qualifications, they may face higher cognitive and emotional demands. This mismatch can activate the process of health damage,

ultimately reducing job satisfaction and increasing psychological strain. On the contrary, job resources, such as autonomy and supervisor support play a key role in initiating the motivational process. In addition, Bakker and de Vries (2021) argue that these resources not only help individuals achieve their work goals but also cushion the negative impact of high job demands. In the context of Malaysian graduates, the provision of career development opportunities may help mitigate the negative impact of early job mismatches.

In addition to the original theoretical framework, the JD-R theory has gradually developed. It places greater emphasis on the dynamic interaction between job characteristics and individual psychological processes. The theory no longer assumes that job demands always lead to stress, but believes that its impact largely depends on employees' perceived ability to cope with these demands (Bakker & Demerouti, 2023). In this regard, Signore et al. (2025) found that job crafting can act as a bottom-up approach, so that employees can actively build personal resources, such as self-efficacy and positive emotions. Their study, conducted during the COVID-19 pandemic, illustrates how individuals adapt to changing work conditions by proactively arrange their resource available, rather than passively responding to job demands. This reflects the "person $\times$ situation" interaction within the JD-R framework, where personal strategies and emotional states influence how employees handle both demands and available resources.

This view is especially important for early-career graduates, because their limited work experience may make them more vulnerable to the cognitive and emotional demands brought about by entry-level positions (Blokker et al., 2023). Furthermore, although the difference between challenge and hindrance demands was not initially included in the JD-R model, more recent theoretical developments integrate JD-R with Conservation of Resources theory and suggest that job demands can be perceived differently depending on the level of job and personal resources available. Specifically, demands may function either as challenges or as hindrances, which in turn has significant impact on employee well-being and performance (Bakker & Demerouti, 2023; Demerouti et al., 2025).

In addition, the JD-R theory has been further developed into a multilevel framework, which recognizes that job demands and resources operate not only at the individual level but also at team and organisational levels, thus affecting employee dedication and performance (Junker et al., 2025). Moreover, recent studies have incorporated the work-home resources perspective into the JD-R model, showing how job demands and resources contribute to work-family conflict and spillover effects, thereby connecting work areas and non-work areas (Li et al., 2024).

For Malaysian graduates, they are facing steep learning curves, unclear role

expectations, and increasingly digitalised work conditions. These factors may cause what initially appear to be developmental demands to become sources of pressure in the absence of organisational support. In this case, graduates are more likely to feel the mismatch between their roles and their skills or expectations, resulting in a sense of job mismatch (Bakker & Demerouti, 2023; Kaltenegger et al., 2023).

Recent JD-R literature also shows that job demands should not only be regarded as objective work characteristics, but should be regarded as experiences influenced by personal perception and cognitive evaluation (Azriel, 2023). This subjective evaluation process helps to link JD-R theory with P-J Fit perspectives, because individuals' perceptions of job demands directly influence their judgement of whether they are able to manage job requirements.

2.2.2 Person–Job Fit Theory

(P–J) Fit Theory explains how the match between a person and a job affects work attitudes, performance, and career outcomes. It focuses on how a person's skills, abilities, and needs match the job's requirements. when an individual's knowledge and abilities meet job demands, and the job satisfies the individual's personal and career needs, a good match is realised. In contrast, A poor fit can cause stress, low satisfaction, and a stronger feeling of job mismatch (Merdiaty, 2024; Zhang & Yan, 2024). For graduates, the early stage of a career is very important. It is a period when they build skills and form their professional identity. Therefore, perceived P–J Fit not

only affects employees' feelings about their current job, but also their views on future career development and employability. This idea supports the use of P–J Fit as a key factor that links job characteristics to job mismatch.

Recent studies show that how people see their P–J Fit affects how they experience their work. If people feel that their skills match their job needs well, they are more likely to regard difficult tasks as opportunities for learning and growth. If people feel that their skills do not match their jobs for a long time, they may feel stagnant, their abilities are not fully exploited, and mentally exhausted (Lerche et al., 2025; Scholze & Hecker, 2024). Research on the construction of meaning shows that employees try to engage in meaningful work. They try to find out whether their work is in line with their skills, identity, and career goals (Scott, 2022). From this view, perceived P–J Fit is a way for people to understand their own work experience.

Perceived P–J Fit is not only about whether skills match job demands. It also reflects how people judge whether their work is meaningful and suitable for their career path. If graduates cannot link their job to a clear career story, they may feel a stronger sense of misfit. This makes them more likely to see their job as a mismatch. This also explains why perceived fit is closely related to attitudes such as dedication, loyalty, and willingness to leave.

Perceived P–J Fit becomes even more important when job choices are limited. In the

case of lack of job market opportunities or mismatch of skills, graduates may accept unsatisfactory jobs (Koopmans et al., 2025). In this case, perceived fit plays the role of screening. It helps graduates judge whether their job is a short-term choice or a real mismatch. This view shows that job mismatch is not only a problem in the labour market. It is also shaped by people's views and feelings about their own career matching. Adding perceived P–J Fit to the framework helps explain how graduates understand and react to undesirable jobs.

Recent studies no longer regard fit as fixed or completely objective anymore. Instead, they believe that the matching can change and depends on personal perception (Keane et al., 2024). Researchers pointed out that employees will constantly re-evaluate their match with their work over time. They do this as they gain experience, get feedback, and adjust to new job demands (Kim et al., 2020; Lerche et al., 2025). This idea is important for graduates. Many graduates cannot choose the best suitable job because of job market pressure. They may accept jobs that do not fully match their skills or expectations. In this case, perceived PJF becomes very important. It affects how graduates understand their work experience (Koopmans et al., 2025). It also affects how they judge whether they are in the wrong job.

Recent studies show that P–J Fit is not simple or fixed. Researchers now believe that matching is dynamic and consists of different dimensions. Keane, Kwon, and Kim

(2024) explain that P–J Fit includes several types. These include demands–abilities fit, needs–supplies fit, and values fit. They show that these parts work together to affect employee engagement and well-being. They also show that people keep adjusting their sense of fit over time. This happens as job demands and personal resources change. This change is different from the previous model that regarded matching as fixed. It focuses more on employee choice and the work context.

Wightman and Christensen (2025) support this idea. They suggest that fit is multi-dimensional and depends on context. Their study shows that fit develops over time through ongoing adjustment between the person and the organization. It does not happen only once when a person starts a job. They also find that fit is shaped by more than just job tasks. It is also influenced by the wider work system and career situation. This means that fit is based on personal perception and changes over time. Together, these studies show that P–J Fit is a changing psychological process. It helps explain how employees understand their jobs and respond to job demands. This supports the use of P–J Fit as an important concept in this study.

In this study, P–J Fit is added to the JD-R model as a psychological factor. It works as a mediating variable between job demands, such as task complexity, and job mismatch. This approach takes into account both job conditions and the graduate's own abilities and expectations, thus more comprehensively explaining the causes of

work mismatch in early careers. It also shows that job demands do not directly cause mismatch. Graduates first evaluate their fit, and this shapes how they see their job.

2.2.3 Career Decision-Making Self-Efficacy (CDMSE)

CDMSE refers to a person's belief in their ability to make good career decisions. It consists of dimensions including understanding one's own strengths, finding job information, choosing goals, making plans, and solving problems. CDMSE originates from social cognitive theory. This theory believes that self-efficacy is an important personal resource. It affects people's behaviour, motivation and way of responding to challenges (Onnual, 2025). In vocational research, CDMSE is seen as a specific type of self-efficacy. It shapes how people handle career decisions, especially when they face uncertainty and complex choices at the start of their careers (Wang et al., 2023).

Many studies show that CDMSE is crucial in career decisions. People with high CDMSE stand a higher chance of being prepared for their careers and confident in making decisions. People with low CDMSE often feel uncertain and find it more difficult making decisions. For example, Anyango (2024) used the CDMSE to measure self-confidence of nursing students in making career choices. The study shows that CDMSE is useful in both education and career environment. Onnual (2025) also developed and tested a CDMSE scale with five factors. They are self-appraisal, job information collection, goal setting, planning, and problem-solving. This structure matches the common view of CDMSE. These research results show that CDMSE

affects the way people deal with career decisions. It can also act as a mediator between personal traits and career outcomes (Onnual, 2025; Anyango, 2024).

Recent studies show that CDMSE is not fixed. Researchers now believe that it will change over time. Wang et al. (2023) reviewed many studies from the past 20 years. They showed how ideas about CDMSE have developed. One key finding is about what affects CDMSE. Wang et al. (2023) found that CDMSE depends not only on personal factors, like personality and past success, but also on social and environmental factors. These include support from others, learning settings, and career feedback. This means CDMSE is shaped by both the person and their environment.

Another important point is that CDMSE is not only suitable for students who are choosing a career. New studies focusses on CDMSE in job changes, early career stages, and uncertain career periods. Wang et al. (2023) show that CDMSE is very important when people face difficult or uncertain career decisions. This includes entering the job market or adjusting to a new job. This makes CDMSE very relevant for graduates who are just starting their careers.

Researchers also show that CDMSE can be improved. It is not a fixed characteristics. Wang et al. (2023) found that training, support, and positive work experience can improve CDMSE. The finding is conforming to modern career theories regarding learning, change, and self-management. In a word, CDMSE is a flexible personal

resource. It helps people make decisions, deal with uncertainty, and remain confidence in their career choices. This idea supports the use of CDMSE in models like the JD-R model. In this model, CDMSE is a personal resource that helps people deal with job demands (Wang et al., 2023).

CDMSE was first studied in career guidance research. Now, researchers also applied it to working pressure models. According to JD-R model, CDMSE is a personal resource that helps people better control their career demands (Lee et al., 2022). Graduates with high CDMSE are more likely to look for information, compare job options, and see difficult tasks as challenges they can handle rather than pressure (Onnual, 2025).

As a psychological resource, CDMSE helps graduates manage their job demands by enhancing confidence in evaluating job choic and making career decisions. Integrating CDMSE into the model is in line with the social cognitive career frameworks, which shows that higher self-efficacy in career decision tasks can improve adaptive career behaviours and reduces adverse results such as career indecision or perceived job mismatch (Onnual, 2025).

2.2.4 Empirical evidence linking JD-R, P-J fit and CDMSE to job mismatch and early-career outcomes

Since 2020, a major development of JD-R theory is to place more emphasis on

personal resources as a key third component. Personal resources can buffer the adverse effects of work needs. Furthermore, it also dynamically interact with job resources, thus affecting the happiness and motivation process of employees. Recent research underscores that personal resources can be conceptualised as individual characteristics such as self-efficacy, optimism, and resilience. They play a more core role in shaping how employees respond to job demands and utilize job resources to maintain work engagement and performance, Therefore, reflecting a broader, more integrative understanding of the JD-R framework (Hossan et al, 2023).

Bakker and Demerouti (2023) argue that individual characteristics such as CDMSE act similarly to job resources by helping individuals control their environment and achieve P-J Fit. Prior research on teleworking during the COVID-19 epidemic shows that employees' wellbeing and performance are shaped not only by job demands and resources, but also by how individuals psychologically experience and respond to these conditions (Galanti et al, 2021). Although the research in this area mainly adopts a situational perspective, it highlights the need to incorporate individual-level psychological mechanisms to better explain adaptive responses to challenging work environments. Based on this logic, the present study extends the JD-R model by integrating CDSE and P-J Fit as person-centered constructs, so as to use a more comprehensive perspective of individual-environmental interaction to explain how Malaysian graduates deal with job mismatch in the labour market.

2.3 Review of the Prior Empirical Studies and Hypotheses Development

This section reviews previous studies related to job mismatch and the key factors discussed in this research. It looks at how job demands, job resources, P–J Fit, and CDMSE was examined in earlier research. The purpose is to understand the relationships between these variables based on existing evidence. By identifying consistent findings and gaps in the literature, this section helps to build a clearer direction for the study. Based on this review, the research hypotheses are developed to test how these factors are related to job mismatch among graduates.

2.3.1 Cognitive Workload and Person–Job Fit

Cognitive workload refers to the mental effort required to process complex information, sustain attention, and manage task demands at work (Das Chakladar et al. 2024). Empirical research have verified that excessive cognitive workload can lower individuals' sense of competence and task mastery, especially in the early stages of their careers, because they are still developing skills in specific position (Venz & Boettcher., 2021; Zeshan et al., 2025). From a person–environment fit view, when people face constant cognitive overload, they often feel that their abilities do not match their job requirements. This leads to a lower sense of P–J Fit (Kim, Schuh & Cai, 2020). Recent studies also show that high cognitive demands can affect employees' judgement of their own abilities. They may see normal performance difficulties as evidence that they are not suitable for the job, rather than as a short-term skill gap (Zeshan et al., 2025).

In addition, the effect of cognitive workload on P–J Fit can differ based on task type and career stage. Newcomers to the workplace are still learning work skills. Therefore, they may regard high cognitive requirements as a sign of their own inadequacy, rather than normal challenges at work (Venz & Boettcher, 2021). Also, tasks that require multitasking, quick decision-making, or complex information will aggravate this feeling. Employees may repeatedly encounter difficulties at work, and this can increase their feeling of not fitting the job (Kim, Schuh & Cai, 2020).

