

FACTORS INFLUENCING CAREER ADAPTABILITY  
AMONG UNIVERSITY STUDENTS IN MALAYSIA

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BACHELOR OF ECONOMICS (HONOURS) GLOBAL  
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BY

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## DECLARATION

We hereby declare that:

- (1) This undergraduate research project is the end result of my own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
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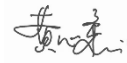
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## DEDICATION

This research project is dedicated to my beloved parents and family, for their endless love, support, and sacrifices. To my friends, thank you for being by my side throughout this journey.

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## LIST OF ABBREVIATIONS

|                |                                                   |
|----------------|---------------------------------------------------|
| AI             | Artificial Intelligence                           |
| HEI            | Higher Education Institution                      |
| CA             | Career Adaptability                               |
| CDMSE          | Career Decision-Making Self-Efficacy              |
| CE             | Career Engagement                                 |
| PP             | Proactive Personality                             |
| BFPT           | Big Five Personality Traits                       |
| CCT            | Career Construction Theory                        |
| SCCT           | Social Cognitive Career Theory                    |
| CONSCIE        | Conscientiousness                                 |
| AGREEA         | Agreeableness                                     |
| OPENN          | Openness to experience                            |
| EXTRA          | Extraversion                                      |
| NEURO          | Neuroticism                                       |
| MOHE           | Ministry of Higher Education of Malaysia          |
| CES            | Career Engagement Scale                           |
| PPS            | Proactive Personality Scale                       |
| CDMSE Scale    | Career Decision Making Self-Efficacy Scale        |
| CAAS-SF        | Career Adapt-Abilities Scale Short Form           |
| BFPT Mini-IPIP | Big Five Mini-International Personality Item Pool |
| VIF            | Variance Inflation Factor                         |
| SPSS           | Statistical Package for the Social Sciences       |

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## **PREFACE**

The transition from higher education to the professional workforce is a significant milestone that is increasingly accompanied by uncertainty in a volatile global job market. In Malaysia workforce are having increasing numbers of graduates who are facing underemployment, as their skills acquired does not match with their job scope. This creates negative psychological cycle as they might feel less confidence and less prepared to get into work. I am inspired to explore the internal drivers of career readiness after observing the varying levels of preparedness among my peers. Thus, the goal of my study is to explore the factors that influences and contribute to a student's capacity to navigate these transitions.

## **ABSTRACT**

This study investigates the factors influencing career adaptability (CA) among 388 university students in Malaysia. Moreover, this study is grounded in Career Construction Theory (CCT) and Social Cognitive Career Theory (SCCT), the research examines the impact of Career Engagement (CE), Career Decision-Making Self-Efficacy (CDMSE), Proactive Personality (PP), and the Big Five Personality Traits (BFPT). This research adopts a quantitative approach, the results from Multiple Linear Regression revealed that the model explains 80.7% of the variance in CA. Findings indicate that CDMSE is the strongest predictor, followed by Career Engagement and Proactive Personality, which all shows a significant positive influence. Conversely, the Big Five Personality Traits overall showed a negative influence in the combined model. These results underscore the critical role of psychological confidence and active engagement over fixed traits, providing a foundation for higher education institutions to enhance graduate readiness through targeted career interventions.

**Keywords:** *Career Adaptability, Career Decision Making Self Efficacy, Career Engagement, Proactive Personality, Malaysia.*

# **CHAPTER 1: INTRODUCTION**

## **1.0 Introduction**

The global employment landscape is undergoing rapid transformation and is mainly driven by technological advancement, economic uncertainty and evolving workforce demands (World Economic Forum, 2025). While the pace of the world's development is changing rapidly, in order to maintain the economy at a stable level, a stable workforce able to produce income, innovation and create wealth to the economy is necessary. However, Low et al., (2023) states that in Malaysia there are numbers of graduates that face difficulties in securing a job as several of them lack the skills to adapt in the evolving workforce.

Chapter 1 aims to provide the foundation of this study by revealing the connection of the key employment trends and emphasizing the relevance of career adaptability in the Malaysian context. Besides, this chapter presents the research background, problem statement, research objectives, research questions, and significance of this study, offering a clear direction for examining how these factors influence the career adaptability of university students.

## **1.1 Research Background**

Since the Fourth Industrial Revolution (IR 4.0), rapid technology transformation and innovation have significantly reshaped structures of employment, lifestyles, work practices, and even human mindsets (Low et al, 2023). Advances in technologies such as Artificial Intelligence (AI) and information processing, automation and robotics is the main driver

shaping trends of the job market. These innovations have led to both the accelerated growth of technology-related roles and the decline of various traditional occupations (World Economic Forum, 2025).

According to the World Economic Forum (2025), these technological shifts will strongly shape the job market by accelerating the demand for digital and technology-related competencies. Technology-related skills, especially AI and big data, networks and cybersecurity, and technological literacy are anticipated to be the most transformative and fastest growing skills in the coming years. However, technological advancements is not the only influence on employment trends. Economic shifts, high competition within the job market, evolving societal expectations, economic uncertainties e.g. COVID-19, geopolitical conflicts also contribute to an increasingly volatile job environment (World Economic Growth, 2025).

In Malaysia, these global pressures intersect with local labour challenges. The rising supply of graduates from Higher Education Institution (HEI), has intensified competition for job opportunities (DOSM, Department of Statistics Malaysia, 2025). As a result, standards in the job market will also significantly become higher as employers wish to recruit the best candidates whom possess qualities like adaptability, flexibility, and continuous learning efforts and skills that can benefit companies in the long term (Gideon, 2025). Furthermore, Malaysian graduates face persistent issues such as skills mismatch and skill-related underemployment, where many are employed in positions that do not align with their academic qualifications (DOSM, 2025; Low & Mah, 2024). These realities highlight that graduates that solely possess academic knowledge will not be sufficient to secure jobs safely; graduates must also be equipped with psychological readiness and the ability to adapt to professional expectations.

Career adaptability (CA) is a set of psychosocial resources that assist an individual handling with their current and upcoming career tasks, changes and work challenges (Savickas & Porfeli, 2012). It involves four transactional capacities: career concern, career control, career curiosity, and career confidence (Savickas, 2019). CA can be shaped by several psychological and personality factors, including career engagement, career-decision making self-efficacy, proactive personality and the Big Five personality traits.

Understanding the extent of how these factors contribute to adaptability is essential to prepare graduates entering the challenging and fast pace work force.

The increasing demands placed on skillful young graduates and the persistent employability challenges in Malaysia belies the importance of studying the factors influencing career adaptability among university students. This study seeks to explore the influences within the cohort of Malaysia university students, providing insights to support future career development initiatives and encouraging career engagement to contribute to the production of adaptable, confident and future-ready graduates.

## **1.2 Problem Statement**

In today's rapidly changing world, the employability of graduates is becoming increasingly challenging. This is due to the high competition of graduates within the job market and the oversupply of HEI graduates. Graduates might face issues and obstacles, such as self-motivation issues, skills mismatch on careers, slow skill development or learning skills. In the face of such harsh job market condition graduates are forced to withstand negative emotions like stress and depression if they do not match career success or footsteps of their peers (Bang and Gyu, 2018; Kim, 2015; Singla et al., 2022, as cited in Du et al., 2024).

According to Bhatti & Zakariya (2024), one of the root causes of these challenges is the gap between industries expectations with graduates' actual capability. A key reason for this mismatch is mainly between the responsibilities of institutions of Malaysia and the job market which do not synchronise collaboration (Talent Corp, 2020). Thus, this creates scenario where the skills students obtain are not applicable or are lacking entirely for their jobs, making job security even more difficult to attain (Talent Corp, 2020, as cited in Nordin & Nordin, 2023). In 2022, graduates that are in skill-related underemployment have increased from 7.9%. Moreover Simamora (2025) states that only 43.3% of degree holders

in 2021 managed to attain jobs aligned to their academic scope. This is because universities rely heavily on theoretical studies with students having minimal exposure to the real world.

One reason why graduates have difficulties securing jobs aligned to their studies, is due to the lack of career development engagement while still university students (Low et al, 2023). Thus, graduates face barriers and difficulties when making career decisions with confidence. This aligns with Omar et al., (2024) which states university students that have understanding of career directions they desired will be able to help themselves to searching for the careers and company they are interested in.

Omar et al., (2024) remarks that good management of mental health is extremely important as previous studies report that students with negative psychological emotions and problems tend to affect a students' performance and academic achievements during university studies (Andrews and Wilding, 2004 as cite in Omar et al., 2024). In addition, mental and physical health are connected to a person's personality and this can influence a person's attitudes and the career adaptability at a high level. Negative psychological emotions are more remarkably seen in the progress of searching for jobs, which creates a nasty feedback cycle, when graduates failed in job interviews, they will often feel demotivated, and if job market is bad, they will encounter more failure in job interviews (Kreemers et al., 2018). Therefore, this can affect career adaptability.

Together, these studies reveal that securing jobs in maintaining knowledge and positions, and also strong adaptability and today's job market, skills of graduates are remarkably crucial, most importantly with continuous efforts.

## **1.3 Research Objectives**

### **1.3.1 General Objectives**

To study the degree of each factor influencing career adaptability.

### **1.3.2 Specific Objectives**

1. To examine the influence of career engagement on career adaptability among university students.
2. To examine the contribution of career decision-making self-efficacy to career adaptability.
3. To analyse the extent to which proactive personality and Big Five Personality traits predict career adaptability.

## **1.4 Research Questions**

1. How does career engagement influence career adaptability among university students?
2. How does CDMSE contribute to career adaptability among university students?
3. How proactive personality and Big Five Personality traits predict career adaptability among university students?

## **1.5 Significance of Study**

This study aims to explore the various factors influencing CA among university students in Malaysia. The significance of the research applies to several contexts with potential impact on institutions of policymakers, employers and society significantly.

First and foremost, the research of this study particularly highlights the need of improvements in the alignment between educational institutions and the labour force. Thus, the findings of this study can provide credible insights for HEI, which plays an impactful role in shaping the future workforce. By deepening the acknowledgment of factors that enhance CA, such as career engagement, career decision making self-efficacy, and personality traits, universities can reduce the gap with industries by developing effective strategies such as refining the courses curricula and providing career services. Moreover, universities can also enhance university students' awareness and understanding of career adaptability by encouraging students to participate in soft skills programs. This is to better equip students with necessary skills in order to build their adaptability to overcome uncertainties rapidly. This study will tackle the importance of integrating career

development initiatives into university programs, which can help university students gain confidence in their own career decisions and improve their employability.

The findings of this study also serve an important message to policymakers in order to construct and implement stronger strategies to bridge the gap between the skills learned from HEIs and the expectations and demands of the labour market. This study will also emphasize the lack of collaboration that is crucially needed between educational institutions, industries, and governmental bodies to prepare students adequately before entering the workforce full of obstacles and challenges.

Thirdly, this study reveals the essential attributes of university students required before entering the workforce. This can greatly benefit employers when hiring new graduates or employees. As they are able to acknowledge factors that influence CA, can provide information to employers to identify the best candidates for the company in the long-term. Such candidates should not possess the necessary technical skills and relevant theoretical knowledge only, but also workforce flexibility, self-efficacy and proactive traits, which are extremely critical for survival in a working environment for long-term success.

From a societal perspective, the significance of this study reaches beyond individual career outcomes. The exploration of this research contributes to the larger goal of producing more skillful graduates, declining graduate unemployment, and underemployment. This closely aligns to the Sustainable Development Goal 8 on Decent Work and Economic Growth, which aims to create an economy with productive and skillful employment contribution. Enhancing career adaptability, ensuring that graduate training aligns with future job positions, graduate skills to access wider opportunities, is thus the responsibilities of a nation for its own economic development and the well-being of its workforce (Hassanuddin, 2025).

This study has highlighted the importance for fostering mental health awareness and promoting well-being among students. As this study examines the role of few psychological factors, such as CDMSE and proactive personality, it reveals the interplay between different responses of mental problems, such as stress and anxiety, from each different personality, particularly from the Big Five Personality traits (e.g.: conscientiousness, neuroticism,

extraversion). These traits can predict one's career adaptability and career success. For instance, emotional stability and responsibility help students manage career stress and improve adaptability. Addressing these factors within the university context can help universities create a more supportive and sustainable learning environment while promoting a holistic approach to development that balances academic achievement with personal well-being. Universities could achieve this environment by providing career services based on their personality traits to support their career development and career decision making.

## **1.6 Outline of Study**

This study is organized into five chapters to ensure a smooth and systematic presentation of the research process. Chapter 1 introduces the fundamental basis of the study and explaining it through the background, problem statement, research objectives, research questions, and significance of study providing an overview of the key concepts related to factors influencing career adaptability.

Chapter 2 reviews past literature that is relevant to this study, outlining the theoretical framework, definitions and concepts related to career adaptability, and also reported empirical findings on CE, CDMSE, PP, and the BFPT. This chapter also highlight the gaps in existing research that motivates the present study.

Chapter 3 presents the research methodology of this study. It details the method of data collection, curation and analysis. This part of this study in particularly, involves construct of research design, population and sampling methods, instruments, data collection procedures, and data analysis techniques used to examine the relationships between the variables.

Chapter 4 reports the results of this study. This part includes raw and analysed data of the study from the survey responses gathered. Thus, this part involves the descriptive statistics, reliability analyses, and inferential findings addressing each research question and hypothesis.

Lastly for chapter 5 presents the discussion and conclusion of this study. This part discusses the key findings related to the existing literature, implications for HEI, policymakers, and future graduates, while acknowledging the limitations of this study and suggested improvements and gaps for future research.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.0 Introduction**

This chapter defines the underlying reasons of using selected variables for this study and reviews existing studies and empirical literature relevant to the present study on career adaptability (CA) among Malaysian university students. This chapter reveals a strong conceptual foundation to investigate the career adaptability and factors that influence university students in Malaysia in order to minimize the gap between Higher Education Institution (HEIs) and the labour force. Two theories that support the study, Career Construction Theory (CCT) and Social Cognitive Career Theory (SCCT) are further discussed and elaborated through the empirical studies corresponding to career adaptability (CA), career engagement (CE), career decision-making self-efficacy (CDMSE), proactive personality (PP), and the Big Five personality traits (BFPT).

### **2.1 Theoretical Review**

This study is grounded on the Career Construction Theory (CCT) and the Social Cognitive Career Theory (SCCT). These theories provide the fundamental framework of this study in defining the use of dependent variables and independent variables. CCT serves as the dominant theory of this study as it implicates career adaptability as the core outcome of an individual's career development. SCCT serves as a supporting framework helping to explain the cognitive behavioural mechanisms of a few predictors, which involves some of our independent variables such as CDMSE and CE. Other independent variables namely

PP and the BFPT are positioned within CCT as this theory supports individual difference in factors which can bring influence to the development of adaptability resources through self-regulation and also personal agency.

### **2.1.1 Career Construction Theory (CCT)**

Career Construction Theory (CCT), developed by Mark Savickas, explains how individuals shape their careers through two main processes: interpretation and interaction. Career experiences are developed and interpreted through the lens of one's personal values, beliefs and past experiences. These interpretations help individuals to be known of their career paths and development. Simultaneously, individuals interact with others, such as mentors, peers, etc, to guide them to their career decisions, a process known as vocational behaviour. Then these interactions, in turn, influence how individuals' response to challenges, to achieve their desired career goals, to plan their career journey and most importantly to shape their overall career development for continuous career growth. This reveals that CCT provides a comprehensive framework for understanding how individuals plan their careers through self-regulation, interpretation and interaction (Savickas, 2019).

#### **2.1.1.1 Career adaptability links with CCT**

In order to strive for success and survival in the workforce, career adaptability and self-regulation is essential. Savickas (2019) mentioned that a need to adapt will trigger self-regulation. Career adaptability (CA) means that individuals have

different capacities and willingness to adapt to changes in the rapid evolution of the workforce (Low et al., 2023). CA is the central of the CCT theory. It involves various aspects that shapes a multifaceted concept includes elements that help individuals navigate their career journey successfully, especially responding to evolving circumstances, challenges and opportunities. Moreover, also covers behaviours, psychological resources and strategies that support career development. CA involves four self-regulatory strengths: (a) Control, (b) Confidence, (c) Concern, (d) Curiosity. In the context of CCT, the study aligns with this research that indicates students with higher levels of career adaptability are seem to be more capable to navigate their career directions in this evolving workforce and economy (Low et al., 2023 as cited in Savickas, 1997; Savickas & Porfeli, 2012).

Career control means how responsible is a person for building his or her career pathways. Career confidence is an individual's belief in own's ability to overcome career-related challenges and achieve success in career journey. Career concern is how oriented an individual is to his or her future for preparing one's future. Lastly, curiosity refers to the level of an individual has faith in ability of himself or herself to make the best career decision and solving problem to reach nearer to their career goals (Savickas, 2019). Together these dimensions act as psychosocial and psychological resources of an individuals to navigate, manage and adapt to the evolving work force.

Furthermore, from the self-regulation adaptability perspective career adaptability is the ability to adjust and manage one's own thoughts, emotions, and behaviours in response to changes, challenges, and demands in a given environment. This concept plays an essential role in career development and personal growth, particularly when it comes to adapting to new situations and pursuing long-term goals. It specifically covers more aspects on internal, psychological, psychosocial foundation. In CCT it involves a sequential model of self-regulated adaptation, it provides a conceptualize framework on highlighting the key stages of the adaptation process which varies from end-to-

end, from initial readiness to the final outcomes after adapting. There are four stages: Adaptive Readiness, Adaptability Resources, Adapting Responses, Adaptation Results (Savickas, 2019).

#### **2.1.1.2 Proactive personality links with CCT**

Linking CA solely may be insufficient to fully explain the psychological and psychosocial processes involved in self-regulation adaptability. Proactive personality (PP) offers a useful theoretical perspective lens because proactive individuals are more likely to initiate changes and influence their environment rather choosing to react passively (Bateman & Crant, 1993). This aligns with the CCT, which it emphasises that individuals' adaptability resources are being shaped through self-regulation and personal agency when facing challenges in vocational tasks and career transitions (Savickas, 2005 as cited in Du et al., 2025).

Building on this, PP act as an internal characteristic that potentially strengthens the expansion of career adaptability resources within CCT. Proactive individuals are specifically more capable to acquire stronger career concern, career control, career curiosity, and career confidence, which are the four main dimensions from career adaptability (Savickas & Porteli, 2012). From CCT, these adaptability resources are the self-regulatory strengths that help individuals to improve and respond to the vocational tasks and transitions in workforce. This is consistent with the self-regulated adaptation perspective, as proactive individuals are theorised to show higher adaptability and more capable to take effective strategies throughout the journey of shaping their career pathways over time (Savickas, 2019).

### **2.1.1.3 Big Five Personality Traits links with CCT**

From the perspective of CCT, personality traits strongly represent a crucial position as it can predict the level of one's career adaptability. Guan et al., (2016) mentioned that the big-five personality model developed by is an approach to be able to explain the reason of different actions and strategies taken by individuals that lead to various career outcomes. Big-five personality traits (BFPT) have five different dimensions that will influence CA and career outcomes potentially, which is: Conscientiousness (CONSCIE), Agreeableness (AGREEA), Openness to experience (OPENN), Extraversion (EXTRA), Neuroticism (NEURO).

Conscientiousness is the tendency of an individual being organised, responsible, goal-oriented, and self-disciplined. Agreeableness refers to an individual that have the tendency of being cooperative, kind, and trusting towards others. Openness to experience refers to how curious, imaginative and receptive ready to accept on new ideas and experiences of an individual. Openness experience also known as imagination or intellectual. Extraversion means how outgoing, extrovert, sociable or assertive one can be. Neuroticism refers to the level of an individuals' emotional instability and whether in what extent can individual bear own negative emotions such as anxiety, stress, depression, etc (John & Pervin, 1999).

