Determinants of Career Adaptability of Undergraduates in Malaysia

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Abstract
Career adaptability refers to adapting to changing tasks and engaging in continued self-learning. It is crucial to respond to the changing demands of employers. Undergraduates are the future talents of a country. Their readiness to join the dynamic labour market is essential to be examined. Thus, this study examines the factors affecting career adaptability among undergraduates in Malaysia. This study uses an online questionnaire for data collection purposes. The questionnaire includes career adaptability, decision-making self-efficacy, proactive personality, and academic performance. After filtering the responses received, the regression analysis consists of 171 responses from undergraduates. Results show that career decision-making self-efficacy, proactive personality, and academic performance positively relate to career adaptability. This study found that career decision-making self-efficacy and proactive personality significantly influence career adaptability. The findings in this study recommend universities encourage undergraduates to participate in extracurricular activities to have the opportunities to enhance their decision-making skills and develop their ability to take initiative.

Keywords: Career Adaptability, Career Decision-Making Self-Efficacy, Proactive Personality, Academic Performance

1. Introduction

The evolution of technology has brought about rapid shifts in employment structures, impacting the present generation. Technology is one of the critical components in various economic activities in today's modern world, especially in the digital world. The industry is transforming technologically, altering our living and working styles. With technology, the Fourth Industrial Revolution (IR 4.0) is reshaping how we live, work, and communicate. Its rapid change is unprecedented. IR 4.0 radically changes traditional industries, which rely on centralized factories, vast workforces, and huge organizations (Economic Planning Unit, 2021).

While technology has the potential to generate new job opportunities, it also can eliminate large numbers of jobs (Mashelkar, 2018). According to a survey by the McKinsey Global Institute, the demand for specific advanced IT and programming skills is projected to surge by as much as 90% between 2016 and 2030. These skills are integral to IR 4.0, requiring workforces to significantly enhance their technical proficiency to remain competitive in an increasingly automated and digitalized economy. Furthermore, acquiring basic digital skills is imperative in navigating the landscape of IR 4.0 (McKinsey & Company, 2018). As the technological landscape evolves, workers must adapt to change and proactively cultivate the skills necessary to thrive in a highly dynamic and technologically driven economy.

Over the past few years, Malaysia has witnessed robust economic growth, but a shift in the economic structure has contributed to a notable increase in unemployment. The transformations in economic structures and industrial activities have not only reshaped the composition of occupations in the labour market but have also left a discernible impact on the education sector. In 2021, Malaysia observed a significant rise of 4.7% in graduates, with a total of 5.61 million individuals graduating compared to 5.36 million in 2020. The number of graduates in the labour force also experienced a 4.6% increase, reaching 4.77 million in 2021, compared to 4.56 million in the preceding year. Despite these shifts, the graduates' labour force participation rate (GLFPR) remained at 85.0%, as reported in the previous year (Department of Statistics Malaysia, 2022a).

New graduates often encounter challenges securing suitable employment, particularly during economic crises, and are more susceptible to job mismatches and underemployment. Job mismatch arises when individuals are compelled to accept positions that do not align with the skill level corresponding to their educational qualifications. In Malaysia, the skill-related underemployment rate witnessed a 6.3% increase, equivalent to 114.6 thousand persons, reaching 1.9 million persons in 2021, up from 1.8 million in 2020. Consequently, the rate of skill-related underemployment for employed individuals with tertiary education rose from 38.0% in 2020 to 38.7% in 2021 (Department of Statistics Malaysia, 2022b). This surge is primarily attributed to the lack of experience in career planning and job exploration among new graduates and an overreliance on academic performance. Additionally, they may lack the soft skills and adaptability required to navigate the job market during economic downturns.

The cultivation of high career adaptability among university students in Malaysia is paramount, as it equips them to navigate the dynamic and ever-changing job market. In a rapidly evolving global economy, individuals must possess the skills and adaptability to navigate new environments and situations, ensuring continued relevance in the workforce. Numerous studies underscore the significance of career adaptability in augmenting employability and fostering career success among undergraduates. However, there is a

growing concern that many university students in Malaysia lack the requisite career adaptability skills to confront these changes and thrive in the labour market effectively.