Over time, continuous high cognitive demands will affect employees' cognition of their own abilities. They may begin to think they are not suitable for their job, even if the real problem is only a temporary lack of experience or skills (Zeshan et al., 2025). This shows that cognitive workload is an important factor affecting perceived P–J Fit. This effect may occur even without considering job support or other resources.

H1a: Cognitive workload is negatively associated with P–J Fit.

2.3.2 Emotional Demands and Person–Job Fit

Emotional needs refer to the degree of work's requirements for employees' emotional control. It also includes dealing with conflict with other people as well as emotional situations at work (Madsen et al., 2022). Prior research found that high emotional demands often lead to greater stress. They will also reduce employees' sense of their own abilities at work. This is especially common in jobs that require direct dealing

with people (Madsen et al., 2020). Early-career employees may find these demands more difficult. They often have less experience in managing emotions and setting boundaries at work.

Emotional demands can also affect P–J Fit. Employees may judge their own ability according to their ability to deal with their emotional conditions. When they feel hard in these situations, they may think their skills do not match the job (Zapf et al., 2023). This effect can be stronger for early-career employees. They may lack experience of controlling their emotions at work. They may also think that their mistakes mean they are not suitable for the job. They may not regard these problems as normal challenges (Brotheridge & Grandey, 2021). Over time, constant emotional demands can make employees feel that their skills do not match their job. This can lower their job satisfaction and dedication to the job.

H1b: Emotional demands are negatively associated with P–J Fit.

2.3.3 Cognitive Workload and Job mismatch

Past studies have shown that high cognitive workload increases role pressure and performance difficulty. This effect is more significant for early-career employees because they are still learning how to handle complex job tasks (Latumahina et al., 2026). When cognitive demands are higher than an individual's ability to bear, it is often difficult for employees to meet their job expectations. This increases the chance that they feel their skills do not match their job requirements (Venz & Boettcher,

2021).

Research on graduate employment and overqualification also shows a similar pattern. High cognitive demands can make people more aware of the gap between what they learned in school and what their job requires (Erdogan & Bauer, 2021). Graduates who face constant cognitive overload may regard recurring task problems as a sign of greater mismatch. They may think the job is not suitable for them, instead of treating it as a normal learning process (Wei & Yew, 2024).

Recent JD-R study also shows that high cognitive demands can change people's perception of their own abilities. Employees may think their performance problems mean they do not fit the job well (Zeshan et al., 2025). Based on these empirical findings, the following hypothesis is proposed:

H2a: Cognitive workload is positively associated with job mismatch.

2.3.4 Emotional demands and Job mismatch

Many studies show that high emotional demands increase psychological stress and emotional exhaustion. These effects will reduce employees' sense of effectiveness at work and make it more difficult for them to adapt to work (Madsen et al., 2020). This impact is often stronger for early-career employees because they have less experience dealing with emotional problems at work.

From the perspective of job mismatch, long-term emotional stress can make employees doubt whether they are qualified for their job. Research shows that when emotional demands are high, employees may see emotional fatigue as a sign that their abilities do not match job expectations. Recent JD-R studies also show that when emotional demands are not balanced by enough job resources, employees are more likely to feel that their job does not match their skills and expectations (Zeshan et al., 2025). Accordingly, the following hypothesis is formulated:

H2b: Emotional demands are positively associated with job mismatch.

2.3.5 Supervisor Support and Person–Job Fit

Supervisor support refers to how employees see their direct supervisors helping them at work. This includes giving guidance, feedback, emotional support, and practical help to complete tasks (Malik et al., 2020). Studies based on the JD-R model show that supervisor support is an important job resource. It can reduce the negative effects of job demands. It also helps employees build more positive views of their own abilities at work. Recent research shows that when supervisors give support, employees feel more confident in their tasks. They also understand their roles more clearly. This helps them feel that their skills match their job requirements (Malik, Baig, & Manzoor, 2023).

For early-career employees and graduates, supervisor support is very important for P–

J Fit. New employees usually have less experience and less knowledge about how the organization works. In this case, supervisors play a key role in helping them learn and adjust. Research shows that when supervisors give helpful feedback and support, employees are more likely to see challenges as learning chances. They are less likely to see problems as signs that they do not fit the job (Venz & Boettcher, 2021). Conversely, insufficient supervisory support may amplify uncertainty and self-doubt, leading graduates to perceive greater misalignment between their abilities and job demands. Based on these empirical findings, the following hypothesis is proposed:

H3a: Supervisor support is positively associated with P–J Fit.

2.3.6 Autonomy and Person–Job Fit

Autonomy involves the degree to which employees have discretion and control over scheduling, organising, and executing their work tasks (Yagil et al, 2021). Prior empirical studies have consistently demonstrated that autonomy is a central job resource that enables employees to adjust task strategies in line with their strengths and preferences. Within the JD-R framework, autonomy has been shown to enhance employees' sense of competence and control, thereby strengthening positive appraisals of their alignment with job roles (Kim et al., 2020).

Recent research further shows that autonomy is especially important for early-career employees because it allows them to fill skill gaps by trying different task completion methods (Zychová et al, 2023). When employees are granted autonomy, they can better shape their roles according to their own abilities, thus improving perceived P–J

Fit. Conversely, low autonomy constrains such adaptive behaviours and may aggravate the sense of mismatch, especially in cognitively demanding roles (Zeshan et al., 2025). Accordingly, the following hypothesis is formulated:

H3b: Autonomy is positively associated with P–J Fit.

2.3.7 Career Decision-Making Self-Efficacy (CDMSE) and Person Job Fit

Previous empirical studies have consistently demonstrated that individuals with higher levels of CDMSE are more capable of making informed and confident career-related choices. Meta-analytic evidence indicates that CDMSE is positively associated with proactive career behaviours, including career exploration, goal clarity, and self-reflection, which help to better match individual abilities and professional roles (Wang et al., 2023). These behaviours help individuals understand job requirements more clearly. They also help them choose or adjust to jobs that better match their skills and expectations.

Recent studies on early-career employees show that CDMSE plays an important role in P–J Fit. Graduates with higher CDMSE are more likely to treat work challenges as controllable and conducive to their own growth. They are less likely to see these challenges as signs of not fitting the job. In contrast, people with lower CDMSE often feel more unsure when they face job demands. This can make them doubt their fit, even when there is a good match between their skills and the job (Kim et al., 2020; Liu, 2025). These findings show that CDMSE is an important personal resource. It helps individuals see a better match between their abilities and job requirements.

Based on these empirical findings, the following hypothesis is proposed:

H4: CDMSE is positively associated with P–J Fit

2.3.8 Person Job Fit and Job Mismatch

Many studies have shown that P–J Fit is an important psychological factor. It helps explain how employees understand their work experience. Longitudinal study shows that changes in perceived fit affect how employees judge the match between their skills and job requirements over time. When people feel a low level of fit, they are more likely to see task problems, unmet expectations, and performance issues as signs of a mismatch (Kim et al., 2020).

Recent study on graduates' employment also supports this idea. Research on overqualification and skill mismatch shows that low perceived P–J Fit is associated with a stronger perception of gaps between education, skills, and actual job tasks (Wei & Yew, 2024). The characteristics of the work itself will not directly lead to mismatch. Instead, people's own views of fit shape how they judge their job. This evidence shows that P–J Fit plays a key role in shaping perceived job mismatch. Accordingly, the following hypothesis is advanced:

H5: P–J Fit is negatively associated with job mismatch.

2.4 Conceptual Framework

This study presents a conceptual framework (Figure 1) to examine factors that affect

job mismatch among Malaysian graduates. The framework is based on the JD-R model. This model groups job factors into job demands and job resources. These factors affect employees' work experience and outcomes (Bakker & Demerouti, 2023). In early careers, job demands can create strong psychological pressure. This happens because employees are still learning and adjusting to workplace expectations. In this study, cognitive workload and emotional demands are treated as main job demands. Cognitive workload means the mental effort needed to handle complex information and complete difficult tasks. Excessive cognitive workload may lead employees to perceive difficulties in meeting job requirements, thereby reducing their perception of alignment between their abilities and job tasks (Venz & Boettcher, 2021). Similarly, emotional demands require employees to regulate emotions and manage interpersonal interactions in the workplace. When emotional demands are high, employees may experience psychological strain, which can negatively affect their perceptions of competence and role fulfilment (Madsen et al., 2022).

Conversely, supervisor support and job autonomy are conceptualized as job resources that may enhance employees' ability to cope with work demands. Job resources provide employees with guidance, flexibility, and support that facilitate effective task performance and career development (Bakker & Demerouti, 2017). These resources may make employees believe that their skills and abilities match job requirements.

Building on P–J Fit theory, this study proposes that P–J Fit acts as an important mechanism linking job characteristics and perceived job mismatch. When employees feel that their abilities match their job requirements, they are less likely to feel a job mismatch (Blokker et al., 2023). CDMSE shows how confident people feel about handling career decisions and challenges. People with higher CDMSE are more likely to feel a better P–J Fit . They are also less likely to feel a job mismatch (Zeshan et al., 2025).

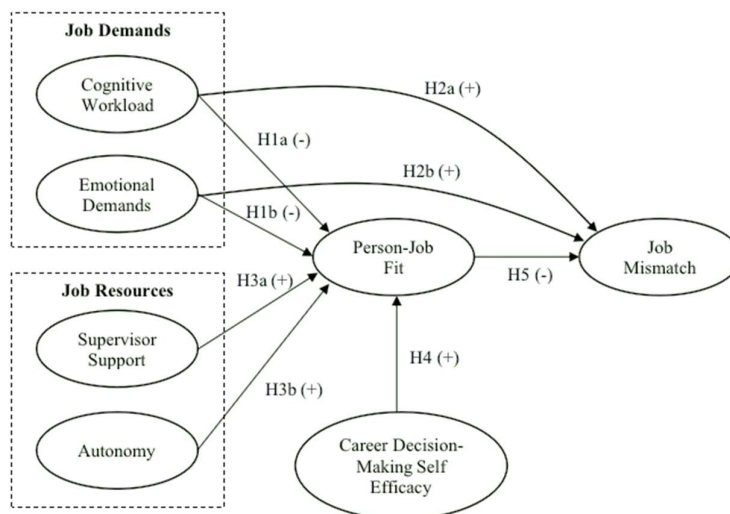


Figure 1 The research model

Figure 2.1 The research model

2.5 Summary

This chapter reviews the key theories and studies used in this research. It starts with the JD-R model. This model explains how job demands and job resources affect employee well-being and work outcomes. The chapter also explains P–J Fit theory. This theory focuses on how a person’s abilities match job requirements. It also covers

CDMSE. CDMSE shows how confident people feel when making career decisions. Subsequently, prior empirical studies examining the relationships between cognitive workload, emotional demands, supervisor support, autonomy, P–J Fit, and job mismatch were reviewed. Drawing from the theoretical arguments and empirical studies discussed in this chapter, eight research hypotheses were developed. The chapter also introduced the conceptual framework that illustrates the proposed relationships among the study variables.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter describes the research methodology used to examine the relationships proposed in the conceptual framework. It aims to explain how the study was designed and conducted in order to achieve the research objectives and test the proposed hypotheses. The chapter begins by outlining the overall research design adopted in this study. This is followed by a description of the sampling strategy and target respondents. The chapter then discusses the data collection procedures, including the development of the questionnaire and the administration of the survey. subsequently, this chapter will explain the measurement methods and data analysis techniques of the study variables. By clearly describing the research procedures and analysis methods, this chapter ensures the transparency and reliability of the research process.

3.2 Research Design

This study aims to find out the impacts of job demand (Cognitive workload, Emotional demand), job resource (Autonomy, Supervisor support), CDSE on PJF as well as job mismatch among Malaysia graduates. This study uses self-administered questionnaires to collect first-hand data. The main aim of the study was to quantitatively assess respondents' perceptions of job mismatch using a Likert scale. the questionnaire survey was appropriate, because it can not only generate reliable data that accurately represents the current situation but also collect a large volume of data within a limited time and at a lower cost (Bihu, 2021).

As noted by Saunders et al. (2023), a cross-sectional study is a research method where the researchers evaluates the outcome and exposure using data gathered over a defined time frame. This approach is often favored because it can be completed relatively quick and at a lower cost while assessing the relationships between variables. Therefore, it provides a simpler hypothesis construction method for future studies. The target respondents for this research are Malaysian graduates from public and private universities in Malaysia.

3.3 Population, Sample and Sampling Procedures

3.3.1 Population

This study targets Malaysian graduates who have obtained at least a bachelor's degree and have been employed within the past eight years (Anakor, 2025). These criteria are used as explicit selection conditions to ensure that respondents are in the early stage

of their careers, when job adjustment, perceived job mismatch, and career decision-related challenges are most prominent.

3.3.2 Sampling Size and technique

Following established guidelines for multivariate analysis and structural equation modelling (SEM), an adequate sample size is required to ensure statistical validity and model stability. Establishing a suitable sample size for SEM is critical to ensure sufficient statistical power and reliable model parameters estimation. SEM sample size planning should be informed by power analysis, as inadequate samples can limit the ability to detect true effects and provide unstable estimates (Jak et al., 2021).

