

**FACTORS AFFECTING CUSTOMER
ACCEPTANCE OF PROFESSIONAL
MEMBERSHIP: A CASE OF MALAYSIA'S
AVIATION SECTOR**

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PROFESSIONAL MEMBERSHIP: A CASE OF
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ABSTRACT

In today's competitive aviation market, customer acceptance is pivotal for the success of products and services, given the industry's stringent standards and regulatory demands. This is particularly critical for aviation professionals and organizations involved with the Board of Engineers Malaysia (BEM). Understanding and influencing customer attitudes and behaviors can significantly impact outcomes such as sales performance, industry reputation, and customer loyalty. High levels of acceptance correlate with increased sales and enhanced industry reputation, while poor acceptance can lead to diminished sales, reputational damage, and financial setbacks (Rogers, 2020). Customer attitudes in aviation reflect the perceptions of both industry professionals and clients regarding the quality and reliability of aviation products and services. For example, an aviation company that consistently delivers high-quality, reliable aircraft components is likely to establish a strong reputation among customers and regulatory bodies (Zeithaml et al., 2021). This study explores the factors influencing the decision of Licensed Aircraft Maintenance Engineers (LAEs) licensed by the Civil Aviation Authority of Malaysia (CAAM) to register with BEM. In this context, LAEs are considered "customers" of BEM. Utilizing the Theory of Planned Behavior (TPB), the research investigates the acceptance levels of unregistered LAEs toward BEM membership, particularly within aircraft maintenance organizations. Key factors examined include customer attitudes, social norms, perceived behavioral control, and institutional support. Employing a quantitative methodology, the study gathered data through self-administered questionnaires from unregistered LAEs, with 170 responses deemed usable for analysis using SPSS software version 29. The findings indicate significant relationships between engineers' attitudes, subjective norms, and perceived behavioral control in relation to BEM membership acceptance, with institutional support moderating these relationships. Moreover, age and years of professional experience were found to significantly affect LAEs' attitudes toward BEM membership. The study provides evidence-based insights into the factors influencing statutory registration among LAEs, offering practical implications for LAEs, aircraft maintenance organizations, regulatory authorities, and policymakers. It underscores the importance of engaging regulatory bodies, fostering collaborations, and pursuing continuous improvements within the aircraft maintenance industry. The study's novelty lies in its integration of institutional support as a moderator, offering new theoretical insights and practical implications for improving LAEs' statutory registration through enhanced institutional backing and policy reforms in the aviation industry.

Keywords: Customer acceptance, attitude, social norms, behavioural control, institutional support, Licensed Aircraft Maintenance Engineers (LAEs), Theory of Planned Behaviour (TPB), Board of Engineers Malaysia (BEM)

APPROVAL

This is to certify that this thesis conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, for the fulfilment of the requirements for the Doctor of Business Administration.

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DECLARATION

I hereby declare that the thesis submitted in fulfilment of the DBA degree is my own work and that all contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and/or exclusion from the award of the degree.

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LIST OF ABBREVIATIONS

AML	Aircraft Maintenance License issued by CAAM or DCA
BEM	Board of Engineers Malaysia established under Registration of Engineers Act 138 (1969)
CAAM	Civil Aviation Authority of Malaysia established under parliament Act 788 (2017) is the regulator of aviation operation in Malaysia
CPD	Continuous Professional Development program for engineers to keep abreast with current technology and policies in the industry
COC	Code of Conduct issued by BEM
DCA	Department of Civil Aviation, Malaysia the predecessor of CAAM was the regulator of aviation operation in Malaysia
LAE	Unregistered Licensed Aircraft Maintenance Engineer holding an AML issued by CAAM
REA 138	Registration of Engineers Act 138 (Amendment 2015)

CHAPTER 1

INTRODUCTION

1.0 Introduction

The worldwide aviation sector is an intricate and fiercely competitive ecosystem, serving as a cornerstone for global connectivity and economic advancement (Navigating Turbulence: The Impact of Global Economics on the Aviation Industry, 2023). Globally, the aviation industry has witnessed substantial growth, forming a sophisticated network involving airlines, regulatory bodies, and skilled professionals. Statistics from the International Air Transport Association (IATA) reveal a consistent robust growth, with a 5.5% compound annual growth rate in global passenger traffic over the past two decades (IATA, 2022), highlighting its pivotal role in fostering global trade, tourism, and economic development.

In Malaysia, the aviation industry plays a pivotal role in the nation's economic prosperity, strategically positioning itself as a key player in the regional and international aviation landscape (Malaysian aviation, aerospace industry set to soar higher, 2023). One of the critical aspects of service quality of the airline services is compliance of security and standards, which could be achieved by possessing highly qualified airline professionals. These airline professionals known as License Aircraft Engineer (LAE). LAEs are crucial to the industry, responsible for maintaining aircraft airworthiness and contributing significantly to passenger service quality by meticulously conducting maintenance and repairs (Aircraft Maintenance Engineer, 2023).