### **2.1.2 Social Cognitive Career Theory (SCCT)**

Social Cognitive Career Theory (SCCT), created by Lent, Brown, and Hackett, describes career progression as a result of the interplay among cognitive, behavioural, and environmental influences. Based on Bandura's social cognitive theory, SCCT primarily emphasizes self-efficacy beliefs, anticipated outcomes, and goal-directed actions as fundamental mechanisms influencing how people cultivate interests, make decisions, and crucially persist in career-related activities. According to SCCT, people are proactive participants who can influence their career actions depending on their beliefs (self-efficacy), their expectations for future outcomes (outcome expectation), and the goals they aspire to achieve (Lent, Brown & Hackett, 1994).

#### **2.1.2.1 Career-Decision Making Self Efficacy linking to SCCT**

From SCCT, the theory emphasizes the most on self-efficacy. Self-efficacy is the individuals' judgements and beliefs on own self upon their career capabilities to arrange and carry out vocational tasks. Thus, career decision making self-efficacy (CDMSE) explains the confidence level of one's ability to complete each task successfully. It involves five dimensions: (a) Problem-solving, (b) Self-appraisal, (c) Occupational information, (d) Goal selection and (d) Planning (Taylor & Betz, 1983).

Problem solving is the capability of a person in handling difficulties and barriers connected to his or her career decisions. Moreover, self-appraisal is the individuals' belief in understanding own's interests, abilities and values. Occupational information is the extent of one's confidence in collecting and using information about careers and occupations. Goal selection is the

confidence of making the best career goals of own self. Lastly, planning is the individuals' level of confidence in making the appropriate that fit to achieve their career goals (Taylor & Betz, 1983).

#### **2.1.2.2 Career Engagement linking to SCCT**

Career engagement refers to the level which individuals are willing to participate actively in career-related behaviours like, career planning, career exploration, skill development and the involvement in career preparation activities. This align to SCCT which states that behaviours are conceptualised as goal-directed actions that are shaped from self-efficacy beliefs and outcomes expectations. This means that students that have higher engagement are more likely to have better career preparation in long term, at the same time when they have higher self-efficacy, they are believe to be able to perform careers tasks more effectively, higher possibilities of career success (Lent, Brown, Hackett, 2006).

## **2.2 Empirical Review**

### **2.2.1 Career Adaptability (CA)**

Empirical studies have consistently position career adaptability as a critical outcome to indicate the career development of an individual, particularly examine among university students that are prepare to enter the workforce. Prior research reflects that CA is associated with individual's capability to manage vocational tasks and cope with career transition. This includes managing their own psychological characteristics with work in a balance state (Savickas & Porteli, 2012; Zacher, 2014).

CA is also studied in different cultural contexts (Guan et al, 2015). Previous studies have further highlighted on the relevance of CA in contemporary career development. Research mostly involves student samples and has demonstrated that adaptable individuals tend to show greater readiness to face career challenges and are better equipped to handle evolving career demands. Moreover, meta-analytic findings also support career adaptability as the central of the study within the career construction model. This reveals that there is a systematic relationship between adaptability and adaptive career functioning (Rudolph, Lavigne, & Zacher, 2017). However, while CA has been widely studied as an important outcome, fewer studies have simultaneously examined multiple psychological, behavioural, and personality-related predictors of career adaptability within a single framework, particularly among university students.

### **2.2.2 Proactive Personality (PP)**

Empirical studies have examined proactive personality as an important individual difference factor influencing career adaptability. PP positively influences control, confidence, concern, curiosity. Previous studies stated that PP influence CA strongly in each of the four dimensions positively, which also suggest individuals that acquire proactive personality react to obstacles, embrace to changes in workforce and able to put efforts and actions to get nearer to their aim in career success (Duc et al., 2025; Tolentino et al., 2013). Moreover, individuals that have higher PP have a higher CA compare to those that with low and this will affect their future career (Taber & Blankemeyer, 2014; Jiang, 2016). This aligns with the early works of of Savickas (2019), suggests that individuals with a higher level of PP are more prepare to their future career.

### **2.2.3 Big Five Personality Traits (BFPT)**

Empirical studies have examined BFPT, as another important factors the various in each individual associated with the relationship between career adaptability. Prior studies show that CA is positively related to openness, extraversion, agreeableness, conscientiousness, but negatively related to neuroticism (Guan et al., 2015; Teixeira, Bardagi, Lassance, Magalhães, & Duarte, 2012; van Vianen, Klehe, Koen, & Dries ,2012; Zacher, 2014 as cited in Li et al. 2015). These findings proposed that students who are acquire an open mindset are more willing to accept new experiences, confident in their own, cooperative, disciplined are tend to acquire a stronger adaptability resource, whereas students who are more emotionally unstable is likely to face greater difficulty overcoming with unprecedented events in their career (Li et al., 2015).

#### **2.2.4 Career-Decision Making Self-Efficacy (CDMSE)**

Prior studies manage to consistently examined CDMSE as an essential psychological factor and can influence career behaviour in career development, particularly among university students. Early work by Taylor and Betz (1983) highlighted the strong role of self-efficacy in career decision making process. This establish CDMSE as a key component in vocational research specifically. Several studies have studied about the relation between CDMSE and CA, showing that students that are confidence in making their own career decisions have higher ability to adapt to different career situations. Moreover, studies also reveals that there is a positive relationship between CDMSE with CA. This suggests that students that feel more proficient of making the best vocational choices for themselves are more prepared to cope with vocational tasks and deal with career transitions (Rudolph, Lavigne, & Zacher, 2017; Shin, Lee, & Seo, 2019; Duffy, Douglass, & Autin, 2015; Ebenehi, Rashid, & Rahim, 2016; as cited in Low et al., 2023; Liu et al., 2023).

#### **2.2.5 Career Engagement (CE)**

Previous studies have studied CE as one of the factors of influencing CA of student's future career and influence currently in their career development. Hirschi et al., (2013) stated that individuals that high CE reflect that they have higher involvement in career planning, career self-exploration, environmental career exploration, career networking. This research indicates the higher the level of CE

can allow individuals to gain more confidence, growth, experience in managing career tasks and environmental transitions in the workforce. This aligns with previous study which CE positively influences career success, have a strong relationship with CA (Çarkıt et al., 2022; Guan et al., 2017). Thus, there is a positive relationship between CE and CA (Arlina & Aprilianti, 2019; Şeker, 2025).

## **2.3 Hypothesis Development**

### **BFPT**

H<sub>01</sub>: There is no relationship between Big Five Personality Traits and Career Adaptability

H<sub>A1</sub>: There is a relationship between Big Five Personality Traits and Career Adaptability.

### **CE**

H<sub>02</sub>: There is no relationship between Career Engagement and Career Adaptability.

H<sub>A2</sub>: There is a relationship between Career Engagement and Career Adaptability.

### **PP**

H<sub>03</sub>: There is no relationship between Proactive Personality and Career Adaptability.

H<sub>A3</sub>: There is a relationship between Proactive Personality and Career Adaptability.

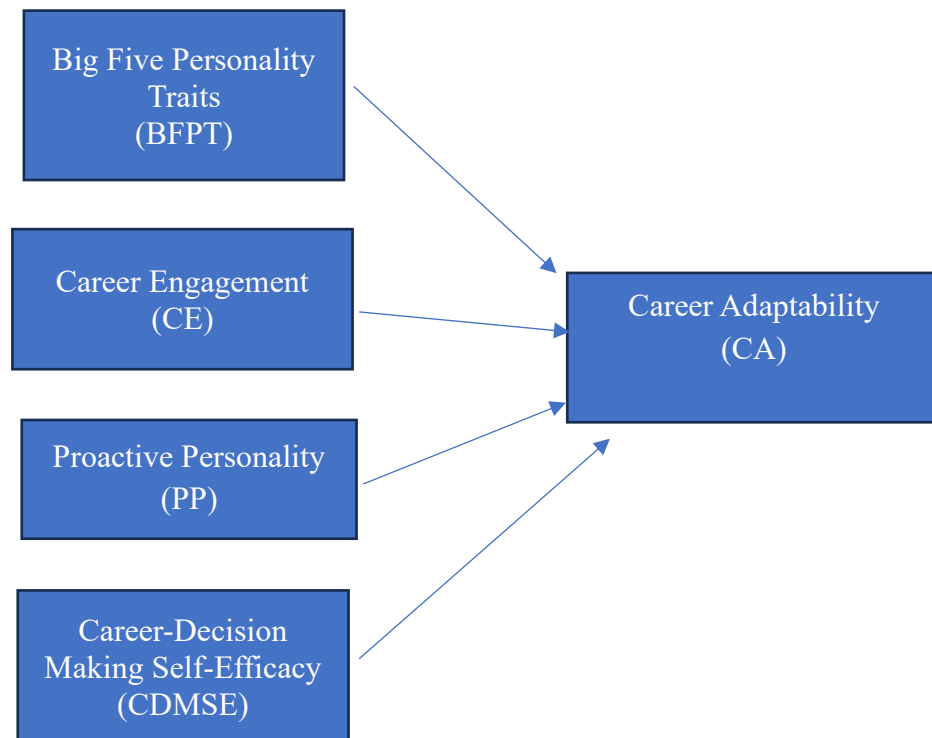
### **CDMSE**

H<sub>04</sub>: There is no relationship between Career Decision Making Self-Efficacy and Career Adaptability.

H<sub>A4</sub>: There is a relationship between Career Decision Making Self-Efficacy and Career Adaptability.

## 2.4 Conceptual Framework

Figure 2.1: Conceptual Framework



Source: Developed for the research

## 2.5 Research Gap

Existing studies reveal the importance to study CA of university students especially while facing economic uncertainty that will influence job market. However, in Malaysia, it remains limited and often confined to single-institution samples. Moreover, local studies in

Malaysia tend to examine predictors in isolation, for instance, CDMSE, PP, social support solely rather than testing an integrated model which combining behavioural (CE), cognitive (CDMSE), and dispositional (PP & BFPT) factors together.

In contrast, CE which act as a specific proactive behaviour has been underexamined among Malaysian samples, and methodology has relied heavily on cross-sectional data which has limits conclusion changes over time. Therefore, this study's purpose is to address the gaps by investigating the combination of the several factors which are CE, CDMSE, PP and BFPT to predict the CA among Malaysian university students.

## **2.6 Conclusion**

This chapter reveals the conceptual basis for examining CA among Malaysian university students by connecting both CCT and SCCT theories to the selected predictors. It also synthesised with prior findings on PP, BFPT, CDMSE and CE, and turn this evidence into the study's hypotheses. Next, this chapter then clarified the critical gaps in the Malaysian context, thereby justifying the need for the present integrated model. The upcoming chapter outlines the methods used to test these proposed relationships.

## **CHAPTER 3: METHODOLOGY**

### **3.0 Introduction**

Chapter 3 outlines the methods and steps on obtaining the data of this study. It consists several sections in detail including, the research design, population and sampling methods, data collection instruments, data collection procedures, and a brief introduction of analysis techniques used.

### **3.1 Research Design – Quantitative Research Design**

Research design is the strategic structure used for the planning, implementation and analysis of the study (Slater & Hasson, 2024). This study utilizes a quantitative research design to explore and gather information from Malaysia undergraduates' students. Quantitative research designs mainly focus on statistical data collection, moreover, analysis will be conducted to explain the research question or hypothesis. It involves a hierarchy of evidence to be able to explain the studies from a wide range from descriptive and correlational studies to more controlled experimental designs. This study aims involves exploring the naturally occurring relationships between the independent variables: Proactive Personality (PP), Big Five Personality Traits (BFPT), Career Decision Making Self-Efficacy (CDMSE), Career Engagement (CE), and the dependent variables: Career Adaptability (CA).

Internal validity is the level of reliability and accuracy within the data, proving that the relationships found between variables are trustworthy. Conversely, external validity is the findings beyond the specific sample and conditions and fit with the study. The results and quality of findings are determined by the factors affecting internal validity, while the application of these results to other settings, such as types of students are determined by external validity (Slater & Hasson, 2024).

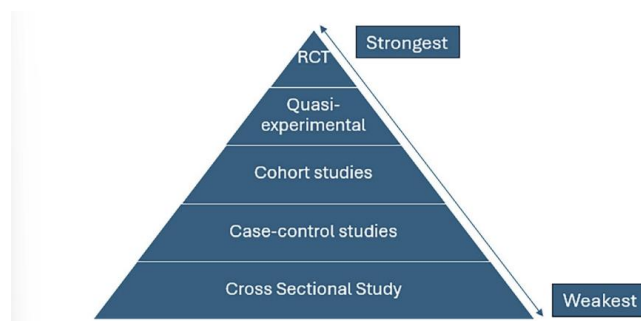
### **3.1.1 Descriptive Research Design**

There are two main quantitative research design: descriptive and experimental. Descriptive research is a non-experimental design that describe the distribution and correlation between several variables, it helps to explain how both variables are related to each other (Aggarwal & Ranganathan, 2019). However, experimental which are design that contains a variety of variables designed to increase the explanation of causality of the other variables (Slater & Hasson, 2024). Thus, this research utilizes a descriptive research design to describe to explain the distribution of key variables such as, the relationship between PP and CA among Malaysian undergraduates. As this approach focuses on providing accuracy of the population's characteristics without seeking to establish a strictly causal hypothesis (Aggarwal & Ranganathan, 2019).

Furthermore, there are two categories of descriptive research, exploratory and descriptive. Descriptive designs tend to be more precise and specifically structured with a clear direction which have specific research questions or hypotheses, whereas exploratory are more flexible with a broad research question. Our study acquires a descriptive design and involves one of the design types which is cross-sectional studies, instead of cohort designs and case-control studies. All three types of descriptive research are being examine by conducting surveys, but unlike the others, cross-sectional studies do not follow individuals up in the future (Slater & Hasson, 2024).

Cross-sectional studies are famous for collection of data on individuals, and it is cheap and convenient to use, as data are only collected at a single point in time. Thus, it is easier to provide a quick big picture on the particular whole population or a sample and is relevant to provide the impact or to describe features of a population, although it is the weakest in the ranking of hierarchy of evidence in quantitative research (Slater & Hasson, 2024). Therefore, conducting a cross-sectional survey are relevant for this study, as we are able to observe the behaviour and the thinking of each individual.

Figure 3.1: Hierarchy of Evidence



Source: (Slater & Hasson, 2024).

## **3.2 Sampling Design**

### **3.2.1 Target Population**

The aim of this research is to examine the factor affecting the career adaptability of university students in Malaysia. The focus of the respondents will be specifically on undergraduates' students that are from different background, variety of studies and different universities.

### **3.2.2 Sampling Elements**

The participants in the sample are Malaysian whom are still currently studying in any universities in Malaysia, ranging from first year of their bachelor degree to the last year of studies. Undergraduates' students are being chosen instead of other students involve in (HEI) Higher Education Institutes are because students like Masters and Postgraduate often possess a higher level of work experience and professional maturity, whereas, undergraduate students are more in an exploring stage. By selecting undergraduates solely, can make sample homogeneous, making results more accurate.

### 3.2.3 Sampling Techniques

Sampling is the selection of sample participations from an individual or a large group for a certain type of research purpose. Instead of utilizing population to obtain data, sample is a better choice as, as population is costly and time demanding for researchers to survey the whole population for a research study. Thus, sample simply means a pack of individuals, things, or things being collected from a vast group or population for measurement in the research. Sample are gather based on several aspects that researchers aim to examine on, in order to attain accurate data. Sampling have been categorised in two groups: probability and nonprobability (Makwana et al., 2023).

Probability sampling is used when each member in the particular population has an equal opportunity of being chosen to include in the sample, as each member are consider a potential respondent that are able to provide information for the research. It includes four types of sampling: simple random, systematic, stratified sample, cluster sampling. Conversely, in nonprobability sampling the opportunity of being chosen in the sample from the particular population for every member is unknown. It also involves four types of sampling techniques: convenience sampling, quota sampling, snowball sampling and purposive sampling (Makwana et al., 2023).

In this study, nonprobability sampling is being utilized and adopting convenience sampling. During the process of convenience sampling the sample members are being choose based on the accessibility of the researcher. So, the selections of sample members are depending on those whom are readily available and whom fulfil the criteria of the research study (Makwana et al., 2023).

Convenience sampling is chosen in this study instead of stratified sampling is due to the difficulties in accessing a vast number of students and inviting students to participate in the survey from specific universities all around Malaysia. Thus, the survey is being distributed to Malaysia's university undergraduates' students via Google form both face to face and online.

### 3.2.4 Sampling Size

The sample size of this study is being determined by the theory of Krejcie and Morgan (1970) by using the formula or using the Table 3.2 shown below:

$$s = \frac{X^2 NP(1 - P)}{d^2 (N - 1) + X^2 P (1 - P)}$$

s = required sample size

$X^2$  = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N = the population size

P = the population proportion (assumed to be .50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (.05).

*Source: Krejcie and Morgan (1970)*

Table 3.2: Determinants of Sample Size, Krejcie and Morgan Table

| <i>N</i> | <i>S</i> | <i>N</i> | <i>S</i> | <i>N</i> | <i>S</i> |
|----------|----------|----------|----------|----------|----------|
| 10       | 10       | 220      | 140      | 1200     | 291      |
| 15       | 14       | 230      | 144      | 1300     | 297      |
| 20       | 19       | 240      | 148      | 1400     | 302      |
| 25       | 24       | 250      | 152      | 1500     | 306      |
| 30       | 28       | 260      | 155      | 1600     | 310      |
| 35       | 32       | 270      | 159      | 1700     | 313      |
| 40       | 36       | 280      | 162      | 1800     | 317      |
| 45       | 40       | 290      | 165      | 1900     | 320      |
| 50       | 44       | 300      | 169      | 2000     | 322      |
| 55       | 48       | 320      | 175      | 2200     | 327      |
| 60       | 52       | 340      | 181      | 2400     | 331      |
| 65       | 56       | 360      | 186      | 2600     | 335      |
| 70       | 59       | 380      | 191      | 2800     | 338      |
| 75       | 63       | 400      | 196      | 3000     | 341      |
| 80       | 66       | 420      | 201      | 3500     | 346      |
| 85       | 70       | 440      | 205      | 4000     | 351      |
| 90       | 73       | 460      | 210      | 4500     | 354      |
| 95       | 76       | 480      | 214      | 5000     | 357      |
| 100      | 80       | 500      | 217      | 6000     | 361      |
| 110      | 86       | 550      | 226      | 7000     | 364      |
| 120      | 92       | 600      | 234      | 8000     | 367      |
| 130      | 97       | 650      | 242      | 9000     | 368      |
| 140      | 103      | 700      | 248      | 10000    | 370      |
| 150      | 108      | 750      | 254      | 15000    | 375      |
| 160      | 113      | 800      | 260      | 20000    | 377      |
| 170      | 118      | 850      | 265      | 30000    | 379      |
| 180      | 123      | 900      | 269      | 40000    | 380      |
| 190      | 127      | 950      | 274      | 50000    | 381      |
| 200      | 132      | 1000     | 278      | 75000    | 382      |
| 210      | 136      | 1100     | 285      | 100000   | 384      |

Note.—*N* is population size.  
*S* is sample size.

Source: Krejcie and Morgan (1970)

In the Ministry of Higher Education of Malaysia (MOHE)'s the latest report in the year 2024, male undergraduates are 290,093 students and female are 389,064 students, which make the total numbers of students enrolling for bachelor degree are total 679,157 students, which are still actively doing their degree. As our sample size is  $N=679,157$  thus determining the sample size based on both the equation and table are 384 undergraduates' students. Total of 384 questionnaires will be distributed based on the accessibility of the researcher, and this study aim to examine five variables.