Analytical power planning tools, such as *semPower*, allow researchers to perform a priori power calculations that inform sample size decisions tailored to model complexity and hypothesised effects (Moshagen & Bader, 2023). In SEM research, planned sample size targets of around 200 or more are common in practice to achieve satisfactory statistical performance, particularly when multiple latent constructs and paths are involved, and when generalisability is desired.

Considering the complexity of the proposed JD-R-based model, which includes multiple latent constructs and mediation relationships, the minimum sample size was determined following established PLS-SEM sample size guidelines. Specifically, an a priori statistical power analysis was performed using *G*Power* 3.1 to confirm that the

study had adequate power to detect meaningful effects within the structural model (Hair et al, 2022)

Following the guidance of Hair et al. (2022), the power analysis focused on the largest number of predictors affecting any single endogenous variable. A medium effect size ($f^2 = 0.15$) was assumed, with the significance level set at 0.05 and statistical power at 0.80. Based on this, at least 150 respondents are required for the survey. However, this study includes several mediation paths and uses PLS-SEM. Because of this, a larger sample size is needed. A bigger sample helps produce more stable results and more reliable bootstrapping. Past studies suggest at least 300 samples for PLS-SEM models with complex paths and indirect effects (Hair et al., 2022; Sarstedt et al., 2021). So, this study aims to collect at least 300 valid responses. The target is up to 350 responses. This allows for data cleaning, missing values, and possible data loss during analysis.

The study also considers different sampling methods, including probability sampling and non-probability sampling. The first consideration is the quota sampling. This method helps ensure that certain groups, such as gender or industry, are properly represented. However, quota sampling requires accurate population data to set correct quotas (Simkus, 2023). In Malaysia, there is no complete and updated data on graduates' job mismatch and CDMSE. Because of this, quota sampling is not suitable

and may lead to unclear or biased results.

Stratified sampling was also considered. This method improves representation by dividing the population into groups that share similar characteristics. However, it requires a clear sampling frame and group categories (Zrineh et al., 2026). In this study, the target group includes graduates with different jobs, career stages, and work conditions. There is no complete list of this population. Also, grouping people by simple factors may not capture key ideas in this study, such as P–J Fit and job mismatch.

Because of these limits, this study uses purposive sampling. This method allows the researcher to choose people who have relevant work experience. These participants can give meaningful views about their job demands, P–J Fit, and CDMSE. This method is suitable for studies that focus on personal views and psychological factors. In this case, choosing the right participants is more important than full representation (Jeffri & Abdul Rahim, 2023). So, participants are selected based on their work experience and their ability to reflect on their job and career.

3.4 Data Collection Procedure

3.4.1 Primary data

Primary data means information collected directly for a specific study (Ajayi, 2023).

In this study, the researcher collected primary data using a survey questionnaire given

to the participants.

3.4.2 Pre-Test

It is recommended that a small number of participants in the target population be pre-tested for the draft questionnaire before the formal implementation of the questionnaire. This Pre-testing will check the ambiguity in the questionnaire and improve the clarity of the questions (Hashim et al, 2022). Cognitive pretesting allows researchers to collect detailed feedback on their understanding of the questions in the survey, thus improving the measurement validity (Hashim et al., 2022). Before formal data collection, a pre-test was conducted to assess the clarity, relevance, and comprehensibility of the survey instrument. The questionnaire was reviewed by an expert panel consisting of three academics with expertise in human resource management, organisational psychology, and quantitative research methods, as well as two industry practitioners with professional experience in graduate employment and career development. The experts were asked to evaluate the wording, content validity, and theoretical alignment of the measurement items.

3.4.3 Pilot Test

After the pre-test, a pilot test was conducted before the formal survey to assess the reliability and preliminary validity of the measurement items. The pilot study selected 30 in-service graduates as samples, which satisfies the commonly recommended minimum sample size for pilot testing in survey-based research and PLS-SEM applications (Saunders et al., 2023).

3.4.4 Data collection

Data collection for this study adopts an online questionnaire, which is an efficient and cost-effective method for obtaining reliable data from a large sample within a limited timeframe (Bihu, 2021). This study employed a cross-sectional approach, gathering data at one specific time point. The approach is appropriate for exploring associations between variables and capturing participants' perceptions within a specific temporal context without requiring follow-up data collection (Saunders et al., 2023). Cross-sectional studies are often used to study the link between workplace factors and psychological responses. Researchers use this design when they want to understand current patterns, not changes over time (Wang & Cheng, 2020).

Compared to longitudinal studies, cross-sectional studies are faster, cheaper and has a lower withdrawal rate of participants.. Longitudinal studies are better for studying changes and cause-and-effect over time. However, they need repeated data collection. This is difficult for early-career graduates because they may change jobs or locations, and this creates time, cost, and dropout issues (Wang & Cheng, 2020).

In this study, the researcher collected data using an online survey. The survey was created with Google Forms. This method helped reach respondents in different locations in a simple and organized way. This platform was selected because it is easy to access, compatible with multiple devices, and suitable for self-administered surveys

(Bryman, 2021). The survey link was shared through several online platforms. These platforms include graduate social media groups on Facebook, Rednote, and WhatsApp. These platforms helped spread the survey quickly among early-career graduates. They also helped increase visibility within relevant social and professional networks (Zindel, 2023).

The data collection was conducted from 21st February to 6th, March. This time frame is similar to the study that shows that online surveys can get enough responses in a short time when the target group is clear and easy to reach online (Saunders et al., 2023). During this period, reminder messages were posted regularly on the same platforms. These reminders helped increase participation and improve response rates. Participation was voluntary. All respondents used the same survey link, which helped keep the data collection process consistent. The use of multiple online distribution platforms within a concentrated data collection period enabled efficient coverage of graduates employed across diverse organisational and regional contexts.

3.5 Variables and Measurement

Table 3.1 Variables

Variables	Definition	Sources
Cognitive Workload	Cognitive workload refers to individual's mental resources in certain situations.	Das Chakladar et al. (2024).
Emotional demands	Emotional demands at work refer to the extent to which a job requires continuous emotional regulation,	Madsen et al. (2022)

	particularly when dealing with emotionally demanding interactions, clients, or situations that may elicit stress, empathy, or emotional suppression.	
Supervisor support	Perceived supervisor support reflects employees' beliefs that their supervisors acknowledge their efforts, show concern for their welfare, and provide necessary support to facilitate effective job performance.	Malik et al. (2020)
Autonomy	Autonomy pertains to the extent of discretion available to workers, specifically regarding their ability to operate with independence and customize their workflows according to their own preferred techniques and decision-making processes.	Yagil et al. (2021)
Person-job fit	P-J Fit refers to the extent to which an employee's skills, knowledge, and abilities align with the demands and requirements of the job, reflecting the perceived compatibility between the individual and the work role, with higher fit supporting more favourable work outcomes.	Kim et al. (2020)
Job mismatch	Job mismatch reflects a misalignment between employees' skills and job requirements, often caused by poor managerial competence, resulting in over skilling, underutilization of talent, and reduced employee satisfaction.	Kohnová et al. (2020)
CDMSE Including: (Self Appraisal Occupational Information Goal Selection	CDMSE refers to individuals' beliefs in their ability to effectively engage in tasks required for making informed career decisions, such as self-evaluation, information seeking, goal setting, and planning	Liu, Z. (2025)

Planning Problem Solving)		
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Table 3.1 Variables Continued

Table 3.2 Measurement Items

Variables	List of items	Number of items	Sources
Cognitive Workload	-The content of this work was very complex. -The problems covered in this work were very complex. -In this work, very complex terms were mentioned. -I invested a very high mental effort in the complexity of this work. -The explanations and instructions in this work were very unclear. -The explanations and instructions in this work were full of unclear language. -The explanations and instructions in this work were, in terms of learning, very ineffective. -I invested a very high mental effort in unclear, ineffective explanations and instructions in this work.	8	Das Chakladar et al. (2024)
Emotional demands	-My work is emotionally demanding. -In my work, I am confronted with things that personally touch me. -I face emotionally charged situations in my work.	6	Madsen et al. (2022)

	-In my work, I deal with clients who incessantly complain, although I always do everything to help them. -In my work, I have to deal with demanding clients. -I have to deal with clients who do not treat me with the appropriate respect and politeness.		
Supervisor support	-My supervisor cares about my opinions. -My supervisor really cares about my well-being. -My supervisor shows very little concern for me (reverse worded). -My supervisor strongly considers my goals and values.	4	Malik et al. (2021)
Autonomy	-The job allows me to make my own decisions about how to schedule my work. -The job allows me to decide on the order in which things are done on the job. -The job allows me to plan how I do my work. -The job gives me a chance to use my personal initiative or judgement in carrying out the work. -The job allows me to make a lot of decisions on my own. -The job provides me with significant autonomy in making decisions. -The job allows me to make decisions about what methods I use to complete my work. -The job gives me considerable opportunity for independence and	9	Yagil et al. (2021)

	freedom in how I do the work. -The job allows me to decide on my own how to go about doing my work.		
Person-job fit	-My values match or fit the values of my job. -I am able to maintain my values in my job. -My personal values allow me to integrate into my job because they are in line with its values. -My view of work culture corresponds to the work culture of my job.	4	Kim et al.(2020)
Job mismatch	-I have a genuine education and knowledge for the current job. -My current job is relevant to my areas/discipline of education. -I have job-specific skills, which are relevant to the current job. -I have the necessary skills, which are relevant to the current job. -I have portable skills, which are relevant to the current job.	5	Kohnová et al. (2020)
Occupational Information	-I am able to make a career decision and then not worry if it was right or wrong. -I am able to figure out what I am or am not ready to sacrifice for my career goals. -I am able to find out employment trends for an occupation over the next 10 years. -I am able to prepare a good resume. -I am able to successfully manage the job interview process.	5	Liu, Z. (2025)
Goal	-I am able to make a plan for my goals	5	Liu, Z. (2025)

Selection	for the next 5 years. -I am able to accurately assess my abilities. -I am able to determine the steps I need to successfully complete my chosen majors. -I am able to identify employers relevant to my career possibilities. -I am able to persistently work at my major or career goal even when I get frustrated.		
Planning	-I am able to choose a major or career that will fit my interests. -I am able to select one occupation from a list of potential occupations I am considering. -I am able to find the average yearly earnings of people in an occupation. -I am able to determine what my ideal job would be. -I am able to choose a career that will fit my preferred lifestyle.	5	Liu, Z. (2025)
Problem Solving	-I am able to select one major from a list I am considering. -PS: I am able to determine the kind of information about occupations that interests me. -PS: I am able to use the Internet to find information about occupations that interest me. -PS: I am able to talk with a person already employed in a field I am interested in. -PS: I am able to decide what I value most in an occupation.	5	Liu, Z. (2025)

Self Appraisal	-I am able to change majors if I did not like my first choice -I am able to change occupations if I am not satisfied with the one I entered. -I am able to identify some majors or career alternatives if I am unable to get my first choice. -I am able to find information about graduate or professional schools.able to find information about graduate or professional schools. -I am able to determine steps to take if I am having academic trouble with my major.	5	Liu, Z. (2025)

Table 3.2 Measurement Items Continued

Table 3.3 Variables Measurements

	Variables	Measurements	Scale of measurements
Demographic profile	Age	Ordinal	-
	Years of Work Experience	Ordinal	-
	Highest Level of Education	Ordinal	-
	Current Employment Status	Ordinal	-
	Gender	Nominal	-
	Field of Study	Ordinal	-
	Job field	Ordinal	-
Independent Variables	Cognitive Workload	Interval	Seven-point Likert Scale
	Emotional demands	Interval	Seven-point Likert Scale
	Supervisor support	Interval	Seven-point Likert Scale
	Autonomy	Interval	Seven-point Likert Scale
	CDSE	Interval	Seven-point Likert Scale
Dependent Variables	Job mismatch	Interval	Seven-point Likert Scale
Moderator	Person-job fit	Interval	Seven-point Likert Scale

3.6 Data Analysis Technique

3.6.1 Descriptive Statistics of the Sample and Study Variables

Descriptive analysis was conducted to summarise the demographic characteristics of the respondents and to provide an initial overview of the key study variables in

accordance with the JD-R framework. Descriptive statistics facilitate the organisation and interpretation of data prior to multivariate analysis (Siregar, 2025). In this study, frequency and percentage distributions were used to describe respondents' demographic and employment-related characteristics, including gender, age group, education level, employment status, working experience, industry sector, and geographical location. These categorical variables gave basic background information about the graduate sample.

For the main JD-R variables, the study calculated descriptive statistics for job demands and job resources separately. The study calculated mean and standard deviation for each part. This helped show the average level and the distribution of responses. The study also calculated descriptive statistics for P-J Fit, CDMSE, and job mismatch. These results give a basic understanding of how graduates view their work and their own psychological experience. These analyses provided a foundation for subsequent measurement model assessment and structural model analysis using PLS-SEM.