However, a significant challenge in the Malaysian aviation sector lies in the low statutory registration rate of LAEs with the Board of Engineers Malaysia (BEM),

Despite CAAM's recognition of AML qualifications under the REA 138, the low registration (New Straits Times, 2023) raises concerns about engineer's professional standardization and oversight of professional COC adherence and CPD. The recognition of AML qualifications by the CAAM under the REA 138 represents a significant step toward standardizing the professional qualifications of engineers in the field of aircraft maintenance (Abd. Rahim, 2020). However, despite this formal recognition, a conspicuous and persistent issue has emerged: the low statutory registration rate of engineers possessing AML qualifications. This situation raises critical concerns regarding the standardization of professional practices, the effectiveness of oversight in ensuring adherence to a professional code of conduct within the industry.

1.1 Background of the study

The global aviation industry has experienced remarkable growth (IATA, 2022) and transformative development, solidifying its status as a cornerstone of international commerce and connectivity. IATA reports a compounding annual growth rate of 5.5% in global passenger traffic over the past two decades, illustrating the industry's resilience and its significant role in facilitating global trade, tourism, and economic development (IATA, 2021). This expansion has led to a complex network that unites airlines, regulatory bodies, and skilled professionals (IATA, 2023), forming the backbone of a sophisticated global transportation system.

In tandem with this global trajectory, Malaysia has strategically positioned itself as a key player in the aviation landscape (MIDA, 2021). Geopolitically situated as a hub in Southeast Asia, the nation has embraced substantial growth and development in its aviation sector. The CAAM plays a pivotal role in overseeing aviation industry regulatory frameworks, ensuring adherence to stringent international

safety standards, and fostering a secure and efficient aviation environment within the country (CAAM, 2024).

The aviation industry's global growth has been a transformative force, not only shaping the movement of people and goods but also acting as a catalyst for technological advancement and economic development (ICAO, 2024). The evolution of aviation technology, coupled with the expansion of air travel services, underscores the industry's pivotal role in driving globalization and connectivity on a worldwide scale (Husary, 2021). Within the Malaysian context, this global growth narrative finds resonance, exemplified by the nation's commitment to infrastructure development and strategic positioning (MIDA, 2021). Malaysia boasts a burgeoning aviation sector marked by increasing numbers of airports, air carriers, and air traffic movements (MAVCOM, 2023). This growth reflects Malaysia's dedication to fostering a dynamic and competitive aviation industry that aligns with global standards.

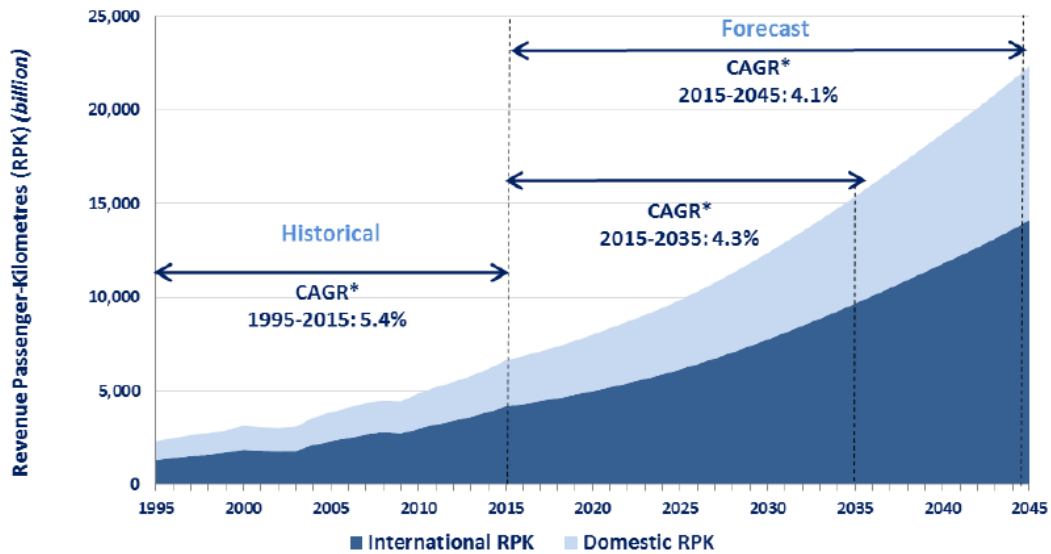
Central to the aviation industry's success are Licensed Aircraft Maintenance Engineers (LAEs), tasked with ensuring the airworthiness of aircraft and contributing substantially to the safety and quality of air travel (CAAM, 2024). However, the effectiveness of these professionals is contingent on a robust regulatory framework that validates their qualifications and competence (Aviation Career Hub, 2023).