Despite the critical importance of career adaptability, research indicates that Malaysian university students exhibit low levels of this crucial skill, resulting in adverse career outcomes such as unemployment, underemployment, and job dissatisfaction. Notably, Malaysian university students demonstrate a moderate level of career adaptability, characterized by higher levels of career concern, confidence, and control (Guan et al., 2013).

Numerous factors influence career adaptability, encompassing personality traits, decision-making self-efficacy, and the impact of career guidance (Savickas & Porfeli, 2012). A comprehensive understanding of these factors is pivotal for universities and policymakers in developing effective career development programs. By addressing these aspects, educational institutions can enhance students' career adaptability, better preparing them for the dynamic and evolving labour market. Hence, the central research question driving this study is: What factors significantly affect the career adaptability of undergraduates?

The outcomes of this study offer valuable insights for policymakers and educators, guiding how to effectively equip undergraduates to confront the challenges of a rapidly evolving labour market. This information is a foundation for universities to craft targeted career guidance programs and formulate policies to enhance students' career adaptability. Such initiatives have the potential to diminish instances of underemployment and contribute to overall improvements in Malaysia's labour market outcomes.

By fostering high levels of career adaptability among graduates, universities play a pivotal role in nurturing individuals who can significantly impact the country's economic growth. Graduates with solid career adaptability are well-positioned to drive innovation, enhance productivity, and create new job opportunities. As a result, these proactive measures benefit individual graduates in navigating their careers and contribute to Malaysia's broader economic landscape. The collaborative efforts of policymakers, educators, and institutions can thus pave the way for a more resilient and thriving workforce better prepared to meet the demands of an ever-changing employment landscape.

2. Literature Review

Career development is an important aspect to investigate in an individual's life. It involves the process of exploring various career opportunities and making informed choices. Two theories that explain how individuals make career choices are Career Construction Theory (CCT) and Social Cognitive Career Theory (SCCT). According to CCT, individuals have varying capacities and willingness to adapt to change. Career adaptability is the ability of an individual to deal with current and future challenges in their work roles. Career adaptability consists of four self-regulatory strengths: concern, control, curiosity, and confidence (Savickas, 1997; Savickas & Porfeli, 2012).

SCCT explains how an individual makes career choices based on self-efficacy, goal selection, outcome expectations, and environmental factors. Self-efficacy is an individual's belief about their ability to achieve certain performance levels in specific tasks. A person with a high level of self-efficacy towards a particular task is more likely to exhibit interest in performing the task, demonstrate persistence in the face of obstacles, and potentially achieve success. The Career Decision-making Self-Efficacy Scale developed by Taylor and Betz (1983) is the most

used instrument to evaluate individuals' levels of self-efficacy. It comprises 25 items that measure five dimensions, including self-appraisal, occupational occupation, goal selection, planning, and problem-solving. Given its relevance to evaluating university students' career adaptability, this scale has gained significant popularity among researchers and practitioners alike (Taylor & Betz, 1983).

Previous studies on career decision-making self-efficacy show a positive relationship between self-efficacy and career adaptability among higher education students (Duffy, Douglass, & Autin, 2015; Ebenehi, Rashid, & Rahim, 2016; Rudolph, Lavigne, & Zacher, 2017; Shin, Lee, & Seo, 2019).

Besides career decision-making self-efficacy, individuals must also be ready to take action to improve their career circumstances (Savickas, 2013). This aspect can be understood through the concept of proactive personality. A proactive personality refers to an individual's tendency to take the initiative to influence their environment. Proactive persons are more likely to effectively navigate career-related changes by identifying opportunities for improvement and creating an environment that aligns with their goals (Bateman & Crant, 1993; Seibert, Crant, & Kraimer, 1999).