3.6.2 Inferential analysis

3.6.2.1 Reliability test

To ensure that the measurement instruments consistently and accurately capture the constructs of interest, internal consistency reliability was assessed using Cronbach's alpha (α), Composite Reliability (CR), and rho_A, in line with best practices for PLS-SEM analysis (Hair et al, 2022). Reliability assessment is a critical prerequisite

for subsequent measurement and structural model evaluation, as unreliable measures may lead to biased or misleading results (Noor & Fuzi, 2025). Cronbach's alpha was first examined to evaluate the degree of interrelatedness among measurement items. Values of 0.70 or higher were considered indicative of acceptable internal consistency. However, as Cronbach's alpha assumes tau-equivalence and may underestimate reliability in PLS-SEM contexts, Composite Reliability (CR) was also assessed. CR accounts for differing indicator loadings and is regarded as a more appropriate reliability measure for latent constructs estimated using PLS-SEM (Hair et al., 2022). CR values exceeding 0.70 were deemed satisfactory.

In addition, rho_A is used as an updated and more robust measure, as it falls between Cronbach's alpha and Composite Reliability. Rho_A provides a consistent estimate of construct reliability and has been recommended as a robust indicator of internal consistency in variance-based structural equation modelling, particularly in PLS-SEM applications (Hair et al., 2022). Collectively, the use of these three reliability measures ensures a comprehensive and rigorous assessment of internal consistency reliability prior to further analysis.

3.6.2.2 Normality test

Assessing normality is a key assumption for many parametric inferential statistics, including linear regression and correlation analysis. Normality tests determine whether the distribution of the variables (or residuals in regression models)

approximates a normal distribution. Parametric methods such as Pearson correlation and ordinary least squares regression assume normality of errors for valid significance testing and confidence interval estimation. The Shapiro–Wilk and Kolmogorov–Smirnov tests are often used to check whether data are normally distributed. If the results are not significant ($p > 0.05$), it means the data do not differ much from a normal distribution (Noor & Fuzi, 2025).

3.6.2.3 Discriminant Validity And Convergent Validity

Discriminant validity was checked to make sure that each latent construct in the measurement model is clearly different from the others. Following common practice in PLS-SEM, both the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio (HTMT) were used for this purpose (Rasoolimanesh, 2022).

The Fornell–Larcker criterion assesses discriminant validity by contrasting the square root of each construct's AVE with its inter-construct correlations. Discriminant validity is supported when this square root value is higher than any of the construct's correlations with others, showing that it is more strongly related to its own indicators than to other latent variables (Hair et al., 2022). In addition, the HTMT ratio was examined to test discriminant validity. It compares the relationship between different constructs with the relationship within the same construct. This helps show if the constructs are clearly different from each other. Based on common guidelines, HTMT values below 0.85 are acceptable. For closely related constructs, values below 0.90

are also acceptable (Rasoolimanesh, 2022).

The combined use of the Fornell-Larcker criterion and HTMT offers a comprehensive assessment of discriminant validity in variance-based structural equation modelling and ensures the robustness of the measurement model prior to structural model evaluation.

Convergent validity refers to the degree to which different items designed to measure the same construct actually consistent with each other. In fact, it ensures that all indicators used for a specific variable can effectively capture the same concept. To establish convergent validity in this study, two main criteria were assessed. First, the outer loadings of each indicator were examined, requiring a threshold of 0.708 or higher to ensure that the variable can interpret a significant portion of the item's variance.

Second, the Average Variance Extracted (AVE) for each construct is calculated. An AVE value of 0.50 or higher is necessary, as this indicates that the construct explains at least half of the variance of its indicators on average. When both the individual loadings and the overall AVE meet these standards, it confirms that the items are sufficiently related and that the measurement model is reliable.

3.6.2.4 Assessing the Common Method Bias

To ensure the validity of the findings, the potential presence of common method bias (CMB) should be assessed, as all data were collected through self-administered questionnaires from a single source. CMB can occur when the variation in the data comes from measurement method rather than the constructs being studied, which may exaggerate relationships between variables (Hair et al., 2022). According to the latest methodological recommendations of PLS-SEM, the full collinearity variance inflation factor (VIF) approach was employed to assess common method bias (Hair et al, 2022). This approach examines collinearity among all latent constructs simultaneously by regressing each construct on all other constructs in the model.

3.6.2.5 Partial Least Squares Structural Equation Modeling using SmartPLS

This study adopts Partial Least Squares Structural Equation Modeling (PLS-SEM) and use SmartPLS 4 Software for analysis. This method helps test relationships between multiple implicit variables in one model. PLS-SEM was chosen instead of covariance-based SEM. This is because it works well for prediction studies and can handle complex models with medium sample sizes (Becker et al., 2023). PLS-SEM is suitable for complex models with many predictors and mediating paths. It can also handle measurement error and does not need strict data distribution (Becker et al., 2023). Unlike multiple linear regression, which exams observed variables, PLS-SEM can test latent variables measured by several indicators. This gives more accurate results.

3.6.2.6 Assessment on Structural Model

In this study, the structural model was tested using path coefficients, significance levels from bootstrapping, and R^2 values. These measures show how strong the relationships are and how well the model explains the data. The study also checked effect sizes f^2 . This shows degree of contribution of each independent variable to the dependent variable. SmartPLS 4 is used for analysis because it supports advanced PLS-SEM procedures. These include bootstrapping, collinearity checks, and model testing based on current guidelines. This helps make the analysis more accurate and complete (Becker et al., 2023).

3.7 Summary

This chapter outlines the analytical technique employed herein. First of all, It describes the research design. It also explains why the research applies a measurable design to test the relationships across constructs. The chapter then explains the sampling method and how the data were collected from the respondents. It also describes how each variable was measured. Finally, the chapter explains the methods used to verify the consistency and accuracy of the measurement instruments.

CHAPTER 4: RESULTS

4.1 Introduction

The outcomes of the data analysis are reported in this chapter. First of all, It describes the background of the respondents. Then, it tests the reliability and validity of the measurement item. After that, the chapter presents the main results of the research and tests the hypotheses. The analysis is done using PLS-SEM, and the results cover how strong and significant the links between variables are. This chapter helps answer the research questions and shows whether the data confirm the proposed model..

4.2 Research Ethics

Research ethics are important in this study because it involves human participants. The study follows basic ethical principles such as honesty, transparency, and avoiding harm or misleading information (Morris, 2015). This study strictly abides by the ethical guidelines formulated by UTAR university. Before filling out questionnaire, respondents have received an explanation regarding the research objectives and how their data will be used. Participation is entirely optional, and respondents are free to discontinue at any point. Informed consent is obtained through the online form. respondents need to check the consent box before continuing with the survey. In addition, a confidentiality and data privacy notice is issued in compliance with the Personal Data Protection Act 2010 (PDPA). All responses were kept anonymous, and the data is used only for academic purposes.

4.3 Pilot Study – Measurement Model Assessment

The pilot study was conducted using 30 valid responses who are early-career graduates. In terms of age, 5 respondents fell into 21–22 age bracket, 10 were in the

23–24 age, 7 were aged 25–26 bracket, 4 were aged 27–28, and 4 were aged 29–30. Regarding working experience, the majority reported less than one year (11 respondents), followed by 3–4 years (9 respondents). In addition, 4 respondents have been working for 1–2 years, 4 had 5–6 years, and 2 had 7–8 years of involvement. With regard to education level, 17 respondents possessed a bachelor's degree, while 13 held a master's degree. Regarding employment status, the majority were working full-time (22 respondents), followed by part-time workers (6 respondents). Only 1 respondent was working on a contract basis and 1 was self-employed. To check how dependable and accurate the measurement instruments were, the measurement model was tested in SmartPLS 4 based on internal consistency reliability and convergent validity standards.

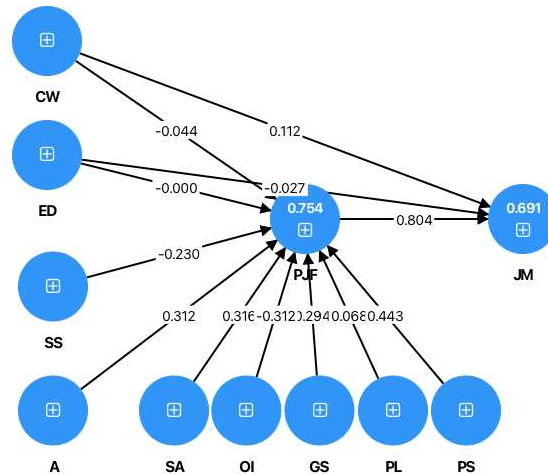


Figure 4.1 measurement model of pilot test

4.3.1 Indicator Reliability (Outer Loadings)

According to the established criteria by Hair et al. (2022), the outer loading for each indicator should ideally exceed 0.7, as this ensures that the latent construct accounts

for more than 50% of the indicator's variance, thereby confirming the statistical reliability of the measurement items. In this study, CDMSE is operationalized as a five-dimension second-order construct consisting of Occupational Information (OI), Goal Selection (GS), Planning (PL), Problem Solving (PS), Self-Appraisal (SA). The results of the pilot test, as summarized in the Appendix 1, demonstrate robust indicator reliability across the majority of the constructs. the loading for SS3 (0.686) was slightly below the ideal threshold. However, since this value remains well above the acceptable floor of 0.40–0.50 commonly cited in exploratory research, and its inclusion did not compromise the overall construct validity, it was retained for further analysis.

Table 4.1 Constructs, Items, and Factor Loadings

Construct	Item	Loading	Construct	Item	Loading
A (9 items)	A1–A9	0.879 – 0.944	PJF (4 items)	PJF1–PJF4	0.887 – 0.910
CW (8 items)	CW1–CW8	0.782 – 0.921	PL (4 items)	PL1–PL4	0.923 – 0.962
ED (8 items)	ED1–ED8	0.780 – 0.907	PS (4 items)	PS1–PS4	0.872 – 0.923
GS (4 items)	GS1–GS4	0.886 – 0.916	SA (4 items)	SA1–SA4	0.925 – 0.949
JM (4 items)	JM1–JM4	0.913 – 0.932	SS (4 items)	SS1–SS4	0.686 – 0.919
OI (4 items)	OI1–OI4	0.902 – 0.923			

Note:

A = Autonomy; CW = Cognitive Workload; ED = Emotional Demands; GS = Goal Selection; JM = Job Mismatch; OI = Occupational Information; PJF = Person–Job Fit; PL = Planning; PS = Problem Solving; SA = Self Appraisal; SS = Supervisor Support.

4.3.2 Internal Consistency Reliability

Cronbach's alpha, composite reliability (rho_c), and rho_A were used to assess internal consistency. Table 4.2 indicates that all constructs exhibited strong reliability, with Cronbach's alpha coefficients ranging from 0.837 to 0.977. All values were above the recommended level of 0.70. Composite reliability (rho_c) values were between 0.893 and 0.980. Rho_A values were between 0.847 and 1.000. All these values were also above 0.70. This shows good internal consistency. Some constructs had values above 0.95, such as A, PL, and SA. These high values are still acceptable at the pilot stage. They show that the items are highly consistent with each other.

Table 4.2_Cronbach's alpha, Cronbach's alpha, composite reliability (rho_c), and AVE

Construct	Cronbach's Alpha	Composite Reliability (pa)	Composite Reliability (pc)	Average Variance Extracted (AVE)
A	0.977	0.980	0.980	0.842
CW	0.948	0.991	0.954	0.723
ED	0.946	1.000	0.956	0.785
GS	0.949	0.950	0.961	0.831
JM	0.934	0.940	0.950	0.792
OI	0.945	0.954	0.958	0.820
PJF	0.921	0.921	0.944	0.808
PL	0.956	0.957	0.966	0.850
PS	0.924	0.930	0.943	0.767
SA	0.964	0.971	0.972	0.873
SS	0.837	0.847	0.893	0.678

Note:

A = Autonomy; CW = Cognitive Workload; ED = Emotional Demands; GS = Goal Selection; JM = Job Mismatch; OI = Occupational Information; PJF = Person–Job Fit; PL = Planning; PS = Problem Solving; SA = Self Appraisal; SS = Supervisor Support.

4.3.3 Convergent Validity

The average variance extracted (AVE) was used to assess convergent validity, producing values from 0.678 to 0.873. All indicators surpassed the recommended threshold of 0.50, meaning each construct explains over half of the variance in its respective items—evidence of strong convergent validity.

4.3.4 Discriminant Validity (HTMT)

Most pairs of constructs had HTMT values below 0.85. For example, the value between Job Mismatch (JM) and Cognitive Workload (CW) was 0.279. The value between JM and Emotional Demands (ED) was 0.290. These results show good discriminant validity for these constructs. However, some pairs had HTMT values above 0.90. The value between OI and GS was 0.946. The correlation coefficient between OI and SA is 0.942. The correlation coefficient between PL and GS is 0.930. These high values show that these concepts are closely related. In the JD-R model, OI, GS and SA are often regarded as part of organisational resources. Therefore, it is expected that there will be a high correlation between them, because they all reflect the support from the working environment. Even if these correlation coefficients are very high, in general, the pilot test results still show that there are sufficient differences between these concepts, and it is worth further analysis (Hair et al., 2022).