Despite the Malaysia industry's global success story (Koen, 2017), challenges persist, notably in the realm of statutory regulatory compliance and professional engineers registration (BERNAMA, 2023). This study focusses in on a critical facet of this challenge within Malaysia, specifically addressing the low registration rate of LAEs (Leong, 2019) with the Board of Engineers Malaysia (BEM). The standardization of engineers' competence is crucial for ensuring uniformity and maintaining high standards across the engineering profession. Under the Regulatory

Engineering Act (REA) 2015, it is essential that engineers receive equal recognition, similar to the acknowledgment afforded to other engineering professionals. This uniform recognition can help in standardizing practices and ensuring that all engineers meet consistent competence levels, ultimately leading to a more reliable and effective engineering sector. One of the significant implications of this standardization is its impact on industry safety. Engineers who are not registered under the REA may lack adherence to a professional code of conduct. This absence of formal registration could result in diminished accountability and oversight, raising concerns about the adherence to safety protocols and ethical standards. Consequently, unregistered engineers might inadvertently compromise industry safety, highlighting the need for stringent registration and adherence to professional guidelines. Furthermore, the quality benchmarks for engineering practice are critically influenced by continuous professional development (CPD). The lack of CPD seminars, talks, and other professional development opportunities can adversely affect the quality of practice among Licensed Aircraft Engineers (LAEs). Continuous learning and updating of skills are vital for maintaining high standards in engineering practice. Without these opportunities, the quality of work may decline, undermining the reliability and safety of engineering outputs.

1.1.1 Development of the Aviation Industry

Figure 1.1: Future of aviation



Sources: *International Civil Aviation Organization, 2022*

From figure 1.1 (ICAO, *Global Air Transport Outlook to 2032 and Trends to 2042*, 2017), it has shown that the magnitude of air traffic is astonishing, with over 400 departures per hour for scheduled commercial flights alone. Air transport plays a pivotal role in the social, economic development, and sustainability of regions worldwide (IATA, *Global Outlook for Air Transport, Times of Turbulence*, 2022).

The air transport industry is on an expansive trajectory, promising a bright future for aviation. In 2017, global airlines transported approximately 4.1 billion passengers and 56 million tons of freight through 37 million commercial flights. Daily, airplanes ferry over 10 million passengers and goods valued at around USD 18 billion (IATA, 2024-Release, 2024). This underscores aviation's substantial economic impact, representing 3.5% of the global GDP (2.7 trillion US dollars) and generating 65 million jobs worldwide (ICAO, *Future of Aviation*, 2024). As the singular rapid worldwide transportation network, aviation fuels economic growth, job creation, and facilitates

international trade and tourism. Moreover, it is acknowledged by the international community as a vital enabler in achieving the UN Sustainable Development Goals. Projections indicate that air transport demand will grow at an average rate of 4.3% per annum over the next two decades (ICAO, Future of Aviation, 2024).

If this growth trajectory materializes by 2036, the air transport industry is anticipated to contribute 15.5 million direct jobs and \$1.5 trillion to the world economy. Factoring in the impacts of global tourism, these figures could escalate to an impressive 97.8 million jobs and \$5.7 trillion in GDP (ICAO, Future of Aviation, 2024). By the mid-2030s, an estimated minimum of 200,000 flights per day is expected globally, envisioning a future with twice the current air traffic. (Sources: ICAO, UN Sustainable Development Goals)

1.1.2 An Overview of the Malaysian Aviation Industry

The aviation industry plays a crucial role in Malaysia's economic development and global connectivity. With a diverse range of airlines, airports and aviation-related services, Malaysia's aviation sector has witnessed substantial growth in recent years (CAAM, Malaysia: A Leading Aviation Nation in the Asia Pacific Region, 2021).

The Malaysian aviation sector has also witnessed substantial growth in passenger traffic. In 2019, Malaysia recorded over 100 million passenger movements, with Kuala Lumpur International Airport (KLIA) being one of the busiest airports in the Asia-Pacific region (Malaysia Airports, 2020). This growth is a testament to Malaysia's strategic location, excellent connectivity and the expansion of airlines such as Malaysia Airlines, AirAsia and Batik Air (formerly known as Malindo Air). Table 1.0 presents a comprehensive overview of the annual operating statistics of Malaysian carriers, providing valuable insights into the evolving landscape of the aviation

industry in the country. The data, sourced from the Malaysian Aviation Commission in 2023, spans over a decade and encompasses key performance indicators.