3. Methodology

This study used a survey method in a quantitative research design to gather data from undergraduates in Malaysia. The questionnaire was distributed using Microsoft Forms and consisted of four sections. The sections in the questionnaire include the first section – demographic information; the second section – career adaptability (CA); the third section – career decision-making self-efficacy (CDMSE); and the fourth section – proactive personalities (PAP). The analyses conducted in this study included a reliability test, a Pearson correlation test, and multiple linear regression.

The CA scale used the 24 items from Savickas and Porfeli (2012), CDMSE refers to the 25-item scale by Betz, Klein, and Taylor (1996), and PAP used the 17-item scale from Bateman and Crant (1993). This study used a 5-point Likert scale to measure CA, CDMSE, and PAP. The academic performance refers to Cumulative Grade Point Average (CGPA). The scale scores of all variables were summed up and converted to 100%.

Figure 1 shows the research framework of this study. CA is the dependent variable, while CDMSE, PAP, and CGPA are independent variables in this study.

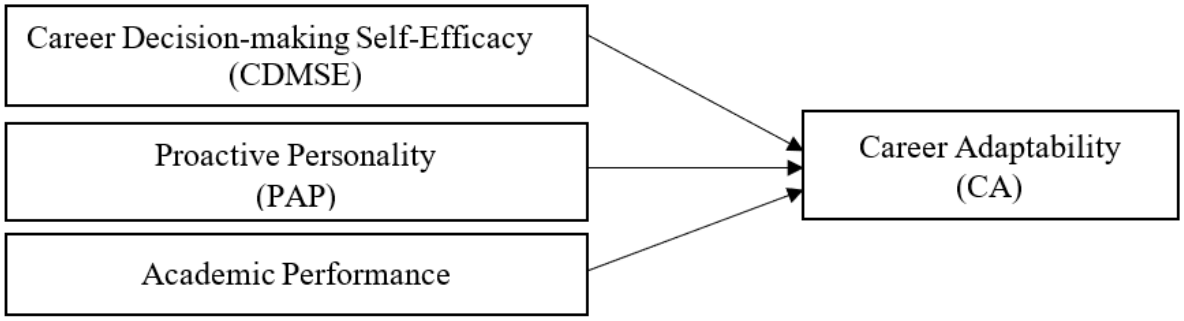

Figure 1: Research Framework

4. Data Analysis

The demographic composition of the participants revealed that 45% of respondents were in their first or second year of undergraduate studies, while 55% were in their third or fourth year. This distribution across academic years provides a balanced representation, capturing insights from students at different stages of their undergraduate journey.

As depicted in Table 1, the results revealed exceptionally high Cronbach's Alpha values. Specifically, the CA, CDMSE, and PAP measures demonstrated strong internal consistency, with Cronbach's Alpha values of 0.945, 0.931, and 0.962, respectively. These high values underscore the reliability and stability of the instruments, affirming the consistency in measuring the targeted constructs. The analysis unveiled a mean score of 78.47 for undergraduate CA. Notably, the standard deviation for PAP was 15.66. This variation indicates the degree of dispersion in responses, offering insights into the diversity of perceptions among participants, particularly regarding PAP.

Examining the correlation patterns among the variables, the findings presented in Table 2 elucidated significant relationships. A positive correlation between CA and PAP implies that individuals with higher career decision-making self-efficacy and proactive personality tend to exhibit greater career adaptability. A positive correlation emerged between CA and CGPA, indicating that those with higher career adaptability scores tend to perform better academically.

Table 1: Reliability Test

Variables	Cronbach's Alpha
CA	0.945
CDMSE	0.931
PAP	0.962

Table 2: Mean, Standard Deviation, and Correlation

Variables	Mean	Standard Deviation	CA	CDMSE	PAP
CA	78.465	11.509	1		
CDMSE	71.620	11.161	0.585***	1	
PAP	70.812	15.664	0.365***	0.423***	1
CGPA	78.708	10.868	0.146	0.099	0.180**

Note: ***$p < 0.01$, **$p < 0.05$

The study's primary objective was to unravel the factors that significantly influence the career adaptability of undergraduates. This study achieved the objective through multiple regression analysis, briefly summarizing the outcomes in Table 3. The examination of different model configurations provided nuanced insights into the relative impact of CDMSE and PAP on CA.