Table 4.3 Discriminant Validity (HTMT)

	A	CW	ED	GS	JM	OI	PJF	PL	PS	SA	SS
A											
CW	0.445										
ED	0.440	0.855									
GS	0.811	0.345	0.394								
JM	0.665	0.279	0.290	0.708							
OI	0.859	0.436	0.487	0.946	0.732						

PJF	0.774	0.262	0.271	0.859	0.884	0.786				
PL	0.838	0.347	0.357	0.930	0.796	0.919	0.834			
PS	0.765	0.293	0.271	0.864	0.702	0.870	0.854	0.888		
SA	0.908	0.467	0.509	0.907	0.667	0.942	0.805	0.877	0.787	
SS	0.867	0.439	0.429	0.658	0.454	0.736	0.572	0.711	0.683	0.804

Note:

A = Autonomy; CW = Cognitive Workload; ED = Emotional Demands; GS = Goal Selection; JM = Job Mismatch; OI = Occupational Information; PJF = Person–Job Fit; PL = Planning; PS = Problem Solving; SA = Self Appraisal; SS = Supervisor Support.

4.3.5 Summary of Pilot Test

In conclusion, the pilot test results show good internal consistency and indicator reliability. Most items performed well in the analysis. Only one item, SS3, showed a small issue. Overall, all 60 items showed strong results. This means the survey is stable and easy for respondents to understand. It is suitable for full data collection and later SEM analysis.

4.4 Data Collection

4.4.1 Respondent Demographic Profile

This study collected data from 350 participants to test the proposed research model. Table 1 presents the demographic profile of the respondents in detail. The sample includes key information such as gender, age, work experience, education level, employment type, academic major, and work sector. The age distribution mainly reflects early-career professionals.

Respondents come from different education levels, ranging from bachelor's degrees to doctoral-level qualifications. Their academic majors also vary, including

management, psychology, education, and information technology. Respondents are at different career stages. Some are in entry-level positions, while others have more work experience. They are also employed under different arrangements, such as full-time, part-time, and contract work. This diversity in the sample provides a strong basis for the study. It helps ensure that the findings are relevant and can apply to different professional and educational contexts.

Table 4.4 Respondent Demographic Profile, Major Distribution, and Industry Field (N = 350)

Demographics	Category	Frequency	Percentage (%)
Job Field		Frequency	Percentage (%)
Gender	Male	103	29.4
Business & Management		110	31.4
	Female	247	70.6
Computer Science / AI / IT		37	10.6
Age	21–22	78	22.3
Economics & Finance		26	7.4
	23–24	93	26.6
Education		24	6.9
	25–26	22	6.3
Engineering & Technology		70	20.0
Communication & Media Studies		19	5.4
	27–28	47	13.4
Medicine & Health Sciences		13	3.7
	29–30	62	17.7
Law		11	3.1
Working Experience	Less than 1 year	120	34.3
Arts & Humanities		10	2.9
	1–2 years	96	27.4
	3–4 years	73	20.9
	5–6 years	43	12.3
	7–8 years	18	5.1
Highest Education	Bachelor Degree	321	91.7
	Master Degree	25	7.1
	PhD / Doctoral	4	1.1
Employment Type	Full-time	221	63.1
	Part-time	95	27.1
	Contract	22	6.3
	Self-employed	12	3.4

Social Sciences	7	2.0
Psychology	7	2.0
Public Administration	7	2.0
Others	57	16.3
Major	Frequency	Percentage (%)
Business & Management	87	24.9
Computer Science / AI / IT	32	9.1
Engineering & Technology	29	8.3
Economics & Finance	27	7.7
Psychology	25	7.1
Communication & Media Studies	19	5.4
Arts & Humanities	16	4.6
Social Sciences	16	4.6
Natural Sciences	14	4.0
Medicine & Health Sciences	14	4.0
Law	11	3.1
Education	11	3.1
Others	49	14.0

4.4.2 Response Rate

The study gathered data through an online survey, obtaining 350 valid responses that were utilized for analysis. Only respondents who met the screening criteria (i.e., early-career graduates with relevant working experience) were allowed to proceed with the survey.

4.4.3 Data Preparation and Cleansing

During the data collection process, responses that did not meet the screening criteria were excluded at the initial stage. This ensured that only relevant and qualified respondents were included in the final dataset. therefore, 350 usable responses were saved for further analysis.

4.4.4 Data Verification And Missing Data

The dataset was carefully reviewed to ensure accuracy and consistency before analysis. All responses were checked for completeness and logical consistency. Since the questionnaire was designed with required fields, incomplete responses were minimized. There were no missing data issues in this study, as the online survey required respondents to complete all items before submission. Therefore, all 350 responses were complete and suitable for analysis.

4.4.5 Outliers

The dataset was screened for potential outliers to ensure the quality of the data. No extreme or abnormal responses were identified that could significantly affect the analysis. Therefore, all responses were retained.

4.5. Measurement Model Results

4.5.1 Convergent validity

The reliability and convergent validity of the measurement model were assessed through Cronbach's alpha, composite reliability (CR), rho_A, and the average variance extracted (AVE). As shown in Table 4.5, all Cronbach's alpha values were above the threshold of 0.70, and the composite reliability values exceeded 0.70, indicating high internal consistency of the constructs. Furthermore, the average variance extracted (AVE) for all constructs was greater than 0.50, suggesting that

The latent constructs account for over half of the variance in their corresponding indicators, thus establishing convergent validity.

Table 4.5 Convergent validity of the measurement model

Construct	Cronbach's Alpha	rho_A	Composite Reliability (CR)	AVE
Autonomy	0.966	0.966	0.970	0.784
CDMSE	0.973	0.975	0.975	0.614
Cognitive Workload	0.925	0.970	0.931	0.632
Emotional Demands	0.910	0.914	0.930	0.689
Goal Selection (GS)	0.930	0.931	0.947	0.782
Job Mismatch	0.931	0.934	0.948	0.785
Occupational Information (OI)	0.884	0.889	0.916	0.685
Planning (PL)	0.925	0.926	0.943	0.769
Problem Solving (PS)	0.916	0.918	0.937	0.749
Person Job Fit	0.930	0.932	0.950	0.828
Self Appraisal (SA)	0.901	0.905	0.927	0.716
Supervisor Support	0.785	0.909	0.868	0.650

4.5.2 Discriminant Validity

The discriminant validity of the first-order constructs was evaluated using the HTMT criterion along with bootstrapped confidence intervals. While some HTMT values were found to be above the conservative threshold of 0.85, further examination of the HTMT inference results revealed that the 95% confidence intervals (2.5%–97.5%) did not include the value of 1 for any construct pair. This indicates that the constructs are empirically distinct from one another. Hence, discriminant validity is confirmed for all first-order constructs in this study.

Table 4.6 Heterotrait-monotrait ratio (HTMT) - Matrix

Construct	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Autonomy								
(2) CW	0.301							

Construct	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(3) ED	0.266	0.539						
(4) GS	0.472	0.367	0.358					
(5) JM	0.471	0.388	0.340	0.616				
(6) OI	0.459	0.425	0.374	0.925	0.633			
(7) PL	0.412	0.454	0.407	0.812	0.579	0.822		
(8) SA	0.444	0.416	0.354	0.907	0.535	0.942	0.801	

Table 4.7 HTMT Inference Test with 95% Confidence Intervals

Construct Pair	HTMT	2.5%	97.5%	Discriminant Validity
OI <-> GS	0.925	0.871	0.967	Yes
SA <-> GS	0.907	0.835	0.963	Yes
SA <-> OI	0.942	0.881	0.983	Yes
PL <-> OI	0.822	0.758	0.880	Yes
PL <-> GS	0.812	0.751	0.865	Yes
JM <-> GS	0.616	0.534	0.697	Yes
OI <-> JM	0.633	0.539	0.725	Yes

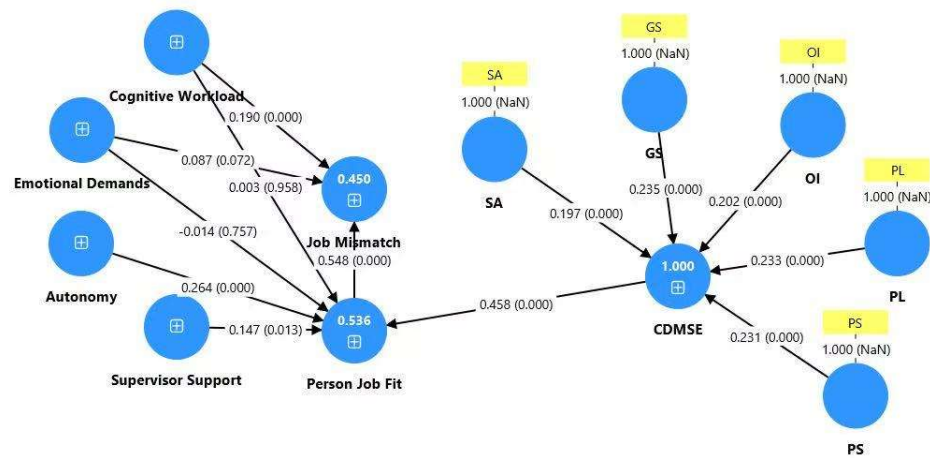


Figure 4.2 Measurement Model Results

4.5.3 Common Method Bias results

The potential for CMB and multicollinearity was evaluated using the variance

inflation factor (VIF) approach. As presented in Table 4.4, all inner VIF values for the structural model were below the conservative threshold of 3.3 (Hair et al., 2022), indicating that the structural paths are free from critical collinearity issues.

Table 4.8 Variance Inflation Factor (VIF)

Path	Inner VIF	Status
Autonomy → P-J Fit	1.640	Acceptable
CDMSE → Pe-J Fit	1.694	Acceptable
Cognitive Workload → Job Mismatch	1.395	Acceptable
Cognitive Workload → P-J Fit	1.475	Acceptable
Emotional Demands → Job Mismatch	1.337	Acceptable
Emotional Demands → P-J Fit	1.369	Acceptable
P-J Fit → Job Mismatch	1.127	Acceptable
Supervisor Support → P-J Fit	1.751	Acceptable

4.6 Structural Model Results

4.6.1 Path Coefficient

Hypothesis testing was conducted to examine the proposed relationships among job demands, job resources, CDMSE, P–J Fit, and job mismatch. The results of the structural model are presented in Figure 4.3 and Table 4.9. The explanatory power of the model was assessed using the coefficient of determination (R^2). The results indicate that the model explains 53.6% of the variance in P–J Fit ($R^2 = 0.536$) and 45.0% of the variance in job mismatch ($R^2 = 0.450$), suggesting a moderate level of predictive accuracy. With respect to the antecedents of P–J Fit the findings show that job resources play a more important role than job demands. Specifically, job autonomy ($\beta = 0.264$, $t = 4.883$, $p < 0.001$), supervisor support ($\beta = 0.147$, $t = 2.476$, $p = 0.013$), and CDMSE ($\beta = 0.458$, $t = 6.773$, $p < 0.001$) were found to have significant positive effects on P–J Fit. Therefore, H3a, H3b, and H4 are supported.

In contrast, job demands did not significantly influence P–J Fit. Cognitive workload ($\beta = 0.003$, $t = 0.053$, $p = 0.958$) and emotional demands ($\beta = -0.014$, $t = 0.310$, $p = 0.757$) showed no significant effects on PJF, indicating that H1a and H1b are not supported. Regarding job mismatch, cognitive workload was found to have a significant positive effect ($\beta = 0.190$, $t = 4.015$, $p < 0.001$), supporting H2a. However, emotional demands did not show a significant relationship with job mismatch ($\beta = 0.087$, $t = 1.802$, $p = 0.072$), and thus H2b is not supported. Interestingly, P–J Fit was found to have a significant positive relationship with job mismatch ($\beta = 0.548$, $t = 11.548$, $p < 0.001$). This finding is contrary to the proposed hypothesis, which predicted a negative relationship. Therefore, H5 is not supported.

Overall, the results suggest that job resources and personal resources are important predictors of P–J Fit, while job demands have limited influence on P–J Fit but partially contribute to job mismatch.