The Annual Operating Statistics of Malaysian carriers provide valuable insights into the performance and trends within the country's aviation sector. Table 1.0 presents key metrics spanning from 2010 to 2021, including Available Seat-Kilometres (ASK), Revenue Passenger-Kilometres (RPK), the number of passengers carried, aircraft movements, and cargo movements. The data reveals several notable trends over the years. For instance, there is a discernible growth in metrics such as RPK, the number of passengers carried, and aircraft movements from 2010 to 2019, indicating a period of expansion and increasing demand within the Malaysian aviation industry. However, a significant downturn is observed in 2020 and 2021, attributed to the global COVID-19 pandemic, which severely impacted air travel worldwide.

Table 1.1: Table of Malaysian carriers' annual operating statistics

Year	Available Seat-Kilometre (ASK) [mil]	Revenue Passenger - Kilometre (RPK) [mil]	Number of Passengers Carried [mil]	Number of Aircraft Movements	Cargo Movements [tonne]
2010	87,599	66,719	31.09	628,337	922,710
2011	96,720	74,911	33.82	675,047	909,663
2012	94,364	73,502	35.65	678,051	898,572
2013	139,483	89,339	42.99	775,854	916,920
2014	158,821	97,190	28.59	834,538	1,007,374
2015	116,770	87,210	38.70	857,438	1,001,276
2016	123,219	97,275	52.43	868,677	908,759
2017	135,590	110,203	58.64	907,436	997,172
2018	141,102	112,516	59.95	925,926	1,010,004
2019	134,630	110,146	59.90	958,456	986,906
2020	35,875	25,018	15.65	373,327	820,901
2021	7,832	4,601	5.31	248,595	1,070,838

Sources: Malaysian Aviation Commission, 2023

The metric of Available Seat-Kilometre (ASK) serves as an indicator of the total passenger-carrying capacity provided by Malaysian carriers each year. In 2010, the figure stood at 87,599 million, steadily increasing to 141,102 million in 2018 before experiencing a notable decline to 35,875 million in 2020 and further dropping to 7,832 million in 2021. This substantial variation reflects the dynamic nature of the industry, influenced by factors such as global events, economic conditions, and public health crises.

Revenue Passenger-Kilometre (RPK) measures the actual passenger traffic, and the table illustrates a consistent upward trend from 66,719 million in 2010 to a peak of 112,516 million in 2018. The subsequent years witnessed fluctuations, notably in 2020 and 2021, aligning with the unprecedented challenges posed by the COVID-19 pandemic. The Number of Passengers Carried, a pivotal metric indicating the scale of aviation services, reveals an overall increase from 31.09 million in 2010 to 59.90 million in 2019. However, the impact of the pandemic is evident in the sharp decline to 15.65 million in 2020 and a further reduction to 5.31 million in 2021.

The Number of Aircraft Movements signifies the total count of flights operated by Malaysian carriers. The data demonstrates a consistent growth trajectory, reaching 907,436 movements in 2017. The subsequent years experienced slight fluctuations, emphasizing the resilience and adaptability of the industry. Cargo Movements, measured in tonnes, show a steady increase from 922,710 tonnes in 2010 to 1,070,838 tonnes in 2021. This growth underscores the significance of air cargo in supporting trade and logistics, even during challenging periods.

In summary, the data from Table 1.0 underscores the resilience, adaptability, and challenges faced by Malaysian carriers over the years. The substantial variations in key metrics highlight the industry's responsiveness to external factors, emphasizing

the need for continuous monitoring and strategic planning within the dynamic aviation landscape.

1.1.3 CAAM Licensed Aircraft Maintenance Engineers (LAE) in Malaysia

The Civil Aviation Authority of Malaysia (CAAM), formerly known as the Department of Civil Aviation (DCA), is the regulatory body entrusted with ensuring the safety, security, and sustainability of civil aviation in Malaysia (CAAM, About Us, 2024). Established under the Civil Aviation Authority of Malaysia Act 2017, CAAM plays a pivotal role in enforcing regulatory standards, overseeing aviation activities, and fostering continuous improvement within the aviation industry.

CAAM's multifaceted responsibilities encompass the certification of aviation personnel, including LAEs (CAAM, Aircraft Maintenance Engineer, 2024). Through stringent regulations and adherence to international safety standards, CAAM contributes significantly to the development and maintenance of a robust aviation infrastructure in Malaysia. The regulatory framework provided by CAAM ensures that aviation professionals meet the highest standards of competence, contributing to the overall safety and reliability of the aviation sector (CAAM, Safety Reporting, 2024).

Licensed Aircraft Maintenance Engineers (LAEs) in Malaysia: Certifier of Airworthiness

Licensed Aircraft Maintenance Engineers (LAEs) form an integral part of the aviation industry, serving as custodians of aircraft airworthiness. These professionals play a crucial role in ensuring the safety, reliability, and operational efficiency of aircraft (CAAM, Aircraft Maintenance Engineer, 2024). Licensed by CAAM, LAEs are entrusted with the responsibility of conducting thorough inspections, maintenance, and repairs on aircraft, adhering to stringent regulations and industry best practices

(Harun, 2024). The roles of LAEs extend beyond routine maintenance, encompassing the diagnosis and rectification of technical issues, conducting necessary inspections, and ensuring compliance with airworthiness standards set by CAAM (CAAM, Aircraft Maintenance Engineer, 2024). Their meticulous work is essential for preventing potential safety hazards and maintaining the overall integrity of aircraft systems (APR, 2024).