### **3.3 Data Collection Methods**

#### **3.3.1 Primary Data**

In this study, data are being acquired using primary data. Data will be collected through questionnaire and issued both via online and face to face. The distribution of the questionnaire is sent through a link to respondents via social medias such as Instagram, WhatsApp, RedNote. Questionnaire are being scanned from a QR code if is collected face to face from the participants. This survey aims to obtain a wider circle of undergraduate students to ensure the reliability of the data. The participation of the survey will be voluntary, and consented by the participants. The survey takes about 5-10 minutes to complete, data collection will continue until a target sample size of 384 responses is approximately reached.

### **3.4 Research Instruments**

#### **3.4.1 Questionnaire Design**

The questionnaire is divided in six sections, Section A, B, C, D, E, F. It starts from Section A: Demographic Information, this part includes participants' personal information such as, participants' age, gender, academic year, courses taken, types of institutions, name of university, internship experience, participation in university

career activities. Following by Section B: Mini-IPIP, Section C: CE, Section D: PP, Section E: CDMSE, Section F: CA. Excluding section A, the rest sections are measure using the 5-point Likert Scale. This is to gauge the level of agreement of the statements based on participants' self-judgements which are related to the variables.

### **3.4.2 Instruments Developments**

All instruments are being measured in 5-point Likert scale, from (1) Strong Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree. Cronbach alpha, which is an indicator of measuring the consistency and reliability of the instruments. For each instrument, the results of alphas are considered in good internal reliability ranging from 0.7 to 0.8.

Big Five Personality Traits (BFPT) will be measured using the 20-Items Big Five Mini-IPP, which is a short form developed by Donnellan, Oswald, Baird & Lucas (2006) and is being adapted for the use in this study. The instrument is divided in five dimensions of personality which are: Agreeableness ( $\alpha = 0.82$ ), Conscientiousness ( $\alpha = 0.71$ ), Extraversion ( $\alpha = 0.85$ ), Neuroticism ( $\alpha = 0.79$ ), Intellect/ Imagination ( $\alpha = 0.80$ ). Each of these five dimensions has all obtained a Cronbach's alpha value above 0.60. this indicates a good internal reliability. This shorter version of instrument is considered a suitable instrument for college-students' samples (Donnellan, Oswald, Baird, Lucas, 2006).

The Career Engagement Scale (CES) is developed by Hirschi, Freund & Herrmann (2014), is an essential instrument for examining the extent on how individuals actively manage their careers. It consists of 9-items in the survey. As some scales primarily focus on measuring proactive behaviour, this scale offers a more comprehensive approach by providing insights into a broader concept of career

behaviours. It reflects how individuals be active and take responsibility for their career development. The scale has presented a strong reliability, in results of Cronbach's alpha values ranging from 0.83 to 0.88, indicating excellent internal consistency across different samples (Hirschi, Freund & Herrmann, 2014).

Proactive Personality Scale (PPS) developed by Bateman & Crant (1993), consists of 17-items which designed to evaluate the level of proactivity in individuals. As Bateman & Crant (1993) mentioned that proactive behaviour can lead to changes in the environment and empower individuals to possess greater control over their surroundings. This scale represents good reliability by resulting values ranging from 0.83 to 0.89, which indicates strong internal consistency.

Career Decision Making Self-Efficacy Scale (CDMSE Scale), by Taylor & Betz (1983) which contains 50-items is grouped into five subscales: Goal Orientation ( $\alpha = 0.87$ ), Occupational Information ( $\alpha = 0.89$ ), Problem Solving ( $\alpha = 0.86$ ), Planning ( $\alpha = 0.89$ ), Self-Appraisal ( $\alpha = 0.88$ ). These scales assess the self-efficacy expectations of individuals regarding tasks involved in career decision making. Additionally, this scale aims to measure the confidence of individuals on completing tasks that required to make informed and effective career decisions. The alphas that are all above 0.7 indicates solid internal consistency (Taylor & Betz, 1983).

Career Adapt-Abilities Scale Short Form (CAAS-SF), developed by Maggiori, Rossier & Savickas (2017), designed to measure individual's adaptability in their careers. The scale consists of 12-items which is divided into four key subscales: Concern ( $\alpha = 0.82$ ), Control ( $\alpha = 0.82$ ), Curiosity ( $\alpha = 0.77$ ), and Confidence ( $\alpha = 0.83$ ). The scales show strong reliability of this instrument with result of alpha values above 0.7 for each subscale. The total career adaptability (CA) score has alpha value of 0.90, indicating excellent reliability and consistency for the scale.

Table 3.3 Instruments Development below presents the original items for each scale and its corresponding dimensions along with the adapted items for the use in this study, which reflect slight modifications to tailor the items for the current context.

Table 3.3: Instruments Development

| Scale Measurements                                                                     |                                            |                              |        |                                                        |                                                           |
|----------------------------------------------------------------------------------------|--------------------------------------------|------------------------------|--------|--------------------------------------------------------|-----------------------------------------------------------|
| <i>Big Five Mini-International Personality Item Pool (20 items Big Five Mini-IPIP)</i> |                                            |                              |        |                                                        |                                                           |
| Variables                                                                              | Source                                     | Dimensions                   |        | Original items                                         | Adapted Items                                             |
| Big Five Personality Traits (BFPT)                                                     | Donnellan, Oswald, Baird, and Lucas (2006) | <b>Agreeableness</b>         | BFPT1  | Sympathize with others' feelings                       | I often sympathize with others' feelings                  |
|                                                                                        |                                            |                              | BFPT2  | Am not interested in other people's problems.          | I am often not interested in other people's problems.     |
|                                                                                        |                                            |                              | BFPT3  | Feel others' emotions.                                 | I often able to feel others' emotions.                    |
|                                                                                        |                                            |                              | BFPT4  | Am not really interested in others.                    | I am not really interested in others.                     |
|                                                                                        |                                            | <b>Conscientiousness</b>     | BFPT5  | Get chores done right away.                            | I always get chores done right away.                      |
|                                                                                        |                                            |                              | BFPT 6 | Often forget to put things back in their proper place. | I always forget to put things back in their proper place. |
|                                                                                        |                                            |                              | BFPT7  | Like order.                                            | I like to follow order.                                   |
|                                                                                        |                                            |                              | BFPT8  | Make a mess of things.                                 | I like to keep my things tidy.                            |
|                                                                                        |                                            | <b>Extraversion</b>          | BFPT9  | Am the life of the party.                              | I like to social with others.                             |
|                                                                                        |                                            |                              | BFPT10 | Don't talk a lot.                                      | I do not talk a lot                                       |
|                                                                                        |                                            |                              | BFPT11 | Talk to a lot of different people at parties.          | I usually to a lot of different people at parties.        |
|                                                                                        |                                            |                              | BFPT12 | Keep in the background.                                | I prefer not to stand out in groups.                      |
|                                                                                        |                                            | <b>Neuroticism</b>           | BFPT13 | Have frequent mood swings.                             | I have frequent mood swings.                              |
|                                                                                        |                                            |                              | BFPT14 | Am relaxed most of the time.                           | I am relaxed most of the time.                            |
|                                                                                        |                                            |                              | BFPT15 | Get upset easily.                                      | I get upset easily.                                       |
|                                                                                        |                                            |                              | BFPT16 | Seldom feel blue.                                      | I seldom feel blue.                                       |
|                                                                                        |                                            | <b>Intellect/Imagination</b> | BFPT17 | Have a vivid imagination.                              | I always have a vivid imagination.                        |
|                                                                                        |                                            |                              | BFPT18 | Am not interested in abstract ideas.                   | I am not interested in abstract ideas.                    |

|                                      |                                                    |            | BFPT19 | Have difficulty understanding abstract ideas.                                                                        | I have difficulty understanding ideas.                         |
|--------------------------------------|----------------------------------------------------|------------|--------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|                                      |                                                    |            | BFPT20 | Do not have a good imagination.                                                                                      | I do not have a good imagination.                              |
| <b>Career Engagement Scale (CES)</b> |                                                    |            |        |                                                                                                                      |                                                                |
| Variables                            | Source                                             | Dimensions |        | Original Items                                                                                                       | Adapted Items                                                  |
| Career Engagement (CE)               | Hirschi, A., Freund, P. A., & Herrmann, A. (2014). | -          | CE1    | Actively sought to design your professional future                                                                   | I actively seek ways to plan for my future.                    |
|                                      |                                                    |            | CE2    | Undertook things to achieve your career goals                                                                        | I take action to achieve my career goals.                      |
|                                      |                                                    |            | CE3    | Cared for the development of your career                                                                             | I know I am responsible for my career development.             |
|                                      |                                                    |            | CE4    | Developed plans and goals for your future career                                                                     | I plan for my future goals.                                    |
|                                      |                                                    |            | CE5    | Sincerely thought about personal values, interests, abilities and weaknesses                                         | I reflect honestly on my own capabilities.                     |
|                                      |                                                    |            | CE6    | Collected information about employers, professional development opportunities or the job market in your desired area | I gather information on opportunities in my desired field.     |
|                                      |                                                    |            | CE7    | Established or maintained contacts with people who can help you professionally                                       | I maintain the connections with people who can help my career. |
|                                      |                                                    |            | CE8    | Voluntarily participated in further education, training or other                                                     | I voluntarily participate in training for my career.           |

|                                          |                                        |            |     | events to support your career                                              |                                                                               |
|------------------------------------------|----------------------------------------|------------|-----|----------------------------------------------------------------------------|-------------------------------------------------------------------------------|
|                                          |                                        |            | CE9 | Assumed duties or positions that will help you progress professionally     | I take on duties or positions that help my professional advancement.          |
| <b>Proactive Personality Scale (PES)</b> |                                        |            |     |                                                                            |                                                                               |
| Variable                                 | Source                                 | Dimensions |     | Original Items                                                             | Adapted Items                                                                 |
| Proactive Personality (PP)               | Bateman, T. S., & Crant, J. M. (1993). | -          | PP1 | I am constantly on the lookout for new ways to improve my life.            | I am driven to make a difference to improve my future life.                   |
|                                          |                                        |            | PP2 | I feel driven to make a difference in my community, and maybe the world.   | I am driven to make a difference in my future jobs.                           |
|                                          |                                        |            | PP3 | I tend to let others take the initiative to start new projects.            | I tend to let others take initiatives for my future jobs.                     |
|                                          |                                        |            | PP4 | Wherever I have been, I have been powerful force for constructive changes. | I have strong force to embrace constructive changes.                          |
|                                          |                                        |            | PP5 | I enjoy facing and overcoming obstacles to my ideas.                       | I enjoy overcoming obstacles to my ideas.                                     |
|                                          |                                        |            | PP6 | Nothing is more exciting than seeing my ideas turn into reality.           | I feel very exciting to see my ideas become reality.                          |
|                                          |                                        |            | PP7 | If I see something I don't like, I fix it.                                 | If I see something wrong, I fix it.                                           |
|                                          |                                        |            | PP8 | No matter what the odds, if I believe in something I will make it happen.  | I believe in my ability to make something happen, no matter what the odds is. |

|                                                                 |                                      |                       |        |                                                                               |                                                                        |
|-----------------------------------------------------------------|--------------------------------------|-----------------------|--------|-------------------------------------------------------------------------------|------------------------------------------------------------------------|
|                                                                 |                                      |                       | PP9    | I love being a champion for my ideas, even against others' opposition.        | I am insisting to lay out my ideas even though others might not agree. |
|                                                                 |                                      |                       | PP10   | I excel at identifying opportunities                                          | I am good at identifying opportunities.                                |
|                                                                 |                                      |                       | PP11   | I am always looking for better ways to do things.                             | I constantly look for better ways for my future jobs.                  |
|                                                                 |                                      |                       | PP12   | If I believe in an idea, no obstacle will prevent me from making it happen    | If I believe in an idea, no obstacle will stop me from achieving it.   |
|                                                                 |                                      |                       | PP13   | I love to challenge the status quo.                                           | I love to challenge the current way of doing things.                   |
|                                                                 |                                      |                       | PP14   | When I have a problem, I tackle it head-on.                                   | I tackle problems directly.                                            |
|                                                                 |                                      |                       | PP15   | I am great at turning problems into opportunities                             | I am great at turning problems into opportunities.                     |
|                                                                 |                                      |                       | PP16   | I can spot a good opportunity long before others can                          | I can identify good opportunities before others.                       |
|                                                                 |                                      |                       | PP17   | If I see someone in trouble, I help out in any way I can                      | I help people in trouble in any way I can.                             |
| <b>Career Decision Making Self-Efficacy Scale (CDMSE Scale)</b> |                                      |                       |        |                                                                               |                                                                        |
| Variables                                                       | Sources                              | Dimensions            |        | Original Items                                                                | Adapted Items                                                          |
| Career Decision Making Self Efficacy                            | Taylor, K. M., & Betz, N. E. (1983). | <b>Goal Selection</b> | CDMSE1 | Make a career decision and then not worry about whether it was right or wrong | I can make the best career decision.                                   |
|                                                                 |                                      |                       | CDMSE2 | Choose a major or career that your parents do not approve of.                 | I can make my career decision.                                         |
|                                                                 |                                      |                       | CDMSE3 | Choose the major you want even though the job                                 | I am not afraid to choose a major that I want in my studies            |

|  |  |                                 |         |                                                                                    |                                                               |
|--|--|---------------------------------|---------|------------------------------------------------------------------------------------|---------------------------------------------------------------|
|  |  |                                 |         | market is declining with opportunities in this field.                              |                                                               |
|  |  |                                 | CDMSE4  | Choose a career in which most workers are the opposite sex.                        | I choose a career which most workers are the opposite gender. |
|  |  |                                 | CDMSE5  | Select one occupation from a list of potential occupations you are considering.    | I can choose my occupation.                                   |
|  |  |                                 | CDMSE6  | Choose a career that will fit your preferred lifestyle.                            | I can choose a career that fits my lifestyle.                 |
|  |  |                                 | CDMSE7  | Choose a major or career that will suit your abilities.                            | I can choose career that suit my ability.                     |
|  |  |                                 | CDMSE8  | Choose a major or career that will fit your interests.                             | I can choose a major or career that will fit my interests.    |
|  |  |                                 | CDMSE9  | Choose the best major for you even if it took longer to finish your college degree | I can choose the best major for myself.                       |
|  |  |                                 | CDMSE10 | Select one major from a list of potential majors you are considering               | I can choose the best major for myself.                       |
|  |  | <b>Occupational Information</b> | CDMSE11 | Find information about companies who employ people with college majors in English  | I can look up information on hiring requirements.             |
|  |  |                                 | CDMSE12 | Find information about educational programs in engineering                         | I can find information about occupations                      |

|  |  |                        |          |                                                                                  |                                                                             |
|--|--|------------------------|----------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
|  |  |                        | CDMSE13  | Describe the job duties of the career/ occupation you would like to pursue.      | I can describe the job duties of my desired career.                         |
|  |  |                        | CDMSE14  | Find information in the library about occupations you are interested in.         | I can find information about occupations I'm interested in.                 |
|  |  |                        | CDMSE15  | Find out the employment trends for an occupation in the 1980s.                   | I can study the historical employment trends for an occupation.             |
|  |  |                        | CDMSE 16 | Find information about graduate or professional schools.                         | I can find information about job market.                                    |
|  |  |                        | CDMSE 17 | Find out about the average yearly earnings of people in an occupation            | I can find information about the salary range of occupation.                |
|  |  |                        | CDMSE 18 | Ask a faculty member about graduate schools and job opportunities in your major. | I am confident to ask about job opportunities available in the job market.  |
|  |  |                        | CDMSE 19 | Talk to a faculty member in a department you are considering for a major.        | I am confident to talk to a faculty member in a department I'm considering. |
|  |  |                        | CDMSE 20 | Talk with a person already employed in the field you are interested in.          | I can to talk with someone working in my field of interest.                 |
|  |  | <b>Problem Solving</b> | CDMSE 21 | Come up with a strategy to deal with flunking out of college.                    | I can develop a strategy to deal with my academic failure.                  |
|  |  |                        | CDMSE 22 | Go back to school to get a graduate                                              | I returned to school for a graduate degree after                            |

|  |  |  |          |                                                                                                               |                                                                                     |
|--|--|--|----------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |          | degree after being out of school 5-10 years.                                                                  | being away for many years.                                                          |
|  |  |  | CDMSE 23 | Change occupations if you are not satisfied with the one you enter.                                           | I can change occupations if I am dissatisfied with the first choice.                |
|  |  |  | CDMSE 24 | Determine the steps to take if you are having academic trouble with an aspect of your chosen major.           | I am determining in my steps to take if I have academic trouble in my major.        |
|  |  |  | CDMSE 25 | Identify some reasonable major or career alternatives if you are unable to get your first choice.             | I can identify reasonable alternatives if my first-choice major is unattainable.    |
|  |  |  | CDMSE 26 | Change majors if you did not like your first choice.                                                          | I am confident of changing majors if I dislike my first choice.                     |
|  |  |  | CDMSE 27 | Apply again to graduate schools after being rejected the first time.                                          | I am not afraid to reapply to graduate schools after initial rejection.             |
|  |  |  | CDMSE 28 | Move to another city to get the kind of job you really would like.                                            | I can move to another city to get my desired job.                                   |
|  |  |  | CDMSE 29 | Persistently work at your major or career goal even when you get frustrated.                                  | I am confident to persist toward my career goal even when I am frustrated.          |
|  |  |  | CDMSE 30 | Resist attempts of parents or friends to push you into a career or major you believe is beyond your abilities | I can resist pressure from others to pursue a career beyond my perceived abilities. |

|  |  |                       |          |                                                                                                             |                                                                                   |
|--|--|-----------------------|----------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|  |  | <b>Planning</b>       | CDMSE 31 | Make a plan of your goals for the next five years.                                                          | I am capable to plan my goals for the next five years.                            |
|  |  |                       | CDMSE 32 | Prepare a good resume.                                                                                      | I am capable to prepare a good resume.                                            |
|  |  |                       | CDMSE 33 | Get letters of recommendation from your professors.                                                         | I am confident that I will be able to get recommendation letters from professors. |
|  |  |                       | CDMSE 34 | Find and use the placement office on campus.                                                                | I can find and use the campus career placement office.                            |
|  |  |                       | CDMSE 35 | Successfully manage the job interview process.                                                              | I can successfully manage job interview process.                                  |
|  |  |                       | CDMSE 36 | Plan course work outside of your major that will help you in your future career.                            | I am capable to plan non-major coursework that supports my future career.         |
|  |  |                       | CDMSE 37 | Identify employers, firms, institutions relevant to your career possibilities                               | I can identify relevant employers or institutions for my career.                  |
|  |  |                       | CDMSE 38 | Determine the steps you need to take to successfully complete your chosen major.                            | I am confident to determine on the steps needed to complete my major.             |
|  |  |                       | CDMSE 39 | Decide whether or not you will need to attend graduate or professional school to achieve your career goals. | I am confident to decide if graduate school is needed for my career goals.        |
|  |  |                       | CDMSE 40 | Get involved in a work experience relevant to your future goals.                                            | I am confident to get relevant work experience for my future career goals.        |
|  |  | <b>Self-Appraisal</b> | CDMSE 41 | Accurately assess your abilities.                                                                           | I can accurately assess my abilities.                                             |

|                                                          |                              |                |          |                                                                                      |                                                                               |
|----------------------------------------------------------|------------------------------|----------------|----------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
|                                                          |                              |                | CDMSE 42 | Figure out whether you have the ability to successfully take math courses.           | I know whether my ability can successfully take math courses.                 |
|                                                          |                              |                | CDMSE 43 | Figure out what you are and are not ready to sacrifice to achieve your career goals. | I know what sacrifices I am willing or unwilling to make for my career goals. |
|                                                          |                              |                | CDMSE 44 | Determine what your ideal job would be.                                              | I am confident to determine my ideal job.                                     |
|                                                          |                              |                | CDMSE 45 | List several majors that you are interested in.                                      | I can list several majors I am interested in.                                 |
|                                                          |                              |                | CDMSE 46 | Decide what you value most in an occupation.                                         | I can decide what I value most in a job.                                      |
|                                                          |                              |                | CDMSE 47 | Determine the academic subject you have the most ability in.                         | I am confident to determine the academic subject I have the most ability in.  |
|                                                          |                              |                | CDMSE 48 | List several occupations that you are interested in.                                 | I can list several occupations I am interested in.                            |
|                                                          |                              |                | CDMSE 49 | Define the type of lifestyle you would like to live.                                 | I am confident to define the type of lifestyle I would like to live.          |
|                                                          |                              |                | CDMSE 50 | Determine whether you would rather work primarily with people or with information    | I am confident to decide whether I prefer to work with people or information. |
| <b>Career Adapt-Abilities Scale Short Form (CAAS-SF)</b> |                              |                |          |                                                                                      |                                                                               |
| Variables                                                | Sources                      | Dimensions     |          | Original Items                                                                       | Adapted Items                                                                 |
| Career Adaptability (CA)                                 | Maggiori, C., Rossier, J., & | <b>Concern</b> | CA1      | Thinking about what my future will be like                                           | I am always thinking about what my future will be like.                       |
|                                                          |                              |                | CA2      | Preparing for the future                                                             | I am prepared for my future.                                                  |

|  |                               |                   |      |                                                                                        |                                                        |
|--|-------------------------------|-------------------|------|----------------------------------------------------------------------------------------|--------------------------------------------------------|
|  | Savickas,<br>M. L.<br>(2017). |                   | CA3  | Becoming aware<br>of the educational<br>and vocational<br>choices that I<br>must make. | I am always aware of<br>choices I must make.           |
|  |                               | <b>Control</b>    | CA4  | Making decisions<br>by myself                                                          | I can always make<br>decisions by myself.              |
|  |                               |                   | CA5  | Taking<br>responsibility for<br>my actions                                             | I can always take<br>responsibility for my<br>actions. |
|  |                               |                   | CA6  | Counting on<br>myself                                                                  | I know I can count on<br>myself.                       |
|  |                               | <b>Curiosity</b>  | CA7  | Looking for<br>opportunities to<br>grow as a person                                    | I always look for<br>opportunities to grow.            |
|  |                               |                   | CA8  | Investigating<br>options before<br>making a choice                                     | I always explore options<br>before making a choice.    |
|  |                               |                   | CA9  | Observing<br>different ways of<br>doing thing                                          | I always see different<br>ways of doing thing.         |
|  |                               | <b>Confidence</b> | CA10 | Taking care to do<br>things well                                                       | I am confident in my<br>ability to do things well.     |
|  |                               |                   | CA11 | Learning new<br>skills                                                                 | I am capable to learn<br>new skills.                   |
|  |                               |                   | CA12 | Working up to my<br>ability                                                            | I am confident in my<br>capability.                    |