Table 4.9 : Path Coefficients and Hypotheses Testing

Hypo.	Relationship	β	t	p	Decision
H1a	Cognitive Workload $\rightarrow$ P–J Fit	0.003	0.053	0.958	Not Supported
H1b	Emotional Demands $\rightarrow$ P–J Fit	-0.014	0.310	0.757	Not Supported
H2a	Cognitive Workload $\rightarrow$ Job Mismatch	0.190	4.015	<0.001	Supported

H2b	Emotional Demands → Job Mismatch	0.087	1.802	0.072	Not Supported
H3a	Supervisor Support → P-J Fit	0.147	2.476	0.013	Supported
H3b	Job Autonomy → P-J Fit	0.264	4.883	<0.001	Supported
H4	CDMSE → P-J Fit	0.458	6.733	<0.001	Supported
H5	P-J Fit → Job Mismatch	0.548	11.548	<0.001	Not Supported (opposite direction)

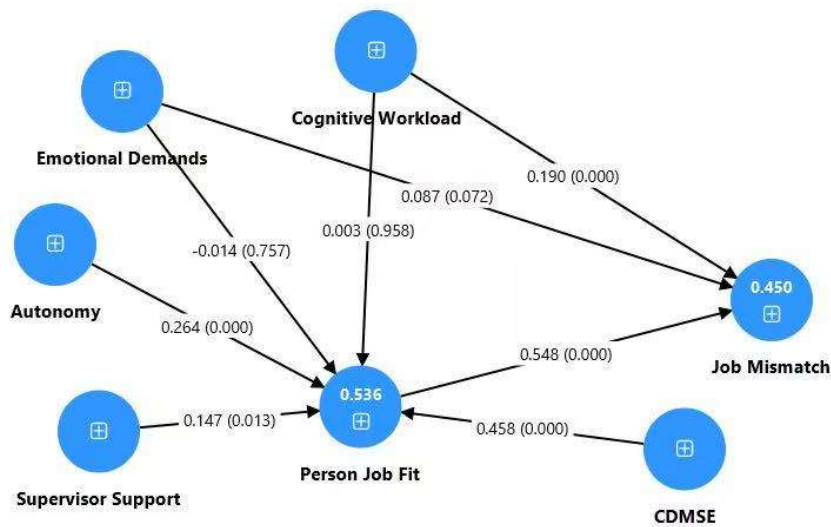


Figure 4.3 Structural Model Results

Note: p-value is displayed in parentheses

4.6.2 Coefficient of Determination (R^2), Effect Size (f^2) and Predictive Relevance (Q^2)

The R^2 value shows how much of the variance in a dependent (endogenous) variable is explained by the predictors. While R^2 is the standard measure, the Adjusted R^2 was also included to account for model complexity and ensure the results weren't inflated. According to Gamil & Abd Rahman (2023), R^2 values around 0.67 are considered substantial, 0.33 moderate, and 0.19 weak. As shown in Table 4.10, the R^2 values for

Person-Job Fit (0.536) and Job Mismatch (0.450) both fall into the moderate-to-strong range. This suggests the model does a good job of explaining the drivers behind these two factors.

Table 4.10: Coefficient of Determination

Endogenous Latent Variable	R2	R2 Adjusted	Predictive Power
Person Job Fit	0.536	0.529	Moderate
Job Mismatch	0.450	0.445	Moderate

Source: Developed for the study

While R^2 looks at the model as a whole, the f^2 effect size looks at the specific contribution of each individual path. It measures how much the R^2 would drop if a specific predictor were removed. According to Cohen's (1988) guidelines, values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects. The results in Table 4.11 show that P-J Fit has a very strong impact on Job Mismatch ($f^2 = 0.484$), marking the largest effect in the model. CDMSE showed a medium effect on P-J Fit ($f^2 = 0.267$), while Autonomy and Supervisor Support had smaller contributions. Factors like Cognitive Workload and Emotional Demands had little to no direct effect on Person-Job Fit.

Table 4.11 : f^2 Effect Size

		f2	Rating	To evaluate the model's ability to predict new data, I conducted the PLSpredict procedure
	Autonomy → P-J Fit	0.091	Small	
	CDMSE → P-J Fit	0.267	Medium	
	Cognitive Workload → Job Mismatch	0.047	Small	
	Cognitive Workload → P-J Fit	0.000	None	
	Emotional Demands → Job Mismatch	0.010	None	
	Emotional Demands → P-J Fit	0.000	None	
To	P-J Fit → Job Mismatch	0.484	Large	
data,	Supervisor Support → P-J Fit	0.027	Small	

using a 10-fold cross-validation. This is a more modern and rigorous way to check predictive power compared to the traditional blindfolding method. The predictive power was evaluated by comparing the RMSE values from the PLS-SEM model against the Linear Model (LM) benchmark. As shown in Table 4.12, the PLS-SEM_RMSE values for all indicators of P-J Fit and Job Mismatch are lower than the LM_RMSE values. According to the criteria by Hair et al. (2021), since the model

consistently generates lower prediction errors compared to the naive LM benchmark for all items, we can conclude that it demonstrates strong predictive capability.

Table 4.12 Predictive Relevance (Q^2)

Construct	Indicator	Q^2_{predict}	PLS-SEM_RMSE	LM_RMSE
Person-Job Fit	PJF1	0.599	1.015	1.602
	PJF2	0.680	0.846	1.496
	PJF3	0.694	0.799	1.446
	PJF4	0.706	0.806	1.487
	PJF5	0.649	0.836	1.412
Job Mismatch	JM1	0.569	1.085	1.652
	JM2	0.650	0.890	1.505
	JM3	0.430	1.249	1.654
	JM4	0.628	0.867	1.422

JM5	0.602	0.931	1.472
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4.6.3 Indirect Effects of Constructs

The mediating role of P–J Fit between job resources/demands and job mismatch was examined using bootstrapping procedures. The results revealed that P–J Fit significantly mediated several relationships. Specifically, autonomy had a significant indirect effect on job mismatch through PJF ($\beta = 0.144$, $t = 4.592$, $p < 0.001$). Similarly, CDMSE showed a significant indirect effect on job mismatch via PJF ($\beta = 0.251$, $t = 5.510$, $p < 0.001$). Supervisor support also had a notable indirect impact on job mismatch mediated by PJF. ($\beta = 0.081$, $t = 2.385$, $p = 0.017$). In contrast, the indirect effects of cognitive workload ($\beta = 0.001$, $t = 0.053$, $p = 0.958$) and emotional demands ($\beta = -0.008$, $t = 0.309$, $p = 0.758$) through PJF were not significant. These results suggest that person-job fit serves as a mediator between job resources (such as autonomy, CDMSE, and supervisor support) and job mismatch, but it does not mediate the impact of job demands.

Table 4.13 Summary of Indirect Effects (Mediation)

Indirect Path	Path Coefficient	SE	T-value	P-value
Autonomy → PJF → Job Mismatch	0.144	0.031	4.592	< 0.001
CDMSE → PJF → Job Mismatch	0.251	0.045	5.510	< 0.001
Supervisor Support → PJF → Job Mismatch	0.081	0.034	2.385	0.017

4.7 Summary

This chapter presented the results of the data analysis using PLS-SEM. The analysis was carried out in two main stages: the assessment of the measurement model and the evaluation of the structural model. The measurement model results showed that all constructs met the required levels of reliability and validity. This indicates that the measurement items used in this study were appropriate for assessing the key variables.

The structural model results provided mixed findings. Four hypotheses are supported, particularly those related to job resources. Autonomy, supervisor support, and CDMSE were found to have significant positive effects on P-J Fit. In addition, cognitive workload and P-J Fit showed significant connection with job mismatch.

However, four hypotheses are not supported. Cognitive workload and emotional demands did not have significant effects on P-J Fit, and there is no significant correlation between emotional demands and job mismatch. These findings suggest that not all job demands affect employees uniformly. The mediation analysis further showed that P-J Fit plays a selective role. It mediated the effects of autonomy, supervisor support, and CDMSE on job mismatch, but does not have the impact on job demands. This indicates that job resources are more likely to influence job mismatch through perceived fit, while job demands may operate through other mechanisms. Overall, the results highlight that both job characteristics and personal factors are important in understanding job mismatch, but their effects are not always consistent. The next chapter will provide a more in-depth discussion of these findings.

CHAPTER 5: DISCUSSION

5.1 Introduction

This study aims to explore the reasons for job mismatch. It focused on how company resources (like support from supervisors and work freedom) and personal resource (CDMSE) work together. By using the JD-R model and the Person-Job Fit theory, how these factors either help prevent or lead to more job mismatch is clarified. This chapter will summarize these results and discusses them. Section 5.2 focuses on the theoretical dimension and compares the findings with past studies in the field of organizational behavior and human resource management. Section 5.3 turns to practice level and shows how to apply these research results to the actual workplace. It also gives suggestions for organizations to improve person-job fit and retain employees. Section 5.4 explains the limitations of this study and puts forward the direction for more in-depth exploration. Overall, this chapter combines theory and data to give a clearer understanding of how work factors and personal factors influence employee outcomes in today's workplace.

5.2 Discussion of Findings

5.2.1 H1a: Cognitive workload and Person-Job Fit

The analysis shows that cognitive workload has no significant impact on Person-Job Fit ($f^2 = 0.000$). This finding is inconsistent with the conclusion of past research, which suggest high cognitive demands typically drain an employee's resources, leading to a perceived lack of fit (Bakker & Demerouti, 2022). However, this result may be consistent with the following view: cognitive workload is often viewed as a

"challenge stressor" rather than a "hindrance stressor." In a highly professional or technical environment, employees might see a heavy cognitive load as a normal part of the job rather than a sign of maladaptation to work. Another possible explanation is that modern employees may have developed higher cognitive resilience or better access to technological tools, thus reducing their pressure on adaptability, regardless of the workload (Bakker et al, 2023)

5.2.2 H1b: Emotional demands and Person-Job Fit

The results indicate that emotional demands do not significantly influence P-J Fit ($f^2 = 0.000$). This contradicts the findings of Madsen et al. (2020), who argued that high emotional labor generally leads to burnout and a sense of alienation from the job. One possible reason for this opposite conclusion of this study is the role of emotional resilience or professional training (Lee & Kim, 2020). If the participants are in roles where emotional demands are expected such as healthcare or service industries, they may separate their professional emotional requirements from their personal sense of "fit" with the job (Dias et al, 2022). Effectively, they may view emotional demands as a task requirement rather than a personal compatibility issue.

5.2.3 H2a: Cognitive workload and job mismatch

The results of this study show that a high psychological load will make employees feel that their work does not match their skills or expectations. In the JD-R framework, mental workload is a job demand. It requires continuous thinking and effort. When these demands are too high, employees may feel that they are not prepared or capable

enough. Therefore, they may think the job does not fit their abilities. Previous studies also show similar results. High mental demands can make employees feel less confident and create a sense of skill mismatch. This is more common among early-career employees who are still learning and building their skills for more complex tasks (Venz & Boettcher, 2021).

5.2.4 H2b: Emotional demands and Job Mismatch

Similar to the results for P-J Fit, emotional demands showed a negligible effect on Job Mismatch ($f^2 = 0.010$). This result is surprising and contradicts traditional JD-R models, which typically link high emotional demands to increased work-related strain and perceived mismatch. The lack of a significant relationship here may be due to the existence of unmeasured moderators, such as social support or coping mechanisms. For instance, if an employee receives strong support from colleagues or supervisors (as suggested by the Supervisor Support data in this model), the negative impact of emotional demands may be offset before it translates into a feeling of job mismatch. Essentially, the emotional "cost" of the job is effectively managed, thus avoiding a sense of structural mismatch.

5.2.5 H3a: Supervisor Support and Person–Job Fit

This finding shows that supportive leadership is crucial for early-career employees. It can help them better adapt to their job roles. When supervisors give guidance, feedback, and encouragement, employees can better understand their tasks and expectations for them. This support helps them learn and adapt at the beginning of

their work, which strengthens their sense of fit. According to the JD-R model, supervisor support works as a job resource. It helps employees deal with work challenges and build their skills. Malik, Baig, & Manzoor, (2023) also demonstrated that support from supervisors helps graduates move from school to the workplace more smoothly

5.2.6 H3b: Job autonomy and Person–Job Fit.

This finding indicates that individuals who enjoy more autonomy and flexibility are more inclined to feel a better match fit in their work. According to the JD-R framework, autonomy is important in encouraging employees to manage work demands effectively (Bakker & Demerouti, 2023). When graduates are given autonomy in their roles, they are able to apply their knowledge and skills more flexibly, which may strengthen their perception that their competencies match the requirements of the job. Blokker et al (2023) have similarly found that job autonomy facilitates the development of P–J Fit by allowing employees to adjust work methods according to their individual strengths (Blokker et al., 2023). For early-career graduates who are still adapting to professional environments, autonomy may also promote learning and skill development, thereby improving their sense of compatibility with their job roles.

5.2.7 H4: Career Decision-Making Self-Efficacy and Person–Job Fit

This result indicates that individuals who are confident in their ability to make career-related decisions are more likely to perceive a higher level of fit between

themselves and their jobs. According to social cognitive career theory, self-efficacy influences individuals' career choices, persistence, and interpretation of work experiences. Employees with higher CDMSE tend to conduct more proactive career behaviours, such as exploring career options, evaluating job requirements, and developing relevant skills. These behaviours may enable graduates to better align their capabilities with job expectations, thereby enhancing their perception of P-J Fit. Past study by Wang et al (2023) also supports this link. The study shows that people who believe in their ability to make career decisions are better able to cope with workplace challenges. These individuals do not regard job requirements as inappropriate signs, but as opportunities for growth (Wang et al., 2023).

5.2.8 H5: Person–Job Fit and Job Mismatch

The result is different from the initial hypothesis, which proposed a negative relationship. Instead, a positive association was found between person-job fit and perceived job mismatch. This unexpected result suggests that although graduates may feel that they are qualified for their job tasks, they may still feel that their job does not fully match their educational background or long-term career expectations.

One possible reason for this result is the underemployment of graduates and the growing problem of skills mismatch in modern labour markets. Recent studies show that many university graduates accept jobs outside their field of study or jobs that do not fully use their qualifications because of labour market limits and fewer job

opportunities (Tran et al., 2026). In this case, individuals may still feel that they are qualified for the job, thus creating a sense of matching the job. However, at the same time, they may realise that their academic training or career goals do not exactly match their current job roles.