In Model 1, both CDMSE ($\beta = 0.522$, $p < 0.01$) and PAP ($\beta = 0.132$, $p < 0.1$) demonstrated a positive association with Career Adaptability (CA). The beta coefficients signify the strength and direction of the relationships, indicating that higher levels of CDMSE and PAP are associated with increased levels of CA. The significance levels (p-values) below 0.05 suggest that these associations are statistically robust.

Model 2, which excluded CGPA due to its insignificance in Model 1, revealed a strengthening of the impact of both CDMSE ($\beta = 0.524$, $p < 0.01$) and PAP ($\beta = 0.144$, $p < 0.05$) on CA. This model refinement allowed for a more focused examination of the core variables, emphasizing their robust contributions to predicting CA.

Models 3 and 4 delved into the individual effects of CDMSE and PAP, respectively. These models revealed that both factors exerted even stronger influences on Career Adaptability, with a beta coefficient of 0.585 ($p < 0.1$) for CDMSE and 0.365 ($p < 0.1$) for PAP. The elevated beta coefficients suggest that when considered in isolation, both CDMSE and PAP play substantial roles in shaping the levels of Career Adaptability among undergraduates. The results affirm the importance of CDMSE and PAP in contributing to the nuanced construct of CA among the study participants.

The regression models employed in this study underscored that CDMSE and PAP emerged as the predominant factors significantly influencing the career adaptability of undergraduates. Notably, the beta coefficients provided a quantitative measure of the strength and direction of these influences, with CDMSE exerting a more significant impact ($\beta = 0.585$) compared to PAP ($\beta = 0.365$).

The substantial influence of CDMSE is highlighted by the higher beta coefficient ($\beta = 0.585$), indicating a more pronounced contribution to the variation in CA. It suggests that as undergraduates perceive themselves as more productive in making career decisions, their levels of career adaptability are likely to be elevated. The finding aligns with the notion that a heightened sense of self-efficacy in career decision-making empowers individuals to navigate the complexities of their professional journeys with increased adaptability and resilience.

Simultaneously, the positive association between PAP and CA, as indicated by the beta coefficient of 0.365, emphasizes the relevance of taking initiative and being proactive in shaping one's career trajectory. Undergraduates with higher scores in proactive personality traits demonstrated a heightened level of career adaptability, underlining the importance of a proactive mindset in fostering adaptive behaviours in the face of evolving career landscapes.

These results resonate with previous research studies (Duffy, Douglass, & Autin, 2015; Ebenehi, Rashid, & Rahim, 2016; Guan et al., 2016; Rudolph, Lavigne, & Zacher, 2017; Shin, Lee, & Seo, 2019; Ebenehi et al., 2016; Karacanozdemir & Yerin Guneri, 2017). The consistency across these findings validates and reinforces the robustness of the outcomes of the current study. The alignment with prior research enhances the study's credibility and contributes to the broader understanding of the pivotal role played by CDMSE and PAP in shaping CA among university undergraduates.

Table 3: Regression Results

	Model 1	Model 2	Model 3	Model 4
CDMSE	0.522	0.524	0.585	
	(7.663)***	(7.689)***	(9.374)***	
PAP	0.132	0.144		0.365
	(1.912)*	(2.105)**		(5.101)***
CGPA	0.070			
	(1.117)			
R-square	0.364	0.359	0.342	0.133
R	0.603	0.599	0.585	0.365
F value	31.828	47.047	87.877	26.018

Note: Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

5. Conclusion

This study concluded that career decision-making self-efficacy and proactive personality significantly influence undergraduates' career adaptability. They are positively related to career adaptability. The analysis in this study found that undergraduates with higher confidence in career decision-making are better prepared to face the challenges in labour after completing their undergraduate studies. Regression results also show that undergraduates possessing a proactive personality have a higher chance of attaining job positions. This study recommends that universities encourage undergraduates to join more extracurricular activities such as organizing activities. Joining extracurricular activities provides opportunities for undergraduates to take on leadership roles and develop confidence, decision-making skills, and the ability to take initiative.