Source: Developed for the research

### 3.5 Constructs Measurements

The scale of measurements is being developed by a psychologist, Stanley Smith Stevens, in 1946. It is also known as the levels of measurement helps to determine how data is collected, analysed, and presented. There are four levels that are able to define which type

of mathematical operations that should be performed on the data. They are nominal, ordinal interval and ratio scale (Stevens, 1946).

### **3.5.1 Nominal Scale**

Nominal scale is seen as the most basic level of measurement which data (numbers or names) is merely be able to classify and label them in order to put them in category. There is no natural order or ranking can be made (Stevens, 1946; Jacoby, 1999). For example, gender, types of university. Majority of the questions in Section A are classified by using this nominal scale.

### **3.5.2 Ordinal Scale**

Ordinal scale emphasizes on organizing data based on the rank or order of the data, regardless of the distance between them (Stevens, 1946; Jacoby, 1999). For example, the 5-point Likert scale by ranking from strongly agree to strongly disagree, this helps to shows the level of adaptability students seems to agree for their career. This mostly can be seen occurring from Section B to F.

### **3.5.3 Ratio Scale**

Ratio scale measurement involves all the properties of the interval scale, which is the best measurement of all, as it involves a true zero point, which help to indicates the total absence of the variable. Data categorised in using ratio scale can also be place in ranking or order but ratio scale is the only one that involves a true zero point. This means that it allows statements about proportions (Stevens, 1946; Jacoby, 1999). For example, age, year of study. Questions like this are involve in Section A as well.

## **3.6 Data Processing**

### **3.6.1 Data Checking**

The purpose of data checking is to ensure the quality of the measurement before any mathematical and systematic analysis operations are performed, so that this makes results more reliable and accurate. This includes ensuring and verifying the respondents' consent of participating for the survey. Before the start of the questionnaire, Section A, respondents that agreed on the Personal Data Collection Notice can only be involve in the sample, those that marked "I disagree" must be immediately discarded. Moreover, researchers need to perform precise check on the completeness of the questionnaire, making sure that respondents that are consented have completed the entire questionnaire.

### **3.6.2 Data Editing**

Data editing includes processes on reviewing the data for consistency, detection of errors and identifying outliers and correction of errors. For example, to ensure students those states to be 22 years old to mark PhD, as their highest level of study, this will create inconsistency. Besides, identifying outliers simply means to ensure an impossible number does not appear to be include in the data. The purpose of data editing is to manage the irregulates in the data, in order to improve the quality, accuracy and adequacy of the data. Data which are containing errors or responses are bias, researchers should be responsible to exclude them.

### **3.6.3 Data Coding**

Data coding is the process where data are being transformed to numerical values or codes which is essential while analysing them statistically. The purpose of performing data coding is to ease the process on analysis of data so, data can be run smoothly by using the SPSS software. The numerical codes being used should be precise and consistent, for example, responses start from Section B to D on the scale of 5-likert scale, (1) Strong Disagree, (2) Disagree, (3) Neutral, (4) Agree, and, (5) Strongly agree. Each level of agreement will be code in different numbers. The Table 3.4 below shows the example of data coding.

Table 3.4: Constructs of Measurement

| <b>Section 1: Demographic Questions</b> |                                             |              |                                                                                    |
|-----------------------------------------|---------------------------------------------|--------------|------------------------------------------------------------------------------------|
|                                         | Constructs                                  | Measurements | Coding                                                                             |
|                                         | Age                                         | Ratio        | 1 = 18 – 22<br><br>2 = 23 – 27                                                     |
| 1                                       | Gender                                      | Nominal      | 1 = Male<br><br>2 = Female                                                         |
| 2                                       | Year of Study                               | Ordinal      | 1 = Year 1<br><br>2 = Year 2<br><br>3 = Year 3<br><br>4 = Year 4<br><br>5 = Year 5 |
| 3                                       | Faculty                                     | Nominal      | 1 = Arts<br><br>2 = Science                                                        |
| 4                                       | Types of institution                        | Nominal      | 1 = Public university<br><br>2 = Private university                                |
| 5                                       | Internship / industrial training experience | Nominal      | 1 = None<br><br>2 = Completed                                                      |

|                                                                     |                                                                |              |                                                                                               |
|---------------------------------------------------------------------|----------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------|
|                                                                     |                                                                |              | 3 = Currently doing<br><br>4 = Planned (next 12 months)                                       |
| 6                                                                   | Participation in university career activities                  | Ordinal      | 1 = None<br><br>2 = 1-2 times<br><br>3 = 3-5 times<br><br>4 = 6+ times                        |
| 7                                                                   | Living arrangement                                             | Nominal      | 1 = On-campus<br><br>2 = Off-campus (with family)<br><br>3 = Off-campus (without family)      |
| 8                                                                   | Scholarship/financial aid status                               | Nominal      | 1 = Yes<br><br>2 = No                                                                         |
| 9                                                                   | How ready do you feel to enter the workforce after graduation? | Ordinal      | 1 = Very Unready<br><br>2 = Unready<br><br>3 = Neutral<br><br>4 = Ready<br><br>5 = Very Ready |
| <b>Section B: Big Five Mini-International Personality Item Pool</b> |                                                                |              |                                                                                               |
|                                                                     | Constructs                                                     | Measurements | Coding                                                                                        |

|   |                                                       |         |                                                                                                       |
|---|-------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------|
| 1 | I am often not interested in other people's problems. | Ordinal | 1 = Strong Disagree<br><br>2 = Disagree<br><br>3 = Neutral<br><br>4 = Agree<br><br>5 = Strongly Agree |
| 2 | I like to follow order.                               | Ordinal | 1 = Strong Disagree<br><br>2 = Disagree<br><br>3 = Neutral<br><br>4 = Agree<br><br>5 = Strongly Agree |
| 3 | I do not talk a lot.                                  | Ordinal | 1 = Strong Disagree<br><br>2 = Disagree<br><br>3 = Neutral<br><br>4 = Agree<br><br>5 = Strongly Agree |

Source: Development of Study

#### **3.6.4 Data Transcribing**

After coding, then researchers shall proceed to data transcribing. Data obtained should be coded in the form of Excel sheet and input into the SPSS software for the mathematical process. After all data are successfully input in the software, analysis result can then be provided.

#### **3.6.5 Data Cleaning**

After analysing, researchers should check upon dataset that might possibly distort the results. For instance, as mentioned in data editing, outliers that can distort the analysis results. Researchers might have overlooked the errors of data while data editing due to the vast numbers. This process aims to ensure the reliability and eliminating the risk of misleading results.

### **3.7 Data Analysis**

Data analysis is the systematic process of converting raw data into valuable information and ideas to be fathom easily either into qualitatively or quantitatively structure raw data. It involves process in interpreting data into study's findings and provides insights on the relationships, distance, difference, strength and effect between variables (Dawit, 2020).

This study utilized Statistical Package for the Social Sciences (SPSS) software for data analysing.

### **3.7.1 Descriptive Analysis**

Descriptive analysis enables researchers to create study ideas and guide further analysis by allowing them to explore data patterns and trends. It helps to provide insights of the sample size before inferential analysis is made. This is because descriptive analysis is able to organize, summarize, and present information very effectively, as it is able to provide results like measure of frequency, central of tendency, variability of the data, distribution of the data (e.g.: normal distribution) (Alabi, 2023). It provides summary of the measures. Therefore, this study, descriptive analysis helps to outline and categorised the data information of Section A of the respondents' demographic information and also the descriptive data of the variables.

#### **3.7.1.1 Central of Tendency**

Central of tendency is the statistical measurements providing single value (E.g.: mean, median, mode) for the distribution to represents the entire distribution. Central of tendency are usually the first order of measures as it is the fundamental of almost all analytical techniques. Without a central value, analytical data like dispersion, symmetry, inference, normality, etc, are not able to identify and calculate. This is because it helps to perform

essential tests like t-tests and ANOVA to determine the level of significance of the data.

Mean is seen as the average value of the whole set of data. Moreover, median is positioned in the central value of the observation also known as positional average. Mode is values that appears in the observation most often. Mean and mode will be affected by extreme values (outliers) but not median. A representative value like mean, median and mode is consider good when it includes all observations and not affected by an outlier (Mishra et al., 2019).

#### **3.7.1.2 Measures of Dispersion**

Standard deviation is the measurement of how dispersed the values of mean are, which also means the dispersion of mean. Moreover, variance is the average of the squared difference from the mean values. Lastly standard error is the difference between the sample's (n) mean and population (N) mean (Mishra et al., 2019).

All these values are useful to obtain the results of normality tests. This is to examine whether the data set are normally distributed. The results of normality test can be shown graphically or statistically. In this study, skewness and kurtosis is utilize to test normality of the overall data.

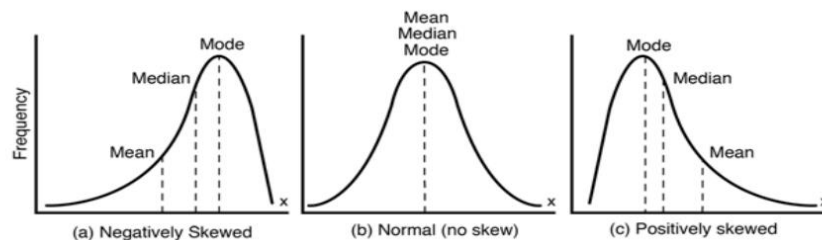
Skewness is a measure of the asymmetry of the distribution of a variable. A distribution is skewed if one tail is longer than the other, indicating a lack of symmetry. Figure 3.2 illustrates the three types of skewness. In Figure 3.2 (b), distribution is normal, this implies that mean, median and mode are approximately equal. A perfectly normal distribution usually has a skewness

value equal to 0. On the other hand, Figure 3.2 (a) is considered as negatively skewed or also left skewed, this implies that mean and median are less than the mode, left tail is longer than right side. In Figure 3.2 (c) implies a positive or right skewed with the tail on the right side of the distribution is longer than the left side. This also means that mean and median are greater than the mode, mean is greater than the median (Hatem et al., 2022).

Kurtosis is used to measure the peakiness of a distribution, which also implies that it is use to show the contrast between dataset distribution and normal distribution (Hatem et al., 2022). Figure 3.3 and Table 3.5 show the different level of kurtosis. When kurtosis is greater than 0 it is considered more peaked than normal thus having heavier tails. When there is 0 in kurtosis normal distribution is consider to obtain an excess kurtosis. When kurtosis is lesser than zero, then its peak is flatter than normal (Hatem et al., 2022).

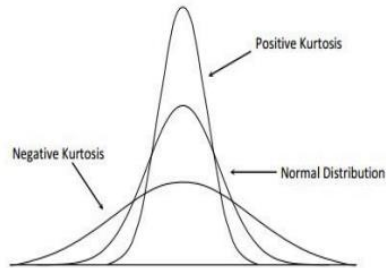
According to Hair et al., (2022) a skewness values between -1 and +1 is consider an excellent result, moreover a value ranges from -2 to +2 is also reasonable and acceptable. Table 3.6 shows the interpretation for skewness. For kurtosis, values of -2 to +2, close to zero are consider to be a normal distribution. However, a results exceeding -2 to +2 are consider nonnormality, this is applicable on both kurtosis and skewness.

Fig 3.2: Graphical Presentation of Skewness



Source: Hatem et al. (2022)

Figure 3.3: Graphical Presentation of Types of Kurtosis



Source: Hatem et al. (2022)

Table 3.5: Kurtosis Interpretation

| Kurtosis                    | Interpretation              |
|-----------------------------|-----------------------------|
| Close to zero               | Normal like tails           |
| Less than zero ( $< 0$ )    | Light tails (platykurtic)   |
| Greater than zero ( $> 0$ ) | Heavier tails (leptokurtic) |

Source: Hatem et al. (2022)

Table 3.6: Skewness Interpretation

| Skewness       | Interpretation                  |
|----------------|---------------------------------|
| -1 to +1       | Excellent results for normality |
| -2 to +2       | Acceptable                      |
| Beyond $\pm 2$ | Non-normality                   |

Source: Hair et al. (2022)

### 3.7.2 Reliability Analysis – Cronbach alpha

Reliability analysis is to gauge the level of consistency and dependability of the data. One of the methods of reliability analysis is Cronbach's Alpha, which is widely used among most statistics research instruments. Cronbach's Alpha value assesses the internal consistency of a set of items to see how they collectively capture the specific construct. Thus, reliability analysis is able to provide researchers few insights, such as: determining the overall reliability of the survey regarding the students' level of career adaptability, evaluate the reliability of each variable's and identifying the specific items that might affect the results of the overall reliability of the survey (Ahmad et al., 2024).

The higher the value of Cronbach Alpha indicates a higher the level of reliability and validity of the research findings, which also means that items in the instruments are closely related and effectively measure the same construct. A value of 0.70 or higher is consider acceptable for basic research, indicates a sufficient level of internal consistency (Nunnally, 1978; as cited in Ahmad et al., 2024). Furthermore, a level of 0.80 alpha value, indicates stronger reliability, defining higher level of appropriateness of the measurement instruments and more preferred in research. Table 3.7 below shows the reliability levels of Cronbach Alpha.

Table 3.7: Reliability levels of Cronbach Alpha

| Reliability Level | Cronbach's Alpha Range | Interpretation                    |
|-------------------|------------------------|-----------------------------------|
| Excellent         | 0.90 and above         | Very high internal Consistency    |
| Good              | 0.80 – 0.89            | Strong internal consistency       |
| Acceptable        | 0.70 – 0.79            | Acceptable internal consistency   |
| Questionable      | 0.60 – 0.90            | Questionable internal consistency |

Source: Ahmad et al., 2024

### **3.7.3 Inferential Analysis**

Inferential analysis involves process on verifying sampling. The purpose of inferential analysis is simply to examine how close can the sample size be true to the population (Dawit, 2020).

#### **3.7.3.1 Regression analysis – Multiple linear regression**

Regression analysis is to investigate the effect of one variable upon the other variable, such as how has an independent variable (e.g.: proactive personality) have influenced the dependent variable (e.g.: career adaptability). There are two types of regression model: simple linear regression, multiple linear regression. This study utilizes multiple regression, which allows multiple independent variables to be analysed simultaneously (Oykes, 1993).

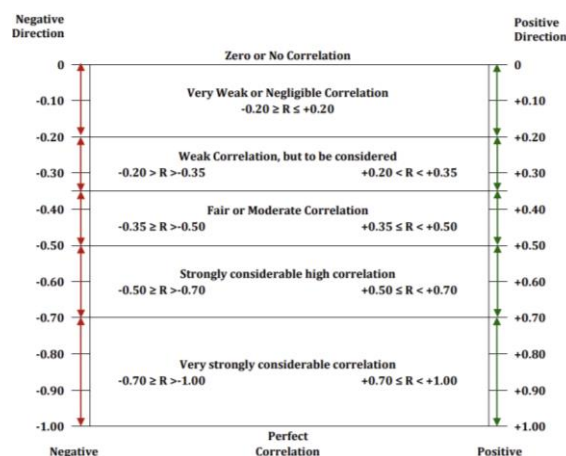
#### **3.7.3.2 Correlation Analysis – Pearson’s correlation coefficients**

Correlation is used to measure the direction or strength of the relationship between a dependent variable and one or more independent variables (Gogtay & Thatte, 2017; Senthilnathan, 2020). In this study, the Pearson’s Correlation Coefficient is utilized to assess these relationships. The Pearson’s correlation coefficient determines the relationship of two or more variables based on three

assumptions: relationships is linear, variables are independent of each other and variables should be normally distributed (not bias). The Pearson's correlation coefficient provides insight on whether variables have a positive, negative or, no relationship in between them, also, the strength of relationship ranging from weak to strong. The coefficient of correlation, R, will be ranging from -1 to +1, where values close to  $\pm 1$  indicates a very strong relationship and values near to 0 indicates a weak or negligible relationship. The interpretation of Pearson's correlation coefficient can be seen below in Figure 3.4.

After determining the correlation between variables, it is then essential to test whether the relationship between these variables is statistically significant. The results of significance testing give insights on how close these sample correlation coefficients are true to the population. Studies that obtain p values greater than 0.5 is considered lack of a significant relationship between variables. Thus, when coefficient correlation,  $R \geq 3.5$  or  $R \leq -3.5$ , and it is statistically significant, p value less than 0.5, indicates there is a relationship exists between variables (Senthilnathan, 2019). It also simply means variables move together, for example when X increase, Y increase as well.