Similarly, recent research suggests that job mismatch is not only explained by the alignment between employees' qualifications and job demands. It is also shaped by wider career expectations and perceived opportunities for career development (Low & Mah, 2024). For new graduates, the transition from education to employment often means accepting some entry-level positions that may not be fully in line with their qualifications or ideal career path. Therefore, they may think that they are qualified for the job, but at the same time they realise that there is a misfit between their educational background and their current roles.

Furthermore, P-J Fit is often regarded as a subjective perception rather than an objective fit between employees and their positions. Recent research in the person-job fit literature shows that employees can feel a sense of fit while also feeling that their career is not well aligned. This is especially common among young professionals who are still exploring their long-term career paths (Bischof, 2021). This helps explain why graduates can't always eliminate the sense of job mismatch even if they feel that they are qualified for the job.

Overall, the results suggest that job mismatch among Malaysian graduates is not only affected by their ability to do job tasks. It is also shaped by their broader career expectations and the match between their education and job opportunities. Therefore, Hypothesis 5, which proposed a negative relationship between person-job fit and perceived job mismatch, is not supported.

5.3 Research Contributions

5.3.1 Theoretical contributions

This study combines the JD-R model, P-J Fit theory and CDMSE to explain the job mismatch among early career graduates, thus enriching the existing research. Unlike many previous studies that focussed on objective mismatch (such as education or skills), this study focusses on how employees perceive mismatch, thus showing the employee's work experience more realistically.

First, the findings confirm the important role of job resources. Autonomy, supervisor support, and CDMSE can improve P-J Fit. This supports the JD-R model, which suggests that resources help employees adjust to their jobs and enhance their fit with work. It also shows that both workplace support and personal confidence are crucial to employees' perception of job matching.

Second, job demands did not work as expected. Cognitive workload and emotional demands don't not significantly affect P-J Fit. This shows that not all job needs will reduce the degree of matching. In some cases, employees may regard these needs as a normal part of their work, especially in more demanding or more professional

positions. This finding expands the JD-R model and shows that the impact of job needs may depend on how employees interpret these needs.

Third, the results show that job demands and job resources work in different ways. Cognitive workload has a direct effect on job mismatch, but it doesn't influence mismatch through P-J Fit. Emotional demands were not significant in either case. This shows that P-J Fit does not always act as a bridge between job demands and job mismatch. In other words, job demands may influence mismatch directly rather than through perceptions of fit.

Fourth, this research emphasize the significance of CDMSE as a personal resource. CDMSE had a strong positive effect on P-J Fit and also showed a significant indirect effect on job mismatch. This expands existing theory by showing that personal confidence in career decisions plays a key role in how employees evaluate their jobs, not just external work conditions.

Finally, one unexpected discovery is that there is a positive correlation between P-J Fit and job mismatch. This goes against what most studies suggest. A possible explanation is that fit is not a simple concept. Employees may feel that they are qualified for the job, but still feel that the job does not match their long-term goals or education. This suggests that P-J Fit should be understood in different ways,

especially when studying early-career employees.

Overall, this study helps fill a gap by showing that beyond job conditions, job mismatch is also influenced by how employees think and feel about their work. It also shows that job demands, job resources, and personal factors should be studied together, rather than separately.

5.3.2 Practical contributions

At the policy level, the findings are also useful for key stakeholders like the Ministry of Higher Education Malaysia (MOHE) and the Ministry of Human Resources Malaysia (KESUMA), which handle graduate employability and workforce development policies. These departments can better serve graduates by updating their Graduate Employability (GE) policies. Currently, most policies focus on whether a student has the "right degree" for a job. This study shows that cognitive workload is a main reason why graduates feel mismatched. MOHE should use this evidence to finance courses on psychological resilience and workload management. KESUMA can also improve its national workforce surveys by asking graduates about their "perceived fit" and "supervisor support" rather than just tracking if they are employed or not.

Higher Education Institutions (HEIs) and University Career Centers can improved by moving beyond basic resume workshops. Since CDMSE is a strong factor of success, vocational centers should create a "career confidence" training camp. These programs

should help students practice making difficult career choices before graduation. By focusing on cultivating a student's confidence, universities can directly improve how quickly their graduates can find a job that really fits them.

Organisations such as HRD Corp and TalentCorp Malaysia can use these findings to reduce employee mobility. The findings prove that even even if the work pressure is high, autonomy and supervisor support can help employees gain a sense of belonging . Managers should be trained to give graduates more control over their own way of working and regularly "communicate" to provide emotional support. This is more conducive to long-term retention than simply reducing their workload.

Job search Platforms and Recruitment Agencies like JobStreet can benefit by adding "Self-Assessment" tools to their platforms. Instead of just matching a candidate to a job based on their CGPA, they can provide tools that measure a graduate's CDMSE. By helping graduates understand their own career confidence levels, these providers can create better "human-centric" matches, which reduces the chance of graduates quitting within the first six months.

Non-Governmental Organizations (NGOs) and Youth Groups NGOs that focus on youth development can use this research to advocate for better mental health support in the workplace. They can design peer-to-peer mentoring networks that provide the "social resources" that are crucial to the findings of this study. These groups can act as a bridge to help fresh graduates cope with the emotional demands in their first job when their employer fails to provide sufficient support.

Finally, graduates themselves gain a huge advantage. This study helps them realize that feeling "mismatched" isn't always their fault or a lack of skill—it is often related to their own confidence levels and the support they get at work. This motivates them to look for employers who offer autonomy and guidance, rather than just pursuing a high salary. In this case, these graduates can enjoy a much more satisfying career journey.

5.3.3 Methodological contributions

Methodologically, this study uses survey data from early-career graduates in Malaysia to test an integrated framework. It combines job demands, job resources, psychological resources, and perceived job mismatch in one model. This makes the analysis clearer and straightforward. The same approach can also be used or adjusted in future studies with different groups or settings.

5.4 Research Limitations

This study uses a quantitative, cross-sectional survey design. This means we collected data from participants at one specific time. While this approach helps us see how different factors are related, it does not prove that one thing definitely causes another. Another limitation is the three theories used in this study. There may be other theories that can better explain job mismatch.

5.5 Recommendations for Future Research

This study opens up five directions for future research. First, future studies can consider using additional theories to enhance the explanatory power of the model. Although this study is based on the JD-R model, other theories such as the Theory of Planned Behavior (TPB) or Social Cognitive Career Theory (SCCT) may provide further insights into how individuals form perceptions of job mismatch. Including variables such as attitudes, subjective norms, career expectations, or perceived behavioural control may help explain a higher percentage of variance in job mismatch.

Second, future research could include additional external variables to strengthen the model. For example, factors such as organisational culture, job design, labour market conditions, or career growth opportunities may influence how employees perceive job mismatch. These variables may help explain why some employees experience mismatch even when they report a high level of P-J Fit.

Third, this study used a quantitative and cross-sectional design. Future studies could adopt mixed-method or multi-method approaches. For example, qualitative interviews

could be used to explore how employees interpret job mismatch in more depth, while longitudinal studies could examine how perceptions of fit and mismatch change over time. This would provide a more complete understanding of the issue.

Fourth, future research could expand the study to different geographical contexts. This study focused on Malaysia, so the findings may not fully apply to other countries. Comparative or cross-cultural studies could be conducted to examine whether the relationships found in this study are consistent across different cultural or economic settings.

Finally, future studies may also consider examining different groups of employees. This study focused on early-career graduates, but more experienced workers or employees in different industries may show different patterns. Exploring these differences would help improve the generalisability of the findings. Overall, future research can build on this study by extending the theoretical framework, including additional variables, and using different research designs to gain a deeper and more comprehensive understanding of job mismatch.

5.6 Conclusion

This study aims to explore why many Malaysian graduates end up working in the wrong jobs. By combining the JD-R model, Person-Job Fit theory, and CDMSE (career decision-making skills), this research clearly shows how new employees deal

with the challenges of today's job market.

The facts show that a good work environment and personal mentality are the key factors for career success. Because job autonomy (freedom at work) and supervisor support help people better adapt to work, Therefore, enterprises play an important role in helping graduates transition from college to career. Also, CDSE is a key personal tool. research shows that when graduates feel confident about their choices, they feel much more compatible with their current roles.

The analysis also found that emotional demands did not have a big effect on how well people fit their jobs or if they felt mismatched. This suggests that for the graduates in this study, the emotional factor at work is not the main thing that makes them feel they are in the wrong job. Instead, the actual mental labor and their own career-related confidence seem to be much more important.

A very important and surprising finding is that feeling like a good "fit" for a job and being "mismatched" can actually happen at the same time. This shows that just because someone is good at their specific daily tasks, it does not mean their job matches their education level or their long-term career goals. In Malaysia, job mismatch is complicated: a graduate may perform well in his daily work, but he may still be too senior or engaged in a job unrelated to his major..

To wrap up, addressing the problem of job mismatch among graduates needs a complete plan that looks at more than just employment numbers. Companies should provide resources that help graduates do their work and support their growth. At the same time, universities should focus on building students' confidence when make a career-related decision, so that they can be prepared for the challenges of the real world. In the end, this study helps us understand how work demands, resources, and personal views shape the early careers of the next generation of Malaysian professionals.

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APPENDIX A

Appendix: Outer Loadings for All Constructs (Pilot Test)

Item Loading		Item Loading		Item Loading		Item Loading	
A1	0.879	CW5	0.836	GS4	0.940	OI5	0.923
A2	0.934	CW6	0.782	GS5	0.900	PJF1	0.893
A3	0.902	CW7	0.826	JM1	0.855	PJF2	0.891
A4	0.890	CW8	0.865	JM2	0.900	PJF3	0.905
A5	0.921	ED1	0.780	JM3	0.842	PJF4	0.905
A6	0.944	ED2	0.853	JM4	0.930	PL1	0.936
A7	0.921	ED3	0.920	JM5	0.920	PL2	0.903
A8	0.936	ED4	0.938	OI1	0.911	PL3	0.930
A9	0.931	ED5	0.899	OI2	0.914	PL4	0.962
CW1	0.850	ED6	0.916	OI3	0.917	PL5	0.878
CW2	0.870	GS1	0.909	OI4	0.861	PS1	0.917
CW3	0.844	GS2	0.876	PS2	0.858	SA2	0.932
CW4	0.921	GS3	0.930	PS3	0.864	SA3	0.945
PS4	0.862	SA1	0.936	SA5	0.948	SS2	0.860
PS5	0.877	SA4	0.910	SS1	0.809	SS3	0.686
						SS4	0.919

APPENDIX B

Ethical Clearance Approval Sheet



UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
Wholly owned by UTAR Education Foundation Co. No. 578227-M

Re: U/SERC/56(A)-843/2026

25 February 2026

Dr Leong Lai Ying
Department of Commerce and Accountancy
Teh Hong Piow Faculty of Business and Finance
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Barat
31900 Kampar, Perak

Dear Dr Leong,

Ethical Approval For Research Project/Protocol

We refer to your application for ethical approval for your research project (Master student's project) and are pleased to inform you that your application has been approved under Expedited Review.

The details of your research project are as follows:

Research Title	Exploring Job Mismatch Among Malaysian Graduates: A Job Demands-Resources (JD-R) Model Perspective with Person-Job (P-J) Fit and Career Decision-Making Self-Efficacy (CDMSE) as Psychological Extensions
Investigator(s)	Dr Leong Lai Ying Li, Qing (UTAR Postgraduate Student)
Research Area	Human Resource Management
Research Location	Online survey
No of Participants	500 participants (Age: 21 and above)
Research Costs	Self-funded
Approval Validity	25 February 2026 - 24 February 2027

The conduct of this research is subject to the following:

- (1) The participants' informed consent be obtained prior to the commencement of the research,
- (2) Confidentiality of participants' personal data must be maintained,
- (3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines; and
- (4) Written consent be obtained from the institution(s)/company(ies) in which the physical or/and online survey will be carried out, prior to the commencement of the research.

Kampar Campus: Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
Sungai Long Campus: Jalan Sungai Long, Bandar Sungai Long, Cheras, 43000 Kajang, Selangor Darul Ehsan, Malaysia
Tel: (603) 9086 0288 Fax: (603) 9019 8868
Website: www.utar.edu.my



Should you collect personal data of participants in your study, please have the participants sign the attached Personal Data Protection Statement for your records.

The University wishes you all the best in your research.

Thank you.

Yours sincerely,



Professor Dr Zuraidah Abd Manaf
Chairman
UTAR Scientific and Ethical Review Committee

c.c Dean, Teh Hong Piow Faculty of Business and Finance

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APPENDIX C

SURVEY QUESTIONNAIRE



Wholly owned by UTAR Education Foundation
(Co. No. 578227-M)
DU012(A)

Greetings to all,

I am conducting a research project on “Job Mismatch among Malaysian Graduates: A Job Demands-Resources (JD-R) Model Perspective with Person-Job (P-J) Fit and Career Decision-Making Self-Efficacy (CDMSE) as Psychological Extensions”. This research aims to examine the determinants of job mismatch among Malaysian graduates through an integrated framework incorporating the Job Demands-Resources (JD-R) model, Person-Job (P-J) Fit, and Career Decision-Making Self-Efficacy (CDMSE). This survey will only take you approximately 5 - 10 minutes, and all participation towards this survey is voluntary. Rest assured that all the responses collected will be used solely for academic purposes and will be kept private and confidential.