CAAM's relationship with LAEs is characterized by a regulatory framework that ensures the competence of these aviation professionals (CAAM, CAD 1 - Personnel Licensing, 2022). The authority issues and oversees the maintenance of licenses for LAEs, enforcing strict standards to guarantee that only qualified individuals are entrusted with the critical responsibility of maintaining aircraft airworthiness (CAAM, CAD1801-Aircraft Maintenance License Part 66, 2022). The regulatory oversight provided by CAAM extends to the training requirements (CAAM, CAD 1821 - Maintenance Training Organization Approval, 2022) of the LAEs. This involves staying abreast of technological advancements, participating in recurrent training programs, and adhering to evolving industry standards. CAAM, as the custodian of aviation safety, acts as a partner in the growth of LAEs, fostering an environment where the workforce is equipped with the necessary skills and knowledge to navigate the complexities of modern aircraft maintenance (CAAM, CAGM 1801 - Aircraft Maintenance License, 2022).

CAAM's role in regulating and overseeing the aviation industry in Malaysia is pivotal to ensuring the highest standards of safety and expertise (CAAM, 2024). Licensed Aircraft Maintenance Engineers, licensed and monitored by CAAM, stand as guardians of airworthiness, contributing to the industry's overall safety and reliability. The synergy between CAAM and LAEs reflects a commitment to

excellence and continuous improvement within Malaysia's aviation landscape (CAAM, 2024).

LAEs has been part of the Malaysian aviation industry since 1947 during the British era (Malaysia Airlines, 2023). The conventional engineers such as the civil, electrical and mechanical engineers had been in the Malaysian systems during the British days and are professionally recognized by the engineering council in United Kingdom. However, the LAEs are not part of the systems of conventional engineers under the BEM. In another words, there was no statutory registration provision for the LAEs in the Malaysian system even though the licensing system is similar to the CAA aircraft maintenance engineer licensing system. The Board of Engineers Malaysia (BEM) which was established in 1972 did not recognize the LAEs until the year 2018.

1.1.4 Board of Engineers Malaysia (BEM): Statutory Regulatory Body of Professional Standards

BEM is a statutory regulatory body established under the Registration of Engineers Act 1967. As the authoritative entity overseeing the engineering profession in Malaysia, BEM plays a pivotal role in ensuring that engineering practitioners adhere to the highest standards, code of conduct and continuous professional development. BEM's mandate extends to the statutory registration and code of conduct regulation of engineers, including LAEs, to uphold the integrity and safety of engineering practices within the country effective 2018 onwards.

The Registration of Engineers Act 1967 empowers BEM to regulate the engineering profession, safeguarding public interests and ensuring the competence and ethical conduct of engineers. BEM's jurisdiction encompasses various engineering disciplines, including aerospace engineering, the field under which LAEs operate. The Act empowers BEM to set and enforce standards for statutory registration, code of

conduct, professional certifications (e.g., professional engineer (Ir.)), and continuous professional development, establishing a legal framework for the practice of engineering.

LAE and BEM Registration: Ensuring Statutory Compliance, Code of Conduct Compliance and Accountability

The registration of LAEs with BEM is not merely a procedural requirement but a critical step in ensuring statutory, code of conduct compliance and accountability of professionals in the field of aircraft maintenance engineering. BEM's oversight ensures that LAEs are registered and obliged to the code of conduct when they carry out their responsibilities. This emphasizes the importance of ethical and professional behavior related to aircraft maintenance and repair. Specifically, it highlights the need for diligent and thorough work in maintaining aircraft to ensure their airworthiness and, ultimately, passenger safety. Such compliance ensures that employees adhere to accepted standards and also contribute to the overall integrity of the organization (EasyLlama, 2024).

The code of conduct serves as a guide for LAEs, outlining the expected behavior and ethical principles within an organization. By adhering to these standards, employees can make better decisions even in ambiguous situations, promoting a culture of accountability and professionalism (EasyLlama, 2024). So, in the aviation industry, rigorous maintenance practices are not only essential for operational efficiency but also critical for ensuring the safety of passengers and crew.

The Importance of LAEs Being Registered with BEM: Statutory Registration and Accountability

The registration of LAEs with BEM brings several significant advantages. Firstly, it provides professional recognition, validating the individual's qualifications and expertise in accordance with BEM's stringent standards. This recognition is not only crucial for individual career development but also enhances the overall reputation and credibility of the engineering profession in the aviation sector (Kumari et al., 2020).