Figure 3.4: Level of Pearson's Coefficient



Source: Senthilnathan, 2019

### 3.7.3.3 Multicollinearity

Multicollinearity occurs in multiple regression, when two or more independent variables are highly correlated with one and another, this could be difficult for the model to determine the individual effect of each variable effectively. This is to ensure that variables are not depending on one another and it is normally measured by using Variance Inflation Factor (VIF). Thus, the Table below shows the level of multicollinearity. A VIF exceeding 5 is consider high level of correlation between both independent variables, and corresponds to Pearson's correlation coefficient, R is equals or exceeding 0.9 or R is equals or exceeding negative 0.9, considering multicollinearity to exist. This simply because of the relationship between VIF and R which shows in below formula (Senthilnathan, 2019). The rule of thumb of VIF also including to consider the level of tolerance, which tolerance must be greater than level of 0.1 (O'brien, 2007).

$$VIF = 1 / (1 - R^2)$$

Table 3.8: Level of multicollinearity

| Criteria                 | Interpretation on Multicollinearity |
|--------------------------|-------------------------------------|
| $VIF = 1$                | No correlation                      |
| $1 < VIF < 5$            | Low level correlation               |
| $5 \leq VIF < \infty$    | High level correlation              |
| $VIF \rightarrow \infty$ | Perfect Multicollinearity           |

Source: Senthilnathan, 2019

### 3.8 Model Specification

$$CA = \beta_0 + \beta_1 BFPT + \beta_2 CE + \beta_3 PP + \beta_4 CDMSE + \epsilon$$

$\beta_0$  = Intercept

$\beta_1 \beta_2 \beta_3 \beta_4$  = Regression Coefficients

$\epsilon$  = Model's Error term

CA = Career adaptability, Dependent Variables

Below are all independent variables,

BFPT = Big Five Personality Traits,

CE = Career Engagement

PP = Proactive Personality

CDMSE = Career Decision Making Self-efficacy

### **3.9 Conclusion**

Chapter 3 has presented an overview of the methodology adopted for this study on the factors influencing CA among university students in Malaysia. The discussion covered the research design, sampling design, data collection method, research instruments, construct measurements, data processing procedures, and data analysis techniques. A quantitative cross-sectional descriptive approach was selected to enable the study to examine the relationships between the identified independent variables and career adaptability in a systematic manner. Chapter 3 also conclude the use of structured questionnaires as the main instrument for primary data collection and outline the statistical methods utilized to analyse the data using SPSS software. Overall, this chapter provides the basis and ways for generating reliable and meaningful findings. In chapter 4, results of empirical analysis will be presented.

## **CHAPTER 4: DATA ANALYSIS**

### **4.0 Introduction**

This chapter provide insights of each analysis results of the survey data by using SPSS software. It involves several data analysis results which outcomes are corresponding to demographic information, descriptive analysis of the variables and also correlation analysis and multiple regression analysis, which are aforementioned at Chapter 3.

### **4.1 Descriptive Analysis**

#### **4.1.1 Respondent Demographic Profile**

Table 4.1 Descriptive Demographic Profile

|                      | Characteristics | Frequency | Percentage | Valid Percent | Cumulative Percent |
|----------------------|-----------------|-----------|------------|---------------|--------------------|
| <b>Age</b>           | 18 - 22         | 187       | 48.2       | 48.2          | 48.2               |
|                      | 23 – 27         | 201       | 51.8       | 51.8          | 100.0              |
| <b>Gender</b>        | Male            | 203       | 52.3       | 52.3          | 52.3               |
|                      | Female          | 185       | 47.7       | 47.7          | 100.0              |
| <b>Year of Study</b> | Year 1          | 50        | 12.9       | 12.9          | 12.9               |
|                      | Year 2          | 72        | 18.6       | 18.6          | 31.4               |
|                      | Year 3          | 147       | 37.9       | 37.9          | 69.3               |
|                      | Year 4          | 118       | 30.4       | 30.4          | 99.7               |

|                                                                       |                          |     |      |      |       |
|-----------------------------------------------------------------------|--------------------------|-----|------|------|-------|
| <b>Faculty</b>                                                        | Year 5                   | 1   | .3   | .3   | 100.0 |
|                                                                       | Arts                     | 295 | 76.0 | 76.0 | 76.0  |
|                                                                       | Science                  | 93  | 24.0 | 24.0 | 100.0 |
| <b>Types of Institution</b>                                           | Public                   | 35  | 9.0  | 9.0  | 9.0   |
|                                                                       | University               |     |      |      |       |
|                                                                       | Private                  | 353 | 91.0 | 91.0 | 100.0 |
| <b>Internship Experience</b>                                          | University               |     |      |      |       |
|                                                                       | None                     | 92  | 23.7 | 23.7 | 23.7  |
|                                                                       | Completed                | 233 | 60.1 | 60.1 | 83.8  |
|                                                                       | Currently doing          | 24  | 6.2  | 6.2  | 89.9  |
|                                                                       | Planned (next 12 months) | 39  | 10.1 | 10.1 | 100.0 |
| <b>Participation in university career activities (past 12 months)</b> | None                     | 65  | 16.8 | 16.8 | 16.8  |
|                                                                       |                          |     |      |      |       |
|                                                                       | 1-2 times                | 194 | 50.0 | 50.0 | 66.8  |
|                                                                       | 3-5 times                | 121 | 31.2 | 31.2 | 97.9  |
|                                                                       | 6+ times                 | 8   | 2.1  | 2.1  | 100.0 |
| <b>How ready do you feel to enter the workforce after graduation?</b> | Very unready             | 87  | 22.4 | 22.4 | 22.4  |
|                                                                       |                          |     |      |      |       |
|                                                                       |                          |     |      |      |       |
|                                                                       |                          |     |      |      |       |
|                                                                       |                          |     |      |      |       |
|                                                                       | Unready                  | 80  | 20.6 | 20.6 | 43.0  |
|                                                                       | Neutral                  | 94  | 24.2 | 24.2 | 67.3  |
|                                                                       | Ready                    | 88  | 22.7 | 22.7 | 89.9  |
|                                                                       | Very Ready               | 39  | 10.1 | 10.1 | 100.0 |

Source: Developed for the study

#### **4.1.1.1 Age**

According to the Table 4.1, there are 187 undergraduates that are age ranging 18 – 22 years old, and 201 undergraduates that are age ranging 23 – 27 years old. There is total accumulate of 388 numbers of respondents, which majority of undergraduates are age ranging from 23 to 27, which holds 51.8% of the sample size.

#### **4.1.1.2 Gender**

Through Table 4.1, male respondents are approximately 203 students and female respondents are approximately 185 students, which numbers of male respondents are 4.6 %, slightly higher than female.

#### **4.1.1.3 Year of study**

Due to research purpose, it is essential to examine students' year of study which are being categorised in 5 groups. There are 50 respondents that are from Year 1 of their studies, 72 respondents that are from Year 2, 147 respondents that are from Year 3, 118 respondents that are from Year 4, but only 1 respondent is from Year 5. That are less likely to be students that are from Year 5 as normally

courses of bachelor degree are three to four years, unless degrees that are from science stream, for example, Chinese Medicine degree.

#### **4.1.1.4 Faculty**

The faculty of studies are being categorized into two major streams: Science and Arts. Arts streams are for example, bachelor degree holders on Business, Graphic Design, Broadcasting, Accounting, Economics, Communication, etc. Whereas Science streams are for example, bachelor degree holders on Computer Science, Engineering, Nursing, Psychology, Chinese Medicine, etc. According to Table 4.1, there are 295 Arts' student respondents and 93 respondents are from Science stream, revealing a majority of Arts' students that hold 76% of the total sample size.

#### **4.1.1.5 Types of institution**

Regarding to Table 4.1, there are 35 respondents that are from public university and there are 353 respondents that are from private university, majority of our respondents are from private universities. As the method of collecting our survey are through convenience sampling, thus there are lesser numbers of public university students accessed.

#### **4.1.1.6 Internship Experience**

Table 4.1 reveal there are 233 respondents out of total of 388 respondents that have completed their internship, holding 60.1% of the total sample size. Moreover, there are 24 respondents are currently engaging in their internship, the other 39 respondents that have planned on having internship within the upcoming 12 months. However, there are 92 respondents that are not planning to have internship in the upcoming 12 months and currently does not have any experience internship, holding 23.7% of total sample size. As the range of students are from Year 1 to Year 5, thus these 92 respondents are majority from Year 1 or Year 2 students, which they are still in the fundamental year of degree studies.

#### **4.1.1.7 Participation In University Career Activities**

Regarding to Table 4.1, in the past 12 months, there are 194 respondents that participate in university career activities for 1 – 2 times. Furthermore, there are 121 respondents that actively participate activities for 3 – 4 time. There are only 8 respondents that participate activities very actively for 6 times or more in the past 12 months, making up 2.1 % of total sample size. Lastly, 65 respondents do not participate in any activities in the past 12 months.

#### 4.1.1.8 Readability

According to the gathered data, there are only 39 respondents (10.1%) that felt very ready to enter the workforce after graduation, 22.7% of respondents that felt ready to enter the workforce after graduation, which equates 88 respondents. Additionally, 94 respondents (24.2 %) felt neutral, 80 respondents feel unready to join the workforce, making 20.6% of the participation.

#### 4.1.2 Central Tendencies Measurement of Constructs

Table 4.2: Central Tendency of Variables

|         | Mean      |           |           |           |           |                | Std. Deviation |
|---------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|
|         | N         | Minimum   | Maximum   | Mean      | Ranking   | Std. Deviation | Ranking        |
|         | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic      | Statistic      |
| BFPT    | 388       | 1.95      | 5.00      | 3.5021    | 5         | .49064         |                |
| CE      | 388       | 2.11      | 5.00      | 3.8519    | 2         | .71898         |                |
| PP      | 388       | 2.24      | 5.00      | 3.7791    | 3         | .64687         |                |
| CDMSE   | 388       | 2.17      | 4.86      | 3.6649    | 4         | .62827         |                |
| CA      | 388       | 1.83      | 5.00      | 3.8707    | 1         | .66375         |                |
| Total N | 388       |           |           |           |           |                |                |

Source: Developed for the Study

#### 4.1.2.1 Mean

According to Table 4.2, the highest mean (3.8707) is ranked in CA, whereas BFPT has the lowest mean (3.5021) ranked among variables. Overall, all means fall between 3.50 and 3.87. As these variables are being measured by using 5-point Likert scale, it is being rate from 1 to 5, 5 is the highest value. Almost all variables have reached the absolute maximum score of 5.00, CDMSE however reach a slightly lower maximum of 4.86. CA has reached the lowest minimum of 1.83 among the other variables, but with a maximum of 5.00, this implies that it has the widest spread at the lower end, whereas PP has the highest value of 2.24 among minimum value.

#### 4.1.2.2 Skewness and Kurtosis

Table 4.3: Results of Skewness and Kurtosis

|              | N   | Skewness  |            | Kurtosis  |            |
|--------------|-----|-----------|------------|-----------|------------|
|              |     | Statistic | Std. Error | Statistic | Std. Error |
| <b>BFPT</b>  | 388 | -.249     | .124       | -.743     | .247       |
| <b>CE</b>    | 388 | -.445     | .124       | -.886     | .247       |
| <b>PP</b>    | 388 | -.187     | .124       | -1.067    | .247       |
| <b>CDMSE</b> | 388 | -.155     | .124       | -1.182    | .247       |
| <b>CA</b>    | 388 | -.424     | .124       | -.740     | .247       |
| Total N      | 388 |           |            |           |            |

Source: Developed for the Study

Table 4.3 shows the normality results being using skewness and kurtosis to determine. As our sample size are greater than 300, thus z-scores or standard error is being ignored, as it will be relatively smaller when sample size increases, this might lead to misjudge of normality.

The table reveals that all of the five variables are then normally distributed ranging from -0.445 to -0.155. This is because the values are range between -2 to +2 which is acceptable for considering as normally distributed. Moreover, Kurtosis for all five variables is in negative values are light tails (Platykurtic) as it is less than zero ranging from - 1.182 to - 0.740 (Hatem et al., 2022). Kurtosis also reveals that all variables are normally distributed as the values closer to zero, between -2 to +2 (Hair et al., 2022).

Since all skewness and kurtosis statistics falls within the reasonable range, the data can be considered normally distributed and relevant for parametric statistical analysis.

## 4.2 Scale Measurement

### 4.2.1 Reliability Analysis

Table 4.3: Cronbach's Alpha Reliability Analysis Results

| Variables | No. of items | Cronbach's Alpha | Reliability level              |
|-----------|--------------|------------------|--------------------------------|
| BFPT      | 20           | 0.813            | Strong Internal Consistency    |
| CE        | 9            | 0.886            | Strong Internal Consistency    |
| PP        | 17           | 0.914            | Very high internal consistency |
| CDMSE     | 36           | 0.958            | Very high internal consistency |

Source: Developed for the Study

Table 4.3 reveals the results of the level of reliability of the independent variables used in this study. CDMSE exhibits the highest alpha value of 0.958 alpha, showing an excellent level of reliability and very high internal consistency. Following by PP, it also shows a high level of reliability of 0.914 alpha, slightly lower than CDMSE, but also signify very high internal consistency. The other two independent variables are however not as high as 0.9 alpha, but it is still consider holding strong reliability. Both CE and BFPT shows a strong internal consistency with alpha values of 0.813 and 0.886 respectively. In results, the reliability test shows that each independent variables have a achieved a high level of satisfactory level of reliability.

## 4.3 Inferential Analysis

### 4.3.1 Multiple Linear Regression Analysis

Table 4.4: Model Summary

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .898 <sup>a</sup> | .807     | .805              | .29296                     |

a. Predictors: (Constant), CDMSE, BFPT, CE, PP

b. Dependent Variable: CA

Source: Developed for the Study

Cohen et al., (2003) mentioned that R represents the measure on the correlation of a dependent variable and two or more independent variables. By looking at Table 4.4, the value of R, 0.898, the correlation in coefficient, has indicates a strong linear relationship between the independent variables (BFPT, CE, PP, CDMSE) and dependent variable (CA).

R square reveals how well the independent variables together account for changes in the dependent variables, representing the coefficient of determination (Cohen et al., 2003). The results in Table 4.4 shows R square implies that there are 80.7% of the variance in the dependent variable can be explained by the independent variables.

Moreover, since the difference between adjusted R square and R square is consider relatively small (0.2%), this reveal the stability of the model, which the predictors chosen has really make effect on the dependent variable, rather than just being noise.

A standard error of the estimate of 0.29296 has represents the average distance that the observed values fall from the regression line. The low level of standard error reflects the precision of the model.

Table 4.5: ANOVA

| <b>Model</b> |            | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b>        |
|--------------|------------|-----------------------|-----------|--------------------|----------|--------------------|
| 1            | Regression | 137.628               | 4         | 34.407             | 400.885  | <.001 <sup>b</sup> |
|              | Residual   | 32.872                | 383       | .086               |          |                    |
|              | Total      | 170.500               | 387       |                    |          |                    |

a. Dependent Variable: CA

b. Predictors: (Constant), CDMSE, BFPT, CE, PP

Source: Developed for the Study

Table 4.5 shows the test results of ANOVA test. Overall, results of  $F=400.885$ , with a p-value smaller than 0.01 implies that the model significantly predicts the dependent variables (CA) well. In other words, at least one of the independent variables (BFPT, CE, PP, CDMSE) contributes to predict CA. Furthermore, a residual mean square of 0.086 reveals that the model fits the data well.

Table 4.6: Coefficients

| <b>Model</b> |            | <b>Unstandardized Coefficients</b> |                   | <b>Standardized Coefficients</b> | <b>t</b> | <b>Sig.</b> |
|--------------|------------|------------------------------------|-------------------|----------------------------------|----------|-------------|
|              |            | <b>B</b>                           | <b>Std. Error</b> | <b>Beta</b>                      |          |             |
| 1            | (Constant) | .900                               | .134              |                                  | 6.697    | <.001       |
|              | BFPT       | -.166                              | .031              | -.123                            | -5.381   | <.001       |
|              | CE         | .279                               | .041              | .302                             | 6.727    | <.001       |
|              | PP         | .125                               | .050              | .121                             | 2.494    | .013        |
|              | CDMSE      | .548                               | .053              | .519                             | 10.347   | <.001       |

a. Dependent Variable: Career Adaptability

Source: Developed for the Study

According to Table 4.6, unstandardized coefficients show how much the dependent variables (CA) will change when there is a one unit increase in independent variables (BFPT, CE, PP, CDMSE).

Based on the Table 4.6 results, we can determine that the predictors have a significant impact on dependent variables. Based on t-test results it shows that except for PP which are significant at level of p value  $< 0.01$  and other variables are significant at level of p value  $< 0.05$ .

### 4.3.2 Pearson's Correlation Analysis

Table 4.7: Pearson's Correlation Analysis

|              |                     | <b>CA</b> |
|--------------|---------------------|-----------|
| <b>BFPT</b>  | Pearson Correlation | -.055     |
|              | Sig. (2-tailed)     | .284      |
|              | N                   | 388       |
| <b>CE</b>    | Pearson Correlation | .834***   |
|              | Sig. (2-tailed)     | <.001     |
|              | N                   | 388       |
| <b>PP</b>    | Pearson Correlation | .802***   |
|              | Sig. (2-tailed)     | <.001     |
|              | N                   | 388       |
| <b>CDMSE</b> | Pearson Correlation | .870***   |
|              | Sig. (2-tailed)     | <.001     |
|              | N                   | 388       |
| <b>CA</b>    | Pearson Correlation | 1         |
|              | Sig. (2-tailed)     |           |
|              | N                   | 388       |

\*\*. Correlation is significant at the 0.01 level (2-tailed).  
 \*\*\*. Correlation at 0.001(2-tailed)

Source: Developed for the Study

Table 4.7 represents the results of Pearson's correlation analysis, which shows the strength and directions between predictors and dependent variable. CA is our dependent variable. Based on the table, the results indicate that BFPT has a negative

and weak relationship with CA ( $r = -0.55$ ,  $p = 0.284$ ). Except for BFPT, the other remaining independent variables: CE ( $r = 0.834$ ), PP ( $r = 0.802$ ) and CDMSE ( $r = 0.870$ ), each has exhibited a very significantly strong relationship with CA positively. Three of these correlations all exceeds 0.8, suggesting a very high degree of linear association with the dependent variable.

### 4.3.3 Multicollinearity Analysis

Table 4.8: Multicollinearity Analysis

| Model        | Collinearity<br>Statistics | Collinearity<br>Statistics |
|--------------|----------------------------|----------------------------|
|              | Tolerance                  | VIF                        |
| 1 (Constant) |                            |                            |
| <b>BFPT</b>  | .963                       | 1.039                      |
| <b>CE</b>    | .249                       | 4.013                      |
| <b>PP</b>    | .212                       | 4.712                      |
| <b>CDMSE</b> | .200                       | 4.989                      |

Source: Developed for the Study

Regarding to Table 4.8, the level of tolerance is considered acceptable as all 4 independent variables: BFPT, CE, PP and CDMSE are greater than 0.10. BFPT has a VIF value that is the lowest among all independent variables of 1.039, which implies no correlation between other independent variables. Although CE (4.013), PP (4.712) and CDMSE (4.989) have higher VIFs comparing to BFPT, they are still below 5 which is consider an acceptable level in statistical research. This also suggests that these three variables might share some common information but it is not enough to invalidate the model of this regression results. However, initially the items of CDMSE should be 50 items but due to similar items contain in the measurements, only 36 items are remained, so that it would not affect VIF.

## 4.4 Findings

Table 4.9: Hypothesis Testing

| Hypothesis                                 | Relationship                                  | Unstandardized Coefficients | Sig.  |
|--------------------------------------------|-----------------------------------------------|-----------------------------|-------|
| <b>H1</b>                                  | There is a relationship between BFPT and CA.  | -.166***                    | <.001 |
| <b>H2</b>                                  | There is a relationship between CE and CA.    | .279***                     | <.001 |
| <b>H3</b>                                  | There is a relationship between PP and CA.    | .125*                       | .013  |
| <b>H4</b>                                  | There is a relationship between CDMSE and CA. | .548***                     | <.001 |
| ***. p-value significant at 0.001 level.   |                                               |                             |       |
| **. p-value significant at the 0.01 level. |                                               |                             |       |
| *. p-value significant at the 0.05 level.  |                                               |                             |       |

Source: Developed for the Study

### 4.4.1 Big Five Personality Traits (BFPT) and Career Adaptability (CA)

H<sub>01</sub>: There is no relationship between Big Five Personality Traits and Career Adaptability

H<sub>A1</sub>: There is a relationship between Big Five Personality Traits and Career Adaptability.