References

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior, 14*(2), 103-118.

Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the career decision-making self-efficacy scale. *Journal of Career Assessment, 4*(1), 47–57. https://doi.org/10.1177/106907279600400103

Department of Statistics Malaysia (2022a). *Graduates Statistics 2021.* Retrieved from https://www.dosm.gov.my/v1/index.php?r=column/pdfPrev&id=N0w0QU95YklKRDFoQWhSV3F6N3NHQT09#:~:text=In%202021%2C%20the%20number%20of,2020%3A%204.56%20million%20persons

Department of Statistics Malaysia (2022b). *Labour Force Survey Report, 2021.* Retrieved from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=126&bul_id=L1kxcjNmdDduMXBHUll2VGlweCsxQT09&menu_id=Tm8zcnRjdVRNWWlpWjRlbmtlaDk1UT09

Duffy, R. D., Douglass, R. P., & Autin, K. L. (2015). Career adaptability and academic satisfaction: Examining work volition and self-efficacy as mediators. *Journal of Vocational Behavior, 90*, 46-54. http://dx.doi.org/10.1016/j.jvb.2015.07.007

Ebenehi, A. S., Rashid, A. M., & Rahim Bakar, A. (2016). Predictors of career adaptability skill among higher education students in Nigeria. *International Journal for Research in Vocational Education and Training (IJRVET), 3*, 212–229. https://doi.org/10.13152/IJRVET.3.3.3

Economic Planning Unit (EPU) (2021). *National Fourth Industrial Revolution (4IR) Policy*. https://www.epu.gov.my/sites/default/files/2021-07/National-4IR-Policy.pdf

Guan, Y., Deng, H., Sun, J., Wang, Y., Cai, Z., Ye, L., Fu, R., Wang Y., Zhang, S., & Li, Y. (2013). Career adaptability, job search self-efficacy and outcomes: A three-wave investigation among Chinese university graduates. *Journal of Vocational Behavior, 83*(3), 561-570. http://dx.doi.org/10.1016/j.jvb.2013.09.003

Mc Kinsey & Company (2018). *Skill shift automation and the future of the workforce.* https://www.mckinsey.com/~/media/mckinsey/industries/public%20and%20social%20sector/our%20insights/skill%20shift%20automation%20and%20the%20future%20of%20the%20workforce/mgi-skill-shift-automation-and-future-of-the-workforce-may-2018.pdf

Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior, 98*(2017), 17–34. https://doi.org/10.1016/J.JVB.2016.09.002

Savickas, M. L. (1997). Career adaptability: An integrative construct for life-span, life-space theory. *Career Development Quarterly, 45*(3), 247-259. https://doi.org/10.1002/j.2161-0045.1997.tb00469.x

Savickas, M. L. (2013). *Career construction theory and practice. In S. D. Brown & R. W. Lent (Eds.), Career development and counseling: Putting theory and research to work (2nd ed., pp. 147-183)*. John Wiley & Sons.

Savickas, M. L., & Porfeli, E. J. (2012). Career adapt-abilities scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior, 80*(3), 661-673. http://dx.doi.org/10.1016/j.jvb.2012.01.011

Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *Journal of Applied Psychology, 84*(3), 416-427.

Shin, Y.-J., Lee, E. S., & Seo, Y. (2019). Does traditional stereotyping of career as male affect college women's, but not college men's, career decision self-efficacy and ultimately their career adaptability? *Sex Roles, (2019)*81, 74–86. https://doi.org/10.1007/S11199-018-0976-7

Taylor, K. M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior, 22*(1), 63-81. https://doi.org/10.1016/0001-8791(83)90006-4

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