Thank you in advance for your time and cooperation in answering our questionnaire. Your participation is highly appreciated.

For any enquiries, please do not hesitate to contact Li, Qing at +60 17-943 2164 or via email at qq1314521@utar.my.

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with the Personal Data Protection Act 2010 (“PDPA”), which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (“UTAR”) is hereby bound to make notice and require consent in relation to the collection, recording, storage, usage and retention of personal information.

Notice:

The purposes for which your personal data may be used are inclusive but not limited to:-

For the assessment of any application to UTAR

For processing any benefits and services

For communication purposes

For advertorial and news

For general administration and record purposes

For enhancing the value of education

For educational and related purposes consequential to UTAR

For the purpose of our corporate governance

For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

Your personal data may be transferred and/or disclosed to third parties and/or UTAR collaborative partners, including but not limited to the respective and appointed outsourcing agents, for the purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by law and when disclosure is necessary to comply with applicable laws.

Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable to us in the event such information is no longer required.

UTAR is committed to ensuring the confidentiality, protection, security and accuracy of your personal information made available to us, and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

By submitting this form, you hereby authorise and consent to us processing (including disclosing) your personal data and any updates to your information, for the purposes and/or for any other purposes related to the purpose.

If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfil our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

You may access and update your personal data by writing to me at **qq1314521@utar.my**

Acknowledgement of Notice

☐ I have been notified by you and that I hereby understand, consented and agreed per UTAR above notice.

☐ I disagree, my personal data will not be processed.

.....

Name:

Date:



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Universiti Tunku Abdul Rahman

Exploring Job Mismatch among Malaysian Graduates: A Job Demands-Resources (JD-R) Model Perspective with Person-Job (P-J) Fit and Career Decision-Making Self-Efficacy (CDMSE) as Psychological Extensions

Instructions:

There are ***TWO*** (2) sections in this questionnaire. Please answer **ALL** questions in **ALL** sections.

Completion of this form will take you less than 5 minutes.

The contents of this questionnaire will be kept strictly confidential.

Voluntary nature of the study

Participation in this research is entirely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. There is no foreseeable risk of harm or discomfort in answering this questionnaire. This is an anonymous questionnaire; as such, it is not able to trace the response back to any individual participant. All information collected is treated as strictly confidential and will be used for the purpose of this study only.

I have been informed about the purpose of the study, and I give my consent to participate in this survey.

YES () NO ()

Note: If yes, you may proceed to the next page; if no, you may return the questionnaire to the researchers. Thanks for your time and cooperation.

Filtering criteria

Only respondents (a) with an **age between 21 and 30 years old**, (b) who **possess at least a bachelor's degree**, (c) with **working experience of not more than eight years**, and (d) who are **currently employed** are allowed to proceed to the main sections of the questionnaire.

Section A: Demographic Information

Please tick ✓ the following answer box ☐ for each question.

1. Age

- ☐ 21 - 22 years old
- ☐ 23 - 24 years old
- ☐ 25 - 26 years old
- ☐ 27 - 28 years old
- ☐ 29 - 30 years old
- ☐ **More than 30 years old** (Thank you for your participation. The questionnaire ends here.)

2. Years of Working Experience

- ☐ Less than 1 year
- ☐ 1 - 2 years
- ☐ 3 - 4 years
- ☐ 5 - 6 years
- ☐ 7 - 8 years
- ☐ **More than 8 years** (Thank you for your participation. The questionnaire ends here.)

3. Highest Level of Education

- ☐ PhD, doctoral or post-doctoral degree

- ☐ Master's degree
- ☐ Bachelor's degree
- ☐ Certificate, Diploma and **other qualifications lower than the Bachelor's degree** (Thank you for your participation. The questionnaire ends here.)

4. Current Employment Status

- ☐ Full-time
- ☐ Part-time
- ☐ Contract
- ☐ Self-employed
- ☐ **Unemployed** (Thank you for your participation. The questionnaire ends here.)

5. Gender

- ☐ Male
- ☐ Female

6. Field of Study

- ☐ Arts & Humanities
- ☐ Business & Management
- ☐ Education
- ☐ Engineering & Technology
- ☐ Computer Science, AI & Information Technology
- ☐ Mathematics & Statistics
- ☐ Natural Sciences (Physics, Chemistry, Biology, etc.)
- ☐ Social Sciences (Economics, Sociology, Political Science, etc.)
- ☐ Law
- ☐ Medicine & Health Sciences
- ☐ Nursing & Allied Health
- ☐ Psychology
- ☐ Architecture & Design

- ☐ Agriculture & Environmental Studies
- ☐ Communication & Media Studies
- ☐ Economics & Finance
- ☐ Public Administration, Public Service & Public Policy
- ☐ Physical Sciences
- ☐ Life Sciences

Other (please specify) _____

7. Your Current Job Is Related To Which Field Of Study?

- ☐ Arts & Humanities
- ☐ Business & Management
- ☐ Education
- ☐ Engineering & Technology
- ☐ Computer Science, AI & Information Technology
- ☐ Mathematics & Statistics
- ☐ Natural Sciences (Physics, Chemistry, Biology, etc.)
- ☐ Social Sciences (Economics, Sociology, Political Science, etc.)
- ☐ Law
- ☐ Medicine & Health Sciences
- ☐ Nursing & Allied Health
- ☐ Psychology
- ☐ Architecture & Design
- ☐ Agriculture & Environmental Studies
- ☐ Communication & Media Studies
- ☐ Economics & Finance
- ☐ Public Administration, Public Service & Public Policy
- ☐ Physical Sciences
- ☐ Life Sciences
- ☐ Other (please specify) _____

Section B:

Please indicate by **circling** the number of your degree of agreement on the following statements, ranging from Strongly Disagree = 1, Disagree = 2, Somewhat Disagree = 3, Neutral = 4, Somewhat Agree = 5, Agree = 6, to Strongly Agree = 7.

Item	Statement	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
Cognitive Workload - Refers to an individual's mental resources in certain situations (Thomas et al., 2023)								
CW1	The content of this work was very complex.	1	2	3	4	5	6	7
CW2	The problems covered in this work were very complex.	1	2	3	4	5	6	7
CW3	In this work, very complex terms were mentioned.	1	2	3	4	5	6	7
CW4	I invested a very high mental effort in the complexity of this work.	1	2	3	4	5	6	7
CW5	The explanations and instructions in this work were very unclear.	1	2	3	4	5	6	7
CW6	The explanations and instructions in this work were full of unclear language.	1	2	3	4	5	6	7
CW7	The explanations and instructions in this work were, in terms of learning, very ineffective.	1	2	3	4	5	6	7
CW8	I invested a very high mental effort in unclear, ineffective explanations and instructions in this work.	1	2	3	4	5	6	7
Emotional Demands - Refers to the extent to which a job requires continuous emotional regulation, particularly when dealing with emotionally demanding interactions, clients, or situations that may elicit stress, empathy, or emotional (Madsen et al., 2022)								
ED1	My work is emotionally demanding.	1	2	3	4	5	6	7
ED2	In my work, I am confronted with things that personally touch me.	1	2	3	4	5	6	7
ED3	I face emotionally charged situations in my work.	1	2	3	4	5	6	7
ED4	In my work, I deal with clients who incessantly complain, although I always do everything to help them.	1	2	3	4	5	6	7

ED5	In my work, I have to deal with demanding clients.	1	2	3	4	5	6	7
ED6	I have to deal with clients who do not treat me with the appropriate respect and politeness.	1	2	3	4	5	6	7
Supervisor Support - Refers to employees' beliefs that their supervisors acknowledge their efforts, show concern for their welfare, and provide necessary support to facilitate effective job performance (Malik et al., 2021)								
SS1	My supervisor cares about my opinions.	1	2	3	4	5	6	7
SS2	My supervisor really cares about my well-being.	1	2	3	4	5	6	7
SS3	My supervisor shows very little concern for me (<i>reverse worded</i>).	1	2	3	4	5	6	7
SS4	My supervisor strongly considers my goals and values.	1	2	3	4	5	6	7
Autonomy - Refers to the extent of discretion available to workers, specifically regarding their ability to operate with independence and customise their workflows according to their own preferred techniques and decision-making processes (Yagil et al., 2021)								
AUT1	The job allows me to make my own decisions about how to schedule my work.	1	2	3	4	5	6	7
AUT2	The job allows me to decide on the order in which things are done on the job.	1	2	3	4	5	6	7
AUT3	The job allows me to plan how I do my work.	1	2	3	4	5	6	7
AUT4	The job gives me a chance to use my personal initiative or judgement in carrying out the work.	1	2	3	4	5	6	7
AUT5	The job allows me to make a lot of decisions on my own.	1	2	3	4	5	6	7
AUT6	The job provides me with significant autonomy in making decisions.	1	2	3	4	5	6	7
AUT7	The job allows me to make decisions about what methods I use to complete my work.	1	2	3	4	5	6	7
AUT8	The job gives me considerable opportunity for independence and freedom in how I do the work.	1	2	3	4	5	6	7
AUT9	The job allows me to decide on my own how to go about doing my work.	1	2	3	4	5	6	7
Career decision-making self-efficacy - Refers to individuals' beliefs in their ability to effectively engage in tasks required for making informed career decisions, such as self-evaluation, information seeking, goal setting, and planning (Liu, 2025).								

SA1	I am able to change majors if I did not like my first choice	1	2	3	4	5	6	7
SA2	I am able to change occupations if I am not satisfied with the one I entered.	1	2	3	4	5	6	7
SA3	I am able to identify some major or career alternatives if I am unable to get my first choice.	1	2	3	4	5	6	7
SA4	I am able to find information about graduate or professional schools.	1	2	3	4	5	6	7
SA5	I am able to determine steps to take if I am having academic trouble with my major.	1	2	3	4	5	6	7
OI1	I am able to make a career decision and then not worry if it was right or wrong.	1	2	3	4	5	6	7
OI2	I am able to figure out what I am or am not ready to sacrifice for my career goals.	1	2	3	4	5	6	7
OI3	I am able to find out employment trends for an occupation over the next 10 years.	1	2	3	4	5	6	7
OI4	I am able to prepare a good resume.	1	2	3	4	5	6	7
OI5	I am able to successfully manage the job interview process.	1	2	3	4	5	6	7
GS1	I am able to make a plan for my goals for the next 5 years.	1	2	3	4	5	6	7
GS2	I am able to accurately assess my abilities.	1	2	3	4	5	6	7
GS3	I am able to determine the steps I need to successfully complete my chosen majors.	1	2	3	4	5	6	7
GS4	I am able to identify employers relevant to my career possibilities.	1	2	3	4	5	6	7
GS5	I am able to persistently work at my major or career goal even when I get frustrated.	1	2	3	4	5	6	7
PL1	I am able to choose a major or career that will fit my interests.	1	2	3	4	5	6	7
PL2	I am able to select one occupation from a list of potential occupations I am considering.	1	2	3	4	5	6	7
PL3	I am able to find the average yearly earnings of people in an occupation.	1	2	3	4	5	6	7
PL4	I am able to determine what my ideal job would be.	1	2	3	4	5	6	7
PL5	I am able to choose a career that will fit my preferred lifestyle.	1	2	3	4	5	6	7

PS1	I am able to select one major from a list I am considering.	1	2	3	4	5	6	7
PS2	I am able to determine the kind of information about occupations that interests me.	1	2	3	4	5	6	7
PS3	I am able to use the Internet to find information about occupations that interest me.	1	2	3	4	5	6	7
PS4	I am able to talk with a person already employed in a field I am interested in.	1	2	3	4	5	6	7
PS5	I am able to decide what I value most in an occupation.	1	2	3	4	5	6	7
Person-Job Fit - Refers to the extent to which an employee's skills, knowledge, and abilities align with the demands and requirements of the job, reflecting the perceived compatibility between the individual and the work role, with higher fit supporting more favourable work outcomes (Kim et al.,2020)								
PJF1	My values match or fit the values of my job.	1	2	3	4	5	6	7
PJF2	I am able to maintain my values in my job.	1	2	3	4	5	6	7
PJF3	My personal values allow me to integrate into my job because they are in line with its values.	1	2	3	4	5	6	7
PJF4	My view of work culture corresponds to the work culture of my job.	1	2	3	4	5	6	7
Job Mismatch - Refers to misalignment between employees' skills and job requirements, often caused by poor managerial competence, resulting in overskilling, underutilization of talent, and reduced employee satisfaction (Kohnová et al.,2020)								
JM1	I have a genuine education and knowledge for the current job.	1	2	3	4	5	6	7
JM2	My current job is relevant to my areas/discipline of education.	1	2	3	4	5	6	7
JM3	I have job-specific skills, which are relevant to the current job.	1	2	3	4	5	6	7
JM4	I have the necessary skills, which are relevant to the current job.	1	2	3	4	5	6	7
JM5	I have portable skills, which are relevant to the current job.	1	2	3	4	5	6	7

The questionnaire ends here. Thank you for your time and cooperation in completing this survey questionnaire.