From Table 4.9 it shows that BFPT will negatively influence CA, which indicates a statistically significant relationship at the level of 0.01 between each other. Thus, in this study we reject H<sub>01</sub>. BFPT contains five dimensions: extraversion, agreeableness, conscientiousness, neuroticism and openness to experience (or imagination or intellectual). However, in this study we do not examine it in dimensions but in a whole. Previous studies show that career adaptability is positively related to openness,

extraversion, agreeableness, conscientiousness, but only negatively related to neuroticism (Guan et al., 2015; Teixeira, Bardagi, Lassance, Magalhães, & Duarte, 2012; van Vianen, Klehe, Koen, & Dries, 2012; Zacher, 2014 as cited in Li et al. 2015).

As from previous studies does not directly point out that BFPT has a negative relationship with CA, instead most studies tested BFPT in dimensions. Thus, this study conducted a Pearson Correlation to test the strength between CA's score and each dimension of BFPT.

#### 4.4.1.1 Pearson Correlation of Big Five Personality Dimensions

Table 4.10: Pearson Correlation of BFPT Dimensions

|          |                     | AGREEA  | CONSCIE | EXTRAVER | NEURO    | OPENN   |
|----------|---------------------|---------|---------|----------|----------|---------|
|          |                     | N       |         |          |          |         |
| CA Score | Pearson Correlation | -.166** | .323*** | .114*    | -.262*** | -.153** |
|          | Sig. (2-tailed)     | .001    | <.001   | .025     | <.001    | .002    |
|          | N                   | 388     | 388     | 388      | 388      | 388     |

\*\*\*. Correlation at 0.001(2-tailed)  
 \*\*. Correlation is significant at the 0.01 level (2-tailed).  
 \*. Correlation is significant at the 0.05 level (2-tailed).

Source: Developed for the Study

Although the regression results show BFPT has a negative relationship with CA, but in Pearson Correlation test there are mixed findings.

#### Conscientiousness (CONSCIE)

Table 4.10 shows that conscientiousness (CONSCIE) have a weak positive relationship with CA (Guan et al., 2015; Teixeira, Bardagi, Lassance, Magalhães,

& Duarte, 2012; van Vianen, Klehe, Koen, & Dries ,2012; Zacher, 2014 as cited in Li et al. 2015). As being an individual that obtain the quality of conscientiousness, they are good at planning and organizing thus they might be able to develop their career path well, so they are more ready to the real workforce. However, the relationship is weak because being conscientious, one might not be that flexible or innovative for new ideas, which is essential to adapt in the working world.

### **Extraversion (EXTRAVER)**

Table 4.10 reveals that extraversion (EXTRAVER) have a weak positive relationship with CA. (Guan et al., 2015; Teixeira, Bardagi, Lassance, Magalhães, & Duarte, 2012; van Vianen, Klehe, Koen, & Dries ,2012; Zacher, 2014 as cited in Li et al. 2015). This is because a person who is more extrovert and outgoing, one is able to obtain a better network between people and might be easier to find new paths, creating positive impact.

### **Neuroticism (NEURO)**

Neuroticism have a weak negative relationship with CA. This is because career adaptability has been shown to be negatively related to general anxiety and fear of failing (Pouyaud et al., 2012 as cited in Kadir & Deniz, 2016). Individuals with high neuroticism will tend to avoid challenges as they might feel overwhelming while handling uncertain situations and issue, and they might have a lower level of career adaptability.

### **Agreeableness (AGREE)**

Agreeableness have a weak negative or negligible relationship between CA (Savickas & Porfeli, 2012). High agreeableness can make a individual being less

proactive in engaging to career changes as they have a higher tendency only cooperating and avoiding conflict. So, individuals like this are lack of independent career planning behaviours.

### **Openness to experience (OPENN) / Imagination**

Prior studies show openness to experience showed only weak effects on CA change and its specific dimensions, with magnitude much smaller than for other predictors (Zacher, 2014). The results of Pearson Correlation show openness to experience has a weak relationship with CA which influencing it negatively. However, in prior studies there are less likely shown that agreeableness has a negative relationship with career adaptability but positive instead. An individual who are too imaginative, one might spend to much time thinking about possibilities and not actually putting them into actions which actually can drive to a new goal, hindering CA.

## **4.4.2 Career Engagement (CE) and Career Adaptability (CA)**

H<sub>02</sub>: There is no relationship between Career Engagement and Career Adaptability.

H<sub>A2</sub>: There is a relationship between Career Engagement and Career Adaptability.

Regarding to Table 4.9 CE can positively influence CA as they have a strong relationship between each other. This result is support by previous studies which because career engagement positively influences career success, thus having a strong relationship with career adaptability (Çarkıt et al., 2022; Guan et al., 2017). Moreover, CE and CA can affect each other positively, revealing a positive relationship (Arlina & Aprilianti, 2019; Şeker, G. 2025). As students that are more engage in curriculum activities like, career development workshops, company visit, often have more

understanding of the real workforce, thus they are more capable and ready to plan their career path ahead.

#### **4.4.3 Proactive Personality (PP) and Career Adaptability (CA)**

H<sub>03</sub>: There is no relationship between Proactive Personality and Career Adaptability.

H<sub>A3</sub>: There is a relationship between Proactive Personality and Career Adaptability.

Table 4.9 results that PP can positively influence CA as they have a strong relationship between each other. This aligns with previous studies on individuals that acquire higher proactive personality, have a higher career adaptability as personality like this react to obstacles and changes by putting it in actions (Duc et al., 2025; Tolentino et al., 2013; Taber & Blankemeyer, 2014; Jiang, 2016; Savickas 2019).

#### **4.4.4 Career Decision Making Self-Efficacy (CDMSE) and Career Adaptability (CA)**

H<sub>04</sub>: There is no relationship between Career Decision Making Self-Efficacy and Career Adaptability.

H<sub>A4</sub>: There is a relationship between Career Decision Making Self-Efficacy and Career Adaptability.

Results in Table 4.9 reflects the positive relationship between CDMSE and CA, indicating that CDMSE can significantly influence CA statistically. Several studies have examined the relation between CDMSE and CA, the studies reveal a positive relationship between these two variables. As studies suggests that students have are more confidence on the career decisions are more adapt to different career situations. (Duffy, Douglass, & Autin, 2015; Ebenehi, Rashid, & Rahim, 2016; Rudolph, Lavigne, & Zacher, 2017; Shin, Lee, & Seo, 2019 as cited in Low et al., 2023; Liu et al., 2023).

## **4.5 Conclusion**

This chapter has provided a detail reporting of the overall data analysis results. Findings are concluded from several analysis including Pearson's analysis, Multiple Regression analysis, coefficient, reliability testing. In our findings, it reveals that all predictors (CE, CDMSE, BFPT and PP) has significantly predict CA.

## **CHAPTER 5: CONCLUSION AND IMPLICATIONS**

### **5.0 Introduction**

This chapter offer an overview of the analysis results responding to this study's research purpose, also showing the application and contribution of this study to the real world. Moreover, also identifying the limitations of this study which further research and improvements should be made in the future studies, enabling researchers to gain a richer context and information.

### **5.1 Discussion of research questions**

R01: How does career engagement (CE) influence career adaptability (CA) among university students?

The first research question sought to determine the extent on how career engagement influences career adaptability. The findings revealed that CE can positively influence CA. Individuals that acquire high level of career engagement implies that students are more active in preparing for their future career through several activities and workshops, such as career exploration workshops, skill development workshops, talks regarding time management, forums, etc. These findings align with the Social Cognitive Career Theory (SCCT), where proactive behaviours like engagement are shaped by self-efficacy and can lead one to a obtain a better career outcome.

R02: How does career decision making self-efficacy (CDMSE) contribute to career adaptability (CA) among university students?

This research question aims to examine the contribution of CDMSE to CA. The findings revealed that CDMSE is the strongest predictor among all independent variables of CA in this study. Students with a higher confidence in their own ability to make the right career decisions, study the occupational information are seen as acquiring a significantly higher level of CA. Moreover, this has also aligned to the framework of Career Cognitive Theory (CCT) as CDMSE acts as one of the essential psychological components which leads individuals to navigate themselves to certain career paths and overcoming career challenges.

R03: How proactive personality (PP) and Big Five Personality traits (BFPT) predict career adaptability (CA) among university students?

This research question aims to investigate the extent of how PP and BFPT predict CA. This study shows that PP has been positively influencing CA. Individuals that possess proactive personality are more active on engaging and handling situations, moreover they also have the tendency to influence their environments. Thus, they are more capable to adapt to career transitions and changes.

BFPT have shown overall a negative relationship with CA in the regression analysis result. As in this study we have explored that by measuring BFPT in a whole hardly be able to obtain a precise result as all individuals possess a different personality which can influence career adaptability differently. In the Pearson Correlation test, dimensions are being tested individually, which reveal that conscientiousness and extraversion have weak and positive relationship with CA; neuroticism, agreeableness and openness to experience have a negative relationship with CA.

## **5.2 Implications of study**

### **5.2.1 Theoretical Implications**

This study mainly contributes a multi-dimensional-predictors by integrating behavioural, cognitive, and dispositional predictors in a single CA model. This study is indifferent with the traditional models as it allows the study to examine predictors into a comprehensive model for CA. This comprehensive model shows that all predictors (CE, BFPT, PP and CDMSE) have strong impact on CA but further studies still have to be made to obtain a more comprehensive content.

### **5.2.2 Practical Implications**

In this study is suggest that universities should prioritize and reconstruct programme structure that contains initiative that can boost CE and CDMSE. This is extremely important in order to minimize the gap between universities and industries. Despite encouraging students to join more cocurricular activities, universities are also responsible to raise students' awareness on the importances of developing their future career paths so that students will feel prepared to enter the workforce. Other than career related workshops, Higher Education Institutions (HEIs) can design specialized workshops and providing counselling services that tailor to students' psychological situations such as helping them to overcome anxiety especially on students that acquire high neuroticism.

Policymakers' biggest responsibility is to facilitate the collaboration between HEIs & industries to ensure both parties acknowledge the needs of the workforce demands. So that situations like skills and job mismatch can be widely reduce and build students' readiness to work stronger, in order to gain higher level of CDMSE. Moreover, by bridging the gaps between parties, a higher career adaptability can contribute the economy by strengthen the workforce to work more effectively and produce a higher output to the country. In the same time obtaining the Sustainable Development Goals 8: Decent Work and Economic Growth, which aims to produce a skilful future ready workforce that can help to maintain the economy.

Furthermore, employers can also benefit by including assessments of proactive traits and career self-efficacy into their recruitment selection processes. This study helps to provide information on the importance of identifying candidates with proactive traits and strong career self-efficacy, rather than focusing on students' academic results and technical knowledge. Moreover, this study also provides information on building a workforce that is more stable in the long term.

### **5.3 Limitations of study**

This study utilizes convenience sampling which has limit the representative of Malaysian undergraduates. Due to the constraints of geographic and institutional scope, the sample is not sufficient to fully represent the big diverse students' population across all regions and institutions of Malaysia. The level of diversity might vary from urban and rural areas, university resources, and also specific faculty cultures and types of students which can also influence a students' behaviour and mindset. Moreover, as the findings highly rely on questionnaires which is self-reported data, this might increase the possibility of social desirability bias, where respondents might not being really understand their own abilities and might make results more or less proactive and adaptable.

One of the biggest limitations of this study is to examine the complexity of the Big Five Personality Traits (BFPT). As in this study BFPT is being examine as a collective predictor in the regression model it may have masked more nuanced psychological influences which require more specialized psychological assessment as each individual will possess different traits which lead to the mixed findings that revealed in Pearson correlation BFPT dimensions.

In this study, the model is being explained with a high percentage of variance. However, there are still other external factors that should be included as they might also significantly influence a undergraduates' career adaptability, such as economic conditions, internship quality, degree of family support, etc.

## **5.4 Recommendations for Future Research**

In this study, it has provided valuable insights on the factors influencing career adaptability among Malaysian university students. In future studies, researchers should not only fully utilize quantitative data method but instead also gather qualitative data, such as conducting in-depth interviews or examine through certain focus groups in order to obtain a deeper and more valuable context. As this can allow researchers to study and acknowledge the real experiences of students and the psychological barriers which they are currently facing while developing their career components and career paths.

Besides, variables such as personality variables: BFPT should being further analyse in dimensions to provide a precise and accurate information to the researchers in order to obtain a more comprehensive finding. Moreover, in future studies researchers should also aim to consider a more diverse sample from Malaysia, not only including private and public universities but also Politeknik institutions, which will help to reveal a more unique groups of samples that provides new insights.

Future researchers should also consider adopting longitudinal studies to track students from their final year of studies into the first few years of employment, which would be able to provide a clearer understanding of how career adaptability has changes over time through the years of transition from universities to career world.

## **5.5 Conclusion**

Overall, this research successfully investigates the factors influencing CA among university students in Malaysia. The findings have also aligned to prior studies which Career Cognitive Theory (CCT) and Social Cognitive Career Theory (SCCT) can drive adaptability (Savickas, 2019; Lent et al, 1994). This research has provided several aspects and insights on the understanding of what drives students' readiness for the workforce.

Furthermore, the findings also revealed that based on the coefficient beta it has shown that career decision making self-efficacy (CDMSE) is the strongest predictor among others, supporting by career engagement (CE), proactive personality (PP) and big five personality traits (BFPT). Career Engagement (CE), Proactive Personality (PP) and Career Decision Making Self-Efficacy (CDMSE) have positively influence Career Adaptability (CA) (Tolentino, 2013; Taylor and Betz, 1983; Şeker, 2025). This study has underscored that personality traits play far more significant role, so it is insufficient to only measure BFPT in a single regression model, instead it should be measure through dimensions.

The practical implications of this study serve to advise HEIs, policymakers and employers to move and work together to build an active and resilient workforce, it is a collective responsibility to educate and nurture young individuals to ensure a future-ready workforce.

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# APPENDICES

## **Appendix 1.1: Questionnaire**

### **PERSONAL DATA COLLECTION**

Please be informed that in accordance with 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 collection, recording, storage, usage, and retention of personal information.

1. Personal data refers to any information which may directly or indirectly identify a person which could include sensitive personal data and expression of opinion.

Among others it includes:

- a) Name
  - b) Identity card
  - c) Place of Birth
  - d) Address
  - e) Education History
  - f) Employment History
  - g) Medical History
  - h) Blood type
  - i) Race
  - j) Religion
  - k) Photo
  - l) Personal Information and Associated Research Data
2. The purposes for which your personal data may be used are inclusive but not limited to:
    - a) For assessment of any application to UTAR
    - b) For processing any benefits and services
    - c) For communication purposes
    - d) For advertorial and news
    - e) For general administration and record purposes
    - f) For enhancing the value of education
    - g) For educational and related purposes consequential to UTAR

- h) For replying any responds to complaints and enquiries
  - i) For the purpose of our corporate governance
  - j) For the purposes of conducting research/ collaboration
3. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for 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 laws and when disclosure is necessary to comply with applicable laws.
  4. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.
  5. UTAR is committed in 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:

6. By submitting or providing your personal data to UTAR, you had consented and agreed for your personal data to be used in accordance to the terms and conditions in the Notice and our relevant policy.
7. 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 fulfill 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.
8. You may access and update your personal data by writing to [ngshinjou@lutar.my](mailto:ngshinjou@lutar.my) If you have any questions about this study at any time, please feel free to contact me.

### Acknowledgement of Notice

☐ I have been notified and hat I hereby understood, consented and agreed per UTAR above notice.

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

## Section A: Demographic Questions

1. Age: \_\_\_\_\_
2. Gender:  
☐ Male ☐ Female ☐ Non-binary/Other ☐ Prefer not to say
3. Year of study  
☐ Year 1 ☐ Year 2 ☐ Year 3 ☐ Year 4 ☐ Other: \_\_\_\_\_
4. Highest level of study:  
☐ Diploma ☐ Bachelor's degree ☐ Master's ☐ PhD ☐ Other: \_\_\_\_\_
5. Types of institution (public/private): \_\_\_\_\_
6. Name of University: \_\_\_\_\_
7. Internship / industrial training experience:  
☐ None ☐ Completed ☐ Currently doing ☐ Planned (next 12 months)
8. Participation in university career activities (past 12 months) (career fair, career talks, counselling, workshops):  
☐ None ☐ 1–2 times ☐ 3–5 times ☐ 6+ times
9. Living arrangement:  
☐ On-campus ☐ Off-campus (with family) ☐ Off-campus (without family)
10. Scholarship/financial aid status:  
☐ Yes ☐ No ☐ Prefer not to say
11. How ready do you feel to enter the workforce after graduation?  
☐ Very unready ☐ Unready ☐ Neutral ☐ Ready ☐ Very ready

## Section B: Big Five Mini-International Personality Item Pool

Please rate the following statements on **big five mini-international personality item pool** from (1) Strongly Disagree to (5) Strongly Agree

|     |                                                           | 1 | 2 | 3 | 4 | 5 |
|-----|-----------------------------------------------------------|---|---|---|---|---|
| 1.  | I am often not interested in other people's problems.     |   |   |   |   |   |
| 2.  | I like to follow order.                                   |   |   |   |   |   |
| 3.  | I do not talk a lot.                                      |   |   |   |   |   |
| 4.  | I am not really interested in others.                     |   |   |   |   |   |
| 5.  | I get upset easily.                                       |   |   |   |   |   |
| 6.  | I am not interested in abstract ideas.                    |   |   |   |   |   |
| 7.  | I often sympathize with others' feelings.                 |   |   |   |   |   |
| 8.  | I always get chores done right away.                      |   |   |   |   |   |
| 9.  | I prefer not to stand out in groups.                      |   |   |   |   |   |
| 10. | I am relaxed most of the time.                            |   |   |   |   |   |
| 11. | I do not have a good imagination.                         |   |   |   |   |   |
| 12. | I often able to feel others' emotions.                    |   |   |   |   |   |
| 13. | I like to keep my things tidy.                            |   |   |   |   |   |
| 14. | I like to social with others.                             |   |   |   |   |   |
| 15. | I have frequent mood swings.                              |   |   |   |   |   |
| 16. | I have difficulty understanding ideas.                    |   |   |   |   |   |
| 17. | I always forget to put things back in their proper place. |   |   |   |   |   |
| 18. | I usually talk to a lot of different people at parties.   |   |   |   |   |   |
| 19. | I seldom feel blue.                                       |   |   |   |   |   |
| 20. | I always have a vivid imagination                         |   |   |   |   |   |

### Section C: Career Engagement

Please rate the following statements on **career engagement** from (1) Strongly Disagree to (5) Strongly Agree.

|    |                                                                      | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------------|---|---|---|---|---|
| 1. | I actively seek ways to plan for my future.                          |   |   |   |   |   |
| 2. | I take action to achieve my career goals.                            |   |   |   |   |   |
| 3. | I know I am responsible for my career development.                   |   |   |   |   |   |
| 4. | I plan for my future goals.                                          |   |   |   |   |   |
| 5. | I reflect honestly on my own capabilities.                           |   |   |   |   |   |
| 6. | I gather information on opportunities in my desired field.           |   |   |   |   |   |
| 7. | I maintain the connections with people who can help my career.       |   |   |   |   |   |
| 8. | I voluntarily participate in training for my career.                 |   |   |   |   |   |
| 9. | I take on duties or positions that help my professional advancement. |   |   |   |   |   |

### Section D: Proactive Personality

Please rate the following statements on **proactive personality** from (1) Strongly Disagree to (5) Strongly Agree.