Secondly, BEM registration fosters accountability among LAEs. By aligning with BEM's professional code of conduct and ethical standards, LAEs commit to upholding the highest levels of integrity and professionalism in their work. This accountability is particularly vital in the aviation industry, where precision and adherence to safety protocols are paramount.

Implications of the Lack of BEM Recognition and Professional Membership for Licensed Aircraft Engineers (LAEs) and the Aviation Industry

The absence of recognition and professional membership from the Board of Engineers Malaysia (BEM) poses several significant implications for Licensed Aircraft Engineers (LAEs) and the broader aviation industry in Malaysia. Without BEM's recognition, LAEs may face challenges in establishing their professional credibility and achieving career advancement. BEM registration is a mark of professional competence and ethical adherence, which can enhance an engineer's reputation and career prospects. Lack of BEM membership can limit opportunities for LAEs to participate in specialized training programs, conferences, and professional networks, which are essential for continuous professional development and career progression (Gowen & Tallon, 2017).

Professional registration with BEM ensures that LAEs adhere to national and international engineering standards. Non-registration may result in gaps in compliance, leading to potential safety risks and substandard maintenance practices. It can also affect the ability of LAEs to stay updated with the latest industry standards and technological advancements, which are critical for maintaining safety and efficiency in the aviation sector (Wang et al., 2018).

BEM recognition is crucial for the recognition of qualifications and work experience both domestically and internationally. Without this, LAEs might face difficulties in seeking employment opportunities abroad or in multinational companies. This lack of mobility can hinder the global career opportunities for LAEs, limiting their professional growth and exposure to international best practices (Rashid et al., 2020).

1.2 Problem Statements

Despite the development of the aircraft MRO business in Malaysia, the number of registered LAEs at BEM remained relatively small. There are a total of approximately 40 MROs (CAAM, 2023) in Malaysia and estimated 9.1% of LAEs registered with BEM, these numbers are relatively small. This indicates to the customer, in this case the LAEs, acceptance of BEM professional membership is questionable. It is crucial, therefore, to understand the customer's (LAEs) perception towards BEM professional membership and factors that may influence their intention to register. The aviation industry in Malaysia stands as a critical pillar of the nation's economy, contributing substantially to employment and GDP. Ensuring the safety and reliability of aircraft operations is imperative, with LAEs playing a central role in upholding these standards (Liew, 2022).

Despite the acceptance of the CAAM AML by BEM in 2018 as a qualification for statutory registration and accountability under Act 138, a significant number of CAAM LAEs have not completed the statutory registration process with BEM, posing a substantial challenge to the industry (BEM, n.d.). This low acceptance among LAEs which is indicated by low registration rate with BEM raises multifaceted concerns, impacting the aviation industry on various fronts: The statutory registration with BEM is designed to ensure that LAEs obliged to the code of conducts required for their critical roles in aircraft maintenance. The absence of registration may lead to questions regarding the accountability and conduct of unregistered LAEs, potentially compromising the safety and reliability of aircraft operations (BEM, n.d.).

BEM's registration process is essential for standardizing and regulating the professional practices of LAEs. Without registration, there is a risk of inconsistency in the code of conduct, potentially leading to variations in safety standards across the industry (BEM, n.d.). The aviation industry relies heavily on trust and code of conduct. Unregistered LAEs may face challenges in establishing their professional credibility, and this lack of registration could, in turn, impact the overall reputation of the aviation sector in Malaysia (BEM, n.d.).

Act 138 mandates the registration of engineers, engineering technologist and inspector or works with BEM to ensure compliance with statutory legal and regulatory requirements. The failure of CAAM LAEs to register creates a gap in regulatory code of conduct oversight, potentially exposing the industry to legal implications and challenges (BEM, n.d.). Supporting anecdotal evidence further emphasizes the significance of these challenges. Instances where unregistered LAEs are involved in critical maintenance or inspection activities have been observed. These cases underscore the potential risks associated with the lack of registration, highlighting the

need for urgent attention to address the existing gaps in the regulatory framework (BEM, n.d.).

The non-registration of CAAM LAEs with BEM poses substantial challenges to the aviation industry in Malaysia, impacting professional accountability, standardization of practices, industry reputation, and legal compliance. Addressing this issue is crucial for safeguarding the integrity and safety of aircraft operations, promoting consistency in professional practices, and upholding the industry's overall credibility and compliance with regulatory requirements (Joseph Herkert, 2020). Hence, an investigation into the factors influencing intention to register among LAEs is mandatory.

The low statutory registration rate of Licensed Aircraft Engineers (LAEs) with the Board of Engineers Malaysia (BEM) can be influenced by a multitude of factors. Research suggests that barriers such as lack of awareness about registration requirements, perceived complexity of the registration process, and inadequate support from regulatory bodies or professional associations can hinder professionals' willingness to register (Mohd Nasir et al., 2019). Additionally, factors related to workplace norms and attitudes towards professional registration, can also impact individuals' decision-making regarding statutory registration (Baker et al., 2018). By exploring these factors comprehensively, this study aims to identify key determinants contributing to the low registration rate of CAAM LAEs with the BEM.

Institutional support, including support from professional bodies and regulatory authorities, can significantly influence individuals' intention to register with the BEM. Research has shown that perceived organizational support and endorsement of registration by professional associations can positively affect professionals' attitudes towards registration and their intention to comply with regulatory requirements (Doran

et al., 2017). Furthermore, initiatives aimed at providing guidance, resources, and assistance to individuals navigating the registration process can enhance their perceived ease of registration and increase their likelihood of compliance (McNally et al., 2020). By investigating the role of institutional support in shaping individuals' behavior and intentions towards BEM registration, this study seeks to provide insights into effective strategies for promoting registration among CAAM LAEs.

Effective collaboration among stakeholders is essential for promoting BEM statutory registration, adherence to a code of professional conduct, and fostering continuous professional development among LAEs. Research highlights the importance of multi-stakeholder partnerships involving regulatory bodies, professional associations, educational institutions, employers, and individual professionals in creating a supportive ecosystem for professional registration and development (Salleh et al., 2021). By leveraging their respective resources, expertise, and networks, stakeholders can develop comprehensive strategies that address barriers to registration, provide ongoing support and guidance to professionals, and promote a culture of lifelong learning and professional excellence within the aviation industry. Through collaborative efforts, stakeholders can contribute to enhancing the professionalism and competency of LAEs while ensuring compliance with statutory registration, regulatory standards, promoting safety and quality in aircraft maintenance practices.

In the context of examining stress-inducing factors and strategies to mitigate stress in the aviation industry, it is imperative to explore the role of support or intervention from professional bodies and policymakers. These entities play a significant role in providing institutional support and shaping policies aimed at addressing stress-related challenges within the industry. Research indicates that the

involvement of professional bodies and policymakers is crucial in implementing effective strategies to mitigate stress and enhance well-being among aviation professionals (Jones et al., 2018). For instance, professional associations such as the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA) often collaborate with industry stakeholders and regulatory bodies to develop guidelines and standards aimed at promoting a healthy work environment and addressing stressors in the aviation sector (Smith & Peters, 2019).

Policy interventions, such as the implementation of comprehensive fatigue management programs and the provision of mental health support services, have been identified as effective strategies to address stress and enhance resilience among aviation personnel (Caldwell & Pierscionek, 2017). Moreover, initiatives led by regulatory authorities and governmental agencies demonstrate a concerted effort to prioritize the well-being of aviation professionals and ensure compliance with safety and health regulations (EUROCONTROL, 2020). These efforts mirror the statutory intervention work such as the statutory registration of LAEs with the BEM by promoting accountability and ethical standards in aircraft maintenance. Therefore, statutory registration contributes to overall safety and professional integrity within the industry.

Despite these efforts, there remains a need for further research to evaluate the effectiveness of support mechanisms and interventions implemented by professional bodies and policymakers in mitigating stress within the aviation industry. Additionally, exploring the perspectives of industry stakeholders and frontline professionals can provide valuable insights into the perceived effectiveness and challenges associated with institutional support initiatives aimed at addressing statutory registration issues.

In summary, the support and intervention from professional bodies and policymakers represent essential components of efforts to mitigate commercial pressure jeopardizing work ethics and promote well-being in the aviation industry. By examining the role of institutional support in addressing statutory registration and implementing effective strategies, this study aims to contribute to existing literature and inform future policy and practice in the field.

Additionally, demographic factors such as age, gender, socioeconomic status, and cultural background play a significant role in influencing professional body membership. For instance, Sullivan et al. (2023) highlights that younger professionals are more likely to join professional organizations when they perceive clear benefits, such as networking opportunities and career advancement. On the other hand, gender disparities often affect membership trends, as demonstrated by Ward (2021), who observed that women of color experience unique challenges in professional membership, often requiring them to justify their inclusion more than their white counterparts. These findings illustrate how demographic factors can shape both the decision to join and the experience of membership in professional bodies.

1.3 Research Questions

Below are the research questions of this study:

- i. Do LAE attitude, norms and behaviour influence their acceptance of BEM professional membership?
- ii. Does institutional support moderate the relationships between LAEs attitude, norms and behaviour and the acceptance of BEM professional membership?
- iii. Do demographics have an effect on LAEs attitudes, norms, behavior and acceptance of BEM professional membership?