|     |                                                                               | 1 | 2 | 3 | 4 | 5 |
|-----|-------------------------------------------------------------------------------|---|---|---|---|---|
| 1.  | I am driven to make a difference to improve my future life.                   |   |   |   |   |   |
| 2.  | I am driven to make a difference in my future jobs.                           |   |   |   |   |   |
| 3.  | I tend to let others take initiatives for my future jobs.                     |   |   |   |   |   |
| 4.  | I have strong force to embrace constructive changes.                          |   |   |   |   |   |
| 5.  | I enjoy overcoming obstacles to my ideas.                                     |   |   |   |   |   |
| 6.  | I feel very exciting to see my ideas become reality.                          |   |   |   |   |   |
| 7.  | If I see something wrong, I fix it.                                           |   |   |   |   |   |
| 8.  | I believe in my ability to make something happen, no matter what the odds is. |   |   |   |   |   |
| 9.  | I am insisting to lay out my ideas even though others might not agree.        |   |   |   |   |   |
| 10. | I am good at identifying opportunities.                                       |   |   |   |   |   |
| 11. | I constantly look for better ways for my future jobs.                         |   |   |   |   |   |
| 12. | If I believe in an idea, no obstacle will stop me from achieving it.          |   |   |   |   |   |
| 13. | I love to challenge the current way of doing things.                          |   |   |   |   |   |
| 14. | I tackle problems directly.                                                   |   |   |   |   |   |

|     |                                                    |  |  |  |  |  |
|-----|----------------------------------------------------|--|--|--|--|--|
| 15. | I am great at turning problems into opportunities. |  |  |  |  |  |
| 16. | I can identify good opportunities before others.   |  |  |  |  |  |
| 17. | I help people in trouble in any way I can.         |  |  |  |  |  |

### Section E: Career Decision Making Self Efficacy

Please rate the following statements on **career decision making self-efficacy** from (1) Strongly Disagree to (5) Strongly Agree

|     |                                                                                          | 1 | 2 | 3 | 4 | 5 |
|-----|------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1.  | I can make the best career decision.                                                     |   |   |   |   |   |
| 2.  | I can choose a major or career that will fit my interests.                               |   |   |   |   |   |
| 3.  | I can describe the job duties of my desired career.                                      |   |   |   |   |   |
| 4.  | I believe I can develop a strategy to deal with my academic failure (e.g: flunking out). |   |   |   |   |   |
| 5.  | I am capable to prepare a good resume.                                                   |   |   |   |   |   |
| 6.  | I can accurately assess my abilities.                                                    |   |   |   |   |   |
| 7.  | I can make my career decision.                                                           |   |   |   |   |   |
| 8.  | I am confident to ask about job opportunities available in the job market.               |   |   |   |   |   |
| 9.  | I am determining in my steps to take if I have academic trouble in my major.             |   |   |   |   |   |
| 10. | I can find and use the campus career placement office.                                   |   |   |   |   |   |
| 11. | I am confident to determine the academic subject I have the most ability in.             |   |   |   |   |   |
| 12. | I can move to another city to get my desired job.                                        |   |   |   |   |   |
| 13. | I am capable to plan my goals for the next five years.                                   |   |   |   |   |   |

|     |                                                                                  |  |  |  |  |  |
|-----|----------------------------------------------------------------------------------|--|--|--|--|--|
| 14. | I know what sacrifices I am willing or unwilling to make for my career goals.    |  |  |  |  |  |
| 15. | I am confident to decide whether I prefer to work with people or information.    |  |  |  |  |  |
| 16. | I am not afraid to choose a major that I want in my studies.                     |  |  |  |  |  |
| 17. | I can study the historical employment trends for an occupation.                  |  |  |  |  |  |
| 18. | I returned to school for a graduate degree after being away for many years.      |  |  |  |  |  |
| 19. | I am capable to plan non-major coursework that supports my future career.        |  |  |  |  |  |
| 20. | I am confident to define the type of lifestyle I would like to live.             |  |  |  |  |  |
| 21. | I can choose my occupation.                                                      |  |  |  |  |  |
| 22. | I can find information about occupations.                                        |  |  |  |  |  |
| 23. | I am confident of changing majors if I dislike my first choice.                  |  |  |  |  |  |
| 24. | I can change occupations if I am dissatisfied with the first choice.             |  |  |  |  |  |
| 25. | I am confident to decide if graduate school is needed for my career goals.       |  |  |  |  |  |
| 26. | I can decide what I value most in a job.                                         |  |  |  |  |  |
| 27. | I choose a career which most workers are the opposite gender.                    |  |  |  |  |  |
| 28. | I can find information about occupations I'm interested in.                      |  |  |  |  |  |
| 29. | I can identify reasonable alternatives if my first-choice major is unattainable. |  |  |  |  |  |

|     |                                                                                     |  |  |  |  |  |
|-----|-------------------------------------------------------------------------------------|--|--|--|--|--|
| 30. | I am confident that I will be able to get recommendation letters from professors.   |  |  |  |  |  |
| 31. | I can list several majors I am interested in.                                       |  |  |  |  |  |
| 32. | I can choose a career that fits my lifestyle.                                       |  |  |  |  |  |
| 33. | I can find information about the salary range of occupation.                        |  |  |  |  |  |
| 34. | I am not afraid to reapply to graduate schools after initial rejection.             |  |  |  |  |  |
| 35. | I can successfully manage job interview process.                                    |  |  |  |  |  |
| 36. | I know whether my ability can successfully take math courses.                       |  |  |  |  |  |
| 37. | I can choose career that suit my ability.                                           |  |  |  |  |  |
| 38. | I can look up information on hiring requirements.                                   |  |  |  |  |  |
| 39. | I am confident to persist toward my career goal even when I am frustrated.          |  |  |  |  |  |
| 40. | I can identify relevant employers or institutions for my career.                    |  |  |  |  |  |
| 41. | I am confident to determine my ideal job.                                           |  |  |  |  |  |
| 42. | I can choose the best major for myself.                                             |  |  |  |  |  |
| 43. | I can find information about job market.                                            |  |  |  |  |  |
| 44. | I can resist pressure from others to pursue a career beyond my perceived abilities. |  |  |  |  |  |
| 45. | I am confident to determine on the steps needed to complete my major.               |  |  |  |  |  |

|     |                                                                             |  |  |  |  |  |
|-----|-----------------------------------------------------------------------------|--|--|--|--|--|
| 46. | I can list several occupations I am interested in.                          |  |  |  |  |  |
| 47. | I can choose a major from my list of options.                               |  |  |  |  |  |
| 48. | I am confident to talk to a faculty member in a department I'm considering. |  |  |  |  |  |
| 49. | I am confident to get relevant work experience for my future career goals.  |  |  |  |  |  |
| 50. | I can talk with someone working in my field of interest.                    |  |  |  |  |  |

## Section F: Career Adaptability

Please rate the following statements on **career adaptability** from (1) Strongly Disagree to (5) Strongly Agree.

|     |                                                         | 1 | 2 | 3 | 4 | 5 |
|-----|---------------------------------------------------------|---|---|---|---|---|
| 1.  | I am prepared for my future.                            |   |   |   |   |   |
| 2.  | I can always take responsibility for my actions.        |   |   |   |   |   |
| 3.  | I always explore options before making a choice.        |   |   |   |   |   |
| 4.  | I am confident in my capability.                        |   |   |   |   |   |
| 5.  | I am always thinking about what my future will be like. |   |   |   |   |   |
| 6.  | I can always make decisions by myself.                  |   |   |   |   |   |
| 7.  | I always look for opportunities to grow.                |   |   |   |   |   |
| 8.  | I am confident in my ability to do things well.         |   |   |   |   |   |
| 9.  | I am always aware of choices I must make.               |   |   |   |   |   |
| 10. | I know I can count on myself.                           |   |   |   |   |   |
| 11. | I am capable to learn new skills.                       |   |   |   |   |   |
| 12. | I always see different ways of doing thing.             |   |   |   |   |   |

## **APPENDIX 1.2: Official Ethical Approval Letter**



**UNIVERSITI TUNKU ABDUL RAHMAN**

Wholly Owned by UTAR Education Foundation (Company No. 578227-M)

Re: U/SERC/78-678/2026

19 January 2026

Dr Aye Aye Khin  
Head, Department of Economics  
Faculty of Accountancy and Management  
Universiti Tunku Abdul Rahman  
Jalan Sungai Long  
Bandar Sungai Long  
43000 Kajang, Selangor.

Dear Dr Aye Aye Khin,

### **Ethical Approval For Research Project/Protocol**

We refer to your application for ethical approval for your students' research project from Bachelor of Economics (Honours) Global Economics programme enrolled in course UKEZ3026. We are pleased to inform you that the application has been approved under Expedited Review.

The details of the research projects are as follows:

| No. | Research Title                                                                | Student's Name       | Supervisor's Name | Approval Validity                    |
|-----|-------------------------------------------------------------------------------|----------------------|-------------------|--------------------------------------|
| 1.  | Choosing Careers in a Gig World: Insights from Malaysian Final Year Students  | Yap Chen Yan         | Mr Low Choon Wei  | 19 January 2026 -<br>18 January 2027 |
| 2.  | Student Motivation and AI Use: A Pathway to Academic Performance              | Minnie Ling Yee Lynn |                   |                                      |
| 3.  | Factors Influencing Career Adaptability Among University Students in Malaysia | Ng Shinjou           |                   |                                      |

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; and
- (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.
- (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



## **Appendix 1.3: SPSS Output**

### **Descriptive Analysis**

#### **Frequencies**

|                        |         | <b>Statistics</b> |        |               |         |                      |
|------------------------|---------|-------------------|--------|---------------|---------|----------------------|
|                        |         | Age               | Gender | Year of Study | Faculty | Types of Institution |
| N                      | Valid   | 388               | 388    | 388           | 388     | 388                  |
|                        | Missing | 0                 | 0      | 0             | 0       | 0                    |
| Mean                   |         | 1.52              | 1.48   | 2.87          | 1.24    | 1.91                 |
| Median                 |         | 2.00              | 1.00   | 3.00          | 1.00    | 2.00                 |
| Mode                   |         | 2                 | 1      | 3             | 1       | 2                    |
| Skewness               |         | -.072             | .093   | -.492         | 1.224   | -2.872               |
| Std. Error of Skewness |         | .124              | .124   | .124          | .124    | .124                 |
| Kurtosis               |         | -2.005            | -2.002 | -.760         | -.504   | 6.281                |
| Std. Error of Kurtosis |         | .247              | .247   | .247          | .247    | .247                 |

|                        |         | <b>Statistics</b>                           |                                                                                                                     |                    |                                                            |
|------------------------|---------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------|
|                        |         | Internship / Industrial Training Experience | Participation in university career activities (past 12 months) (career fair, career talks, counselling, workshops): | Living arrangement | How 4 do you feel to enter the workforce after graduation? |
| N                      | Valid   | 388                                         | 388                                                                                                                 | 388                | 388                                                        |
|                        | Missing | 0                                           | 0                                                                                                                   | 0                  | 0                                                          |
| Mean                   |         | 2.03                                        | 2.19                                                                                                                | 1.97               | 2.77                                                       |
| Median                 |         | 2.00                                        | 2.00                                                                                                                | 2.00               | 3.00                                                       |
| Mode                   |         | 2                                           | 2                                                                                                                   | 1                  | 3                                                          |
| Skewness               |         | .984                                        | .024                                                                                                                | .058               | .086                                                       |
| Std. Error of Skewness |         | .124                                        | .124                                                                                                                | .124               | .124                                                       |
| Kurtosis               |         | .787                                        | -.503                                                                                                               | -1.530             | -1.131                                                     |
| Std. Error of Kurtosis |         | .247                                        | .247                                                                                                                | .247               | .247                                                       |

## Frequency Table

|       |       | <b>Age</b> |         |               |                    |
|-------|-------|------------|---------|---------------|--------------------|
|       |       | Frequency  | Percent | Valid Percent | Cumulative Percent |
| Valid | 1     | 187        | 48.2    | 48.2          | 48.2               |
|       | 2     | 201        | 51.8    | 51.8          | 100.0              |
|       | Total | 388        | 100.0   | 100.0         |                    |

|       |       | <b>Gender</b> |         |               |                    |
|-------|-------|---------------|---------|---------------|--------------------|
|       |       | Frequency     | Percent | Valid Percent | Cumulative Percent |
| Valid | 1     | 203           | 52.3    | 52.3          | 52.3               |
|       | 2     | 185           | 47.7    | 47.7          | 100.0              |
|       | Total | 388           | 100.0   | 100.0         |                    |

|       |       | <b>Year of Study</b> |         |               |                    |
|-------|-------|----------------------|---------|---------------|--------------------|
|       |       | Frequency            | Percent | Valid Percent | Cumulative Percent |
| Valid | 1     | 50                   | 12.9    | 12.9          | 12.9               |
|       | 2     | 72                   | 18.6    | 18.6          | 31.4               |
|       | 3     | 147                  | 37.9    | 37.9          | 69.3               |
|       | 4     | 118                  | 30.4    | 30.4          | 99.7               |
|       | 5     | 1                    | .3      | .3            | 100.0              |
|       | Total | 388                  | 100.0   | 100.0         |                    |

|       |   | <b>Faculty</b> |         |               |                    |
|-------|---|----------------|---------|---------------|--------------------|
|       |   | Frequency      | Percent | Valid Percent | Cumulative Percent |
| Valid | 1 | 295            | 76.0    | 76.0          | 76.0               |

|  |       |     |       |       |       |
|--|-------|-----|-------|-------|-------|
|  | 2     | 93  | 24.0  | 24.0  | 100.0 |
|  | Total | 388 | 100.0 | 100.0 |       |

### Types of Institution

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | 1     | 35        | 9.0     | 9.0           | 9.0                |
|       | 2     | 353       | 91.0    | 91.0          | 100.0              |
|       | Total | 388       | 100.0   | 100.0         |                    |

### Internship / Industrial Training Experience

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | 1     | 92        | 23.7    | 23.7          | 23.7               |
|       | 2     | 233       | 60.1    | 60.1          | 83.8               |
|       | 3     | 24        | 6.2     | 6.2           | 89.9               |
|       | 4     | 39        | 10.1    | 10.1          | 100.0              |
|       | Total | 388       | 100.0   | 100.0         |                    |

### Participation in university career activities (past 12 months) (career fair, career talks, counselling, workshops):

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | 1     | 65        | 16.8    | 16.8          | 16.8               |
|       | 2     | 194       | 50.0    | 50.0          | 66.8               |
|       | 3     | 121       | 31.2    | 31.2          | 97.9               |
|       | 4     | 8         | 2.1     | 2.1           | 100.0              |
|       | Total | 388       | 100.0   | 100.0         |                    |

### Living arrangement

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | 1     | 138       | 35.6    | 35.6          | 35.6               |
|       | 2     | 124       | 32.0    | 32.0          | 67.5               |
|       | 3     | 126       | 32.5    | 32.5          | 100.0              |
|       | Total | 388       | 100.0   | 100.0         |                    |

### How ready do you feel to enter the workforce after graduation?

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | 1     | 87        | 22.4    | 22.4          | 22.4               |
|       | 2     | 80        | 20.6    | 20.6          | 43.0               |
|       | 3     | 94        | 24.2    | 24.2          | 67.3               |
|       | 4     | 88        | 22.7    | 22.7          | 89.9               |
|       | 5     | 39        | 10.1    | 10.1          | 100.0              |
|       | Total | 388       | 100.0   | 100.0         |                    |

### Descriptives

| Descriptive Statistics |           |           |           |           |                |           |            |
|------------------------|-----------|-----------|-----------|-----------|----------------|-----------|------------|
|                        | N         | Minimum   | Maximum   | Mean      | Std. Deviation | Skewness  |            |
|                        | Statistic | Statistic | Statistic | Statistic | Statistic      | Statistic | Std. Error |
| BFPT                   | 388       | 1.95      | 5.00      | 3.5021    | .49064         | -.249     | .124       |
| CE                     | 388       | 2.11      | 5.00      | 3.8519    | .71898         | -.445     | .124       |
| PP                     | 388       | 2.24      | 5.00      | 3.7791    | .64687         | -.187     | .124       |
| CDMSE                  | 388       | 2.17      | 4.86      | 3.6649    | .62827         | -.155     | .124       |
| CA                     | 388       | 1.83      | 5.00      | 3.8707    | .66375         | -.424     | .124       |
| Valid N (listwise)     | 388       |           |           |           |                |           |            |

## Descriptive Statistics

|                       | Kurtosis  |            |
|-----------------------|-----------|------------|
|                       | Statistic | Std. Error |
| BFPT                  | -.743     | .247       |
| CE                    | -.886     | .247       |
| PP                    | -1.067    | .247       |
| CDMSE                 | -1.182    | .247       |
| CA                    | -.740     | .247       |
| Valid N<br>(listwise) |           |            |

## Reliability Test

### Big Five Personality Traits (BFPT)

## Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 388 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 388 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

## Reliability Statistics

| Cronbach's<br>Alpha | N of Items |
|---------------------|------------|
| .813                | 20         |

## Item Statistics

|        | Mean | Std.<br>Deviation | N   |
|--------|------|-------------------|-----|
| BFPT1  | 3.58 | .851              | 388 |
| BFPT2  | 2.88 | .978              | 388 |
| BFPT3  | 2.71 | 1.042             | 388 |
| BFPT4  | 3.44 | .931              | 388 |
| BFPT5  | 2.57 | 1.013             | 388 |
| BFPT6  | 3.31 | 1.015             | 388 |
| BFPT7  | 4.02 | .905              | 388 |
| BFPT8  | 3.77 | 1.042             | 388 |
| BFPT9  | 3.78 | 1.036             | 388 |
| BFPT10 | 3.91 | .970              | 388 |
| BFPT11 | 3.40 | 1.295             | 388 |
| BFPT12 | 4.06 | .846              | 388 |
| BFPT13 | 4.01 | .883              | 388 |
| BFPT14 | 3.86 | 1.006             | 388 |
| BFPT15 | 3.74 | 1.098             | 388 |
| BFPT16 | 3.41 | 1.229             | 388 |
| BFPT17 | 3.48 | 1.319             | 388 |
| BFPT18 | 3.62 | 1.163             | 388 |
| BFPT19 | 3.62 | 1.124             | 388 |
| BFPT20 | 2.88 | 1.045             | 388 |

### Item-Total Statistics

|        | Scale Mean if<br>Item Deleted | Scale<br>Variance if<br>Item Deleted | Corrected<br>Item-Total<br>Correlation | Cronbach's<br>Alpha if Item<br>Deleted |
|--------|-------------------------------|--------------------------------------|----------------------------------------|----------------------------------------|
| BFPT1  | 66.46                         | 85.924                               | .611                                   | .795                                   |
| BFPT2  | 67.16                         | 102.882                              | -.380                                  | .840                                   |
| BFPT3  | 67.34                         | 99.350                               | -.199                                  | .834                                   |
| BFPT4  | 66.61                         | 84.508                               | .638                                   | .792                                   |
| BFPT5  | 67.47                         | 96.808                               | -.077                                  | .827                                   |
| BFPT6  | 66.73                         | 82.686                               | .681                                   | .788                                   |
| BFPT7  | 66.02                         | 87.222                               | .488                                   | .800                                   |
| BFPT8  | 66.27                         | 84.889                               | .537                                   | .796                                   |
| BFPT9  | 66.27                         | 84.485                               | .564                                   | .795                                   |
| BFPT10 | 66.13                         | 86.399                               | .497                                   | .799                                   |
| BFPT11 | 66.64                         | 81.048                               | .582                                   | .791                                   |
| BFPT12 | 65.98                         | 88.537                               | .442                                   | .802                                   |

|        |       |         |       |      |
|--------|-------|---------|-------|------|
| BFPT13 | 66.03 | 89.033  | .389  | .805 |
| BFPT14 | 66.19 | 87.924  | .390  | .804 |
| BFPT15 | 66.30 | 83.166  | .596  | .792 |
| BFPT16 | 66.63 | 79.770  | .684  | .785 |
| BFPT17 | 66.56 | 80.893  | .576  | .792 |
| BFPT18 | 66.42 | 84.627  | .482  | .799 |
| BFPT19 | 66.42 | 82.523  | .612  | .791 |
| BFPT20 | 67.16 | 102.553 | -.347 | .841 |

### Scale Statistics

| Mean  | Variance | Std.<br>Deviation | N of Items |
|-------|----------|-------------------|------------|
| 70.04 | 96.293   | 9.813             | 20         |

### Career Engagement (CE)

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 388 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 388 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

| Cronbach's<br>Alpha | N of Items |
|---------------------|------------|
| .886                | 9          |

### Item Statistics

|     | Mean | Std.<br>Deviation | N   |
|-----|------|-------------------|-----|
| CE1 | 3.73 | .945              | 388 |
| CE2 | 3.90 | 1.039             | 388 |
| CE3 | 4.05 | 1.001             | 388 |
| CE4 | 3.75 | .927              | 388 |
| CE5 | 3.78 | .918              | 388 |
| CE6 | 4.01 | .976              | 388 |
| CE7 | 3.89 | 1.079             | 388 |
| CE8 | 3.61 | .997              | 388 |
| CE9 | 3.94 | 1.048             | 388 |

### Item-Total Statistics

|     | Scale Mean if<br>Item Deleted | Scale<br>Variance if<br>Item Deleted | Corrected<br>Item-Total<br>Correlation | Cronbach's<br>Alpha if Item<br>Deleted |
|-----|-------------------------------|--------------------------------------|----------------------------------------|----------------------------------------|
| CE1 | 30.93                         | 34.461                               | .587                                   | .878                                   |
| CE2 | 30.77                         | 31.981                               | .750                                   | .864                                   |
| CE3 | 30.61                         | 33.003                               | .684                                   | .870                                   |
| CE4 | 30.91                         | 34.584                               | .590                                   | .878                                   |
| CE5 | 30.89                         | 35.140                               | .541                                   | .881                                   |
| CE6 | 30.65                         | 33.555                               | .651                                   | .873                                   |
| CE7 | 30.77                         | 32.672                               | .651                                   | .873                                   |
| CE8 | 31.06                         | 34.368                               | .557                                   | .880                                   |
| CE9 | 30.73                         | 32.223                               | .718                                   | .867                                   |

### Scale Statistics

| Mean  | Variance | Std.<br>Deviation | N of Items |
|-------|----------|-------------------|------------|
| 34.67 | 41.871   | 6.471             | 9          |

## Proactive Personality (PP)

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 388 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 388 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .914             | 17         |

### Item Statistics

|      | Mean | Std. Deviation | N   |
|------|------|----------------|-----|
| PP1  | 3.80 | .931           | 388 |
| PP2  | 4.02 | .954           | 388 |
| PP3  | 3.54 | 1.246          | 388 |
| PP4  | 3.63 | .960           | 388 |
| PP5  | 3.70 | .935           | 388 |
| PP6  | 4.11 | .992           | 388 |
| PP7  | 4.08 | .959           | 388 |
| PP8  | 3.77 | .910           | 388 |
| PP9  | 3.62 | .975           | 388 |
| PP10 | 3.82 | 1.056          | 388 |
| PP11 | 4.00 | .966           | 388 |
| PP12 | 3.60 | .979           | 388 |
| PP13 | 3.58 | 1.007          | 388 |
| PP14 | 3.91 | 1.005          | 388 |
| PP15 | 3.54 | .981           | 388 |

|      |      |       |     |
|------|------|-------|-----|
| PP16 | 3.71 | 1.130 | 388 |
| PP17 | 3.84 | .913  | 388 |

### Item-Total Statistics

|      | Scale Mean if<br>Item Deleted | Scale<br>Variance if<br>Item Deleted | Corrected<br>Item-Total<br>Correlation | Cronbach's<br>Alpha if Item<br>Deleted |
|------|-------------------------------|--------------------------------------|----------------------------------------|----------------------------------------|
| PP1  | 60.44                         | 109.560                              | .539                                   | .910                                   |
| PP2  | 60.23                         | 107.438                              | .636                                   | .908                                   |
| PP3  | 60.71                         | 108.368                              | .425                                   | .915                                   |
| PP4  | 60.61                         | 108.584                              | .571                                   | .910                                   |
| PP5  | 60.55                         | 108.734                              | .581                                   | .909                                   |
| PP6  | 60.14                         | 107.123                              | .625                                   | .908                                   |
| PP7  | 60.17                         | 107.943                              | .606                                   | .909                                   |
| PP8  | 60.47                         | 109.961                              | .531                                   | .911                                   |
| PP9  | 60.63                         | 108.492                              | .566                                   | .910                                   |
| PP10 | 60.43                         | 104.090                              | .730                                   | .905                                   |
| PP11 | 60.25                         | 106.512                              | .676                                   | .907                                   |
| PP12 | 60.65                         | 107.583                              | .610                                   | .909                                   |
| PP13 | 60.66                         | 106.953                              | .622                                   | .908                                   |
| PP14 | 60.33                         | 106.972                              | .623                                   | .908                                   |
| PP15 | 60.71                         | 108.099                              | .582                                   | .909                                   |
| PP16 | 60.54                         | 103.252                              | .714                                   | .905                                   |
| PP17 | 60.41                         | 111.188                              | .463                                   | .912                                   |

### Scale Statistics

| Mean  | Variance | Std.<br>Deviation | N of Items |
|-------|----------|-------------------|------------|
| 64.24 | 120.930  | 10.997            | 17         |

## Career Decision Making Self-Efficacy (CDMSE)

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 388 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 388 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .958             | 36         |

### Item Statistics

|         | Mean | Std. Deviation | N   |
|---------|------|----------------|-----|
| CDMSE1  | 3.50 | .995           | 388 |
| CDMSE2  | 3.86 | 1.069          | 388 |
| CDMSE3  | 3.88 | 1.049          | 388 |
| CDMSE4  | 3.69 | .935           | 388 |
| CDMSE5  | 3.61 | .921           | 388 |
| CDMSE6  | 3.88 | 1.028          | 388 |
| CDMSE7  | 3.92 | 1.019          | 388 |
| CDMSE8  | 3.64 | .982           | 388 |
| CDMSE9  | 3.92 | 1.021          | 388 |
| CDMSE10 | 3.68 | 1.163          | 388 |
| CDMSE11 | 3.80 | .899           | 388 |
| CDMSE12 | 3.71 | .959           | 388 |
| CDMSE13 | 3.59 | .999           | 388 |

|             |      |       |     |
|-------------|------|-------|-----|
| CDMSE1<br>4 | 3.90 | 1.058 | 388 |
| CDMSE1<br>5 | 3.77 | .947  | 388 |
| CDMSE1<br>6 | 3.92 | 1.094 | 388 |
| CDMSE1<br>7 | 3.63 | .922  | 388 |
| CDMSE1<br>8 | 3.52 | 1.299 | 388 |
| CDMSE1<br>9 | 3.61 | .921  | 388 |
| CDMSE2<br>0 | 3.82 | .882  | 388 |
| CDMSE2<br>3 | 3.63 | 1.019 | 388 |
| CDMSE2<br>4 | 3.90 | 1.103 | 388 |
| CDMSE2<br>5 | 3.94 | 1.028 | 388 |
| CDMSE2<br>6 | 3.80 | .897  | 388 |
| CDMSE2<br>7 | 3.49 | 1.082 | 388 |
| CDMSE2<br>8 | 3.96 | 1.045 | 388 |
| CDMSE2<br>9 | 3.75 | .864  | 388 |
| CDMSE3<br>0 | 3.60 | .974  | 388 |
| CDMSE3<br>3 | 3.82 | .900  | 388 |
| CDMSE3<br>4 | 3.65 | 1.010 | 388 |
| CDMSE3<br>5 | 3.83 | 1.090 | 388 |
| CDMSE3<br>6 | 3.93 | 1.076 | 388 |
| CDMSE3<br>7 | 3.78 | .939  | 388 |

|             |      |       |     |
|-------------|------|-------|-----|
| CDMSE4<br>2 | 3.73 | 1.008 | 388 |
| CDMSE4<br>5 | 3.94 | 1.046 | 388 |
| CDMSE5<br>0 | 3.82 | .936  | 388 |

### Item-Total Statistics

|             | Scale Mean if<br>Item Deleted | Scale<br>Variance if<br>Item Deleted | Corrected<br>Item-Total<br>Correlation | Cronbach's<br>Alpha if Item<br>Deleted |
|-------------|-------------------------------|--------------------------------------|----------------------------------------|----------------------------------------|
| CDMSE1      | 131.92                        | 509.431                              | .587                                   | .957                                   |
| CDMSE2      | 131.56                        | 504.784                              | .643                                   | .957                                   |
| CDMSE3      | 131.55                        | 505.122                              | .648                                   | .957                                   |
| CDMSE4      | 131.73                        | 513.029                              | .541                                   | .958                                   |
| CDMSE5      | 131.81                        | 510.163                              | .620                                   | .957                                   |
| CDMSE6      | 131.55                        | 505.540                              | .653                                   | .957                                   |
| CDMSE7      | 131.50                        | 503.775                              | .699                                   | .957                                   |
| CDMSE8      | 131.79                        | 507.616                              | .638                                   | .957                                   |
| CDMSE9      | 131.50                        | 504.850                              | .673                                   | .957                                   |
| CDMSE1<br>0 | 131.75                        | 502.684                              | .629                                   | .957                                   |
| CDMSE11     | 131.62                        | 515.590                              | .500                                   | .958                                   |
| CDMSE1<br>2 | 131.71                        | 511.983                              | .551                                   | .958                                   |
| CDMSE1<br>3 | 131.84                        | 510.061                              | .571                                   | .957                                   |
| CDMSE1<br>4 | 131.52                        | 503.031                              | .688                                   | .957                                   |
| CDMSE1<br>5 | 131.66                        | 511.621                              | .567                                   | .958                                   |
| CDMSE1<br>6 | 131.51                        | 501.207                              | .702                                   | .957                                   |
| CDMSE1<br>7 | 131.80                        | 510.161                              | .619                                   | .957                                   |
| CDMSE1<br>8 | 131.91                        | 500.708                              | .592                                   | .958                                   |
| CDMSE1<br>9 | 131.81                        | 511.847                              | .579                                   | .957                                   |

|             |        |         |      |      |
|-------------|--------|---------|------|------|
| CDMSE2<br>0 | 131.61 | 514.451 | .539 | .958 |
| CDMSE2<br>3 | 131.79 | 510.884 | .540 | .958 |
| CDMSE2<br>4 | 131.53 | 503.082 | .657 | .957 |
| CDMSE2<br>5 | 131.48 | 505.914 | .645 | .957 |
| CDMSE2<br>6 | 131.62 | 510.618 | .626 | .957 |
| CDMSE2<br>7 | 131.94 | 511.559 | .492 | .958 |
| CDMSE2<br>8 | 131.47 | 502.110 | .718 | .957 |
| CDMSE2<br>9 | 131.68 | 514.721 | .544 | .958 |
| CDMSE3<br>0 | 131.82 | 512.312 | .534 | .958 |
| CDMSE3<br>3 | 131.61 | 510.110 | .637 | .957 |
| CDMSE3<br>4 | 131.78 | 508.142 | .607 | .957 |
| CDMSE3<br>5 | 131.60 | 503.853 | .649 | .957 |
| CDMSE3<br>6 | 131.49 | 504.654 | .641 | .957 |
| CDMSE3<br>7 | 131.65 | 508.750 | .641 | .957 |
| CDMSE4<br>2 | 131.70 | 507.756 | .617 | .957 |
| CDMSE4<br>5 | 131.48 | 504.493 | .664 | .957 |
| CDMSE5<br>0 | 131.60 | 511.325 | .581 | .957 |

### Scale Statistics

| Mean   | Variance | Std.<br>Deviation | N of Items |
|--------|----------|-------------------|------------|
| 135.43 | 536.803  | 23.169            | 36         |

## Career Adaptability (CA)

### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 388 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 388 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .900             | 12         |

### Item Statistics

|          | Mean | Std. Deviation | N   |
|----------|------|----------------|-----|
| CONCER 1 | 3.63 | .988           | 388 |
| CONTRO 1 | 4.00 | 1.026          | 388 |
| CURIO1   | 4.04 | .990           | 388 |
| CONFI1   | 3.68 | .954           | 388 |
| CONCER 2 | 3.85 | .941           | 388 |
| CONTRO 2 | 3.74 | .937           | 388 |
| CURIO2   | 4.04 | .974           | 388 |
| CONFI2   | 3.77 | .903           | 388 |
| CONCER 3 | 4.01 | .986           | 388 |
| CONTRO 3 | 3.94 | 1.047          | 388 |

|        |      |      |     |
|--------|------|------|-----|
| CONFI3 | 3.92 | .856 | 388 |
| CURIO3 | 3.81 | .914 | 388 |

### Item-Total Statistics

|             | Scale Mean if<br>Item Deleted | Scale<br>Variance if<br>Item Deleted | Corrected<br>Item-Total<br>Correlation | Cronbach's<br>Alpha if Item<br>Deleted |
|-------------|-------------------------------|--------------------------------------|----------------------------------------|----------------------------------------|
| CONCER<br>1 | 42.81                         | 55.097                               | .502                                   | .898                                   |
| CONTRO<br>1 | 42.45                         | 52.630                               | .656                                   | .890                                   |
| CURIO1      | 42.41                         | 52.635                               | .684                                   | .889                                   |
| CONFI1      | 42.77                         | 54.206                               | .593                                   | .894                                   |
| CONCER<br>2 | 42.60                         | 54.546                               | .576                                   | .894                                   |
| CONTRO<br>2 | 42.70                         | 54.276                               | .600                                   | .893                                   |
| CURIO2      | 42.41                         | 53.260                               | .649                                   | .891                                   |
| CONFI2      | 42.68                         | 53.778                               | .668                                   | .890                                   |
| CONCER<br>3 | 42.44                         | 52.805                               | .675                                   | .889                                   |
| CONTRO<br>3 | 42.51                         | 51.966                               | .687                                   | .889                                   |
| CONFI3      | 42.53                         | 55.459                               | .568                                   | .895                                   |
| CURIO3      | 42.64                         | 54.842                               | .574                                   | .894                                   |

### Scale Statistics

| Mean  | Variance | Std.<br>Deviation | N of Items |
|-------|----------|-------------------|------------|
| 46.45 | 63.442   | 7.965             | 12         |

## Pearson Correlation Analysis

### Correlations

|       |                     | BFPT   | CE      | PP      | CDMSE   | CA      |
|-------|---------------------|--------|---------|---------|---------|---------|
| BFPT  | Pearson Correlation | 1      | .049    | .141**  | .070    | -.055   |
|       | Sig. (2-tailed)     |        | .334    | .005    | .167    | .284    |
|       | N                   | 388    | 388     | 388     | 388     | 388     |
| CE    | Pearson Correlation | .049   | 1       | .827*** | .843*** | .834*** |
|       | Sig. (2-tailed)     | .334   |         | <.001   | <.001   | <.001   |
|       | N                   | 388    | 388     | 388     | 388     | 388     |
| PP    | Pearson Correlation | .141** | .827*** | 1       | .864*** | .802*** |
|       | Sig. (2-tailed)     | .005   | <.001   |         | <.001   | <.001   |
|       | N                   | 388    | 388     | 388     | 388     | 388     |
| CDMSE | Pearson Correlation | .070   | .843*** | .864*** | 1       | .870*** |
|       | Sig. (2-tailed)     | .167   | <.001   | <.001   |         | <.001   |
|       | N                   | 388    | 388     | 388     | 388     | 388     |
| CA    | Pearson Correlation | -.055  | .834*** | .802*** | .870*** | 1       |
|       | Sig. (2-tailed)     | .284   | <.001   | <.001   | <.001   |         |
|       | N                   | 388    | 388     | 388     | 388     | 388     |

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

\*\*\* . Correlation at 0.001(2-tailed)

## Multiple Linear Regression

### Variables Entered/Removed<sup>a</sup>

| Model | Variables Entered                | Variables Removed | Method  |
|-------|----------------------------------|-------------------|---------|
| 1     | CDMSE, BFPT, CE, PP <sup>b</sup> |                   | . Enter |

a. Dependent Variable: CA

b. All requested variables entered.

### Model Summary<sup>b</sup>

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1     | .898 <sup>a</sup> | .807     | .805              | .29296                     | 1.833         |

a. Predictors: (Constant), CDMSE, BFPT, CE, PP

b. Dependent Variable: CA

### ANOVA<sup>a</sup>

| Model |            | Sum of Squares | df  | Mean Square | F       | Sig.               |
|-------|------------|----------------|-----|-------------|---------|--------------------|
| 1     | Regression | 137.628        | 4   | 34.407      | 400.885 | <.001 <sup>b</sup> |
|       | Residual   | 32.872         | 383 | .086        |         |                    |
|       | Total      | 170.500        | 387 |             |         |                    |

a. Dependent Variable: CA

b. Predictors: (Constant), CDMSE, BFPT, CE, PP

| Coefficients <sup>a</sup> |            |                             |            |                           |        |       |                         |
|---------------------------|------------|-----------------------------|------------|---------------------------|--------|-------|-------------------------|
| Model                     |            | Unstandardized Coefficients |            | Standardized Coefficients |        |       | Collinearity Statistics |
|                           |            | B                           | Std. Error | Beta                      | t      | Sig.  | Tolerance               |
| 1                         | (Constant) | .900                        | .134       |                           | 6.697  | <.001 |                         |
|                           | BFPT       | -.166                       | .031       | -.123                     | -5.381 | <.001 | .963                    |
|                           | CE         | .279                        | .041       | .302                      | 6.727  | <.001 | .249                    |
|                           | PP         | .125                        | .050       | .121                      | 2.494  | .013  | .212                    |
|                           | CDMSE      | .548                        | .053       | .519                      | 10.347 | <.001 | .200                    |

### Multicollinearity

| Coefficients <sup>a</sup> |            |                         |
|---------------------------|------------|-------------------------|
| Model                     |            | Collinearity Statistics |
|                           |            | VIF                     |
| 1                         | (Constant) |                         |
|                           | BFPT       | 1.039                   |
|                           | CE         | 4.013                   |
|                           | PP         | 4.712                   |
|                           | CDMSE      | 4.989                   |

a. Dependent Variable: CA

### Collinearity Diagnostics<sup>a</sup>

| Model | Dimension | Eigenvalu | Condition | Variance Proportions |      |     |     |
|-------|-----------|-----------|-----------|----------------------|------|-----|-----|
|       |           | e         | Index     | (Constant)           | BFTI | CE  | PP  |
| 1     | 1         | 4.945     | 1.000     | .00                  | .00  | .00 | .00 |
|       | 2         | .037      | 11.527    | .05                  | .23  | .04 | .01 |
|       | 3         | .009      | 24.076    | .92                  | .69  | .00 | .03 |
|       | 4         | .005      | 30.121    | .00                  | .04  | .94 | .27 |
|       | 5         | .004      | 36.447    | .03                  | .04  | .02 | .69 |

### Collinearity Diagnostics<sup>a</sup>

| Model | Dimension | Variance<br>Proportion<br>s<br>CDMSE |
|-------|-----------|--------------------------------------|
|       |           |                                      |
| 1     | 1         | .00                                  |
|       | 2         | .02                                  |
|       | 3         | .00                                  |
|       | 4         | .14                                  |
|       | 5         | .84                                  |

a. Dependent Variable: CA