1.4 Research Objectives

Below are the objectives of this study:

- i To examine the influence of LAE attitudes, subjective norms, and perceived behavioral control on the acceptance of Board of Engineers Malaysia (BEM) professional membership.
- ii To investigate whether institutional support moderates the relationship between LAE attitudes, subjective norms, perceived behavioral control, and the acceptance of Board of Engineers Malaysia (BEM) professional membership.
- iii To determine the effect of demographic factors on LAE attitudes, subjective norms, perceived behavioral control, and the acceptance of Board of Engineers Malaysia (BEM) professional membership.
- iv To develop a framework aimed at improving BEM statutory registration for LAEs.

1.5 Scope of Study

This dissertation addresses the persistent issue of low statutory registration of Civil Aviation Authority of Malaysia (CAAM) Licensed Aircraft Engineers (LAEs) with the Board of Engineers Malaysia (BEM), focusing on understanding the factors contributing to the registration shortfall. The study examines these factors through the lens of the Theory of Planned Behavior (TPB), which emphasizes the roles of attitudes, subjective norms, and perceived behavioral control in influencing individuals' actions. Additionally, the research explores how institutional support functions as a moderating factor that could alleviate or amplify the effects of these variables on registration decisions.

One of the central components of this investigation is attitude, which refers to the personal evaluation of BEM registration by the LAEs. In this context, attitudes are shaped by perceptions of the benefits and drawbacks associated with professional registration. A positive attitude towards BEM registration—viewing it as a valuable step for career advancement, credibility, and professional growth—could significantly influence LAEs to register. However, if LAEs perceive registration as unnecessary, cumbersome, or offering limited advantages in their specific professional context, this negative attitude could become a significant barrier to registration. The perceived irrelevance of registration in the day-to-day operations of their profession, particularly if the engineers already hold CAAM licenses, could lead to a dismissal of its importance.

Closely linked to attitude is the concept of subjective norms, which refers to the social influences and expectations that affect the behavior of LAEs. These norms are shaped by the opinions and actions of peers, colleagues, employers, and industry leaders. If the dominant belief in the aviation maintenance community is that BEM registration is unnecessary or irrelevant, these social norms could exert pressure on LAEs to forego registration. On the other hand, a culture of compliance, where BEM registration is regarded as a mark of professionalism and industry standard, could positively influence LAEs to register. Peer recommendations, industry endorsements, and expectations from employers can play pivotal roles in shaping the decision to engage with the statutory registration process. Thus, subjective norms act as either a reinforcing or discouraging element, depending on the prevailing beliefs within the engineers' professional networks.

The concept of perceived behavioral control further explains the decision-making process regarding registration. This refers to how much control LAEs believe

they have over the registration process. If the registration procedure is perceived as too complicated, costly, or time-consuming, it can act as a deterrent, even for those who might otherwise hold positive attitudes towards registration. Perceived barriers, such as bureaucratic hurdles, unclear guidelines, or financial constraints, diminish the sense of agency LAEs feel over the decision to register. In contrast, if LAEs perceive the process as straightforward and manageable, their sense of control increases, making them more likely to comply. This perception is crucial in determining whether an engineer feels empowered to navigate the registration process or is overwhelmed by its demands.

All these factors, attitude, subjective norms, and perceived behavioral control—ultimately influence customer acceptance in the form of professional membership acceptance. In this case, the acceptance of BEM registration represents a behavioral outcome shaped by these cognitive and social influences. The study seeks to unravel the intricate ways these elements interact to either facilitate or hinder the registration process among CAAM LAEs. Understanding these dynamics will shed light on why many LAEs remain unregistered and how their perceptions, social environment, and control beliefs affect their professional decisions.

However, institutional support emerges as a critical moderating factor in this analysis. Institutional support, in the form of government incentives, employer encouragement, policy reforms, or even simplified registration procedures, has the potential to mitigate the challenges posed by negative attitudes, unsupportive social norms, or low perceived behavioral control. For instance, when institutional support is robust, it can reduce the negative impact of an unfavorable attitude or mitigate the perceived difficulty of the registration process. Such support could take the form of financial subsidies, streamlined registration protocols, or public campaigns that

promote the benefits of BEM registration. When institutional support is weak, however, these challenges can be exacerbated, further disincentivizing LAEs from registering. Thus, institutional support plays a key role in shaping the overall framework within which individual behaviors occur, serving either as a buffer against negative influences or an accelerant that worsens the issue.

The geographical focus on Selangor, Malaysia, provides a localized lens through which these behavioral dynamics can be examined. As a representative region within Malaysia, Selangor's aircraft maintenance industry offers a concentrated population of unregistered CAAM LAEs. By focusing on this specific demographic, the study aims to generate insights that can be applied more broadly across Malaysia, providing a comprehensive understanding of the barriers and facilitators to statutory registration. The development of a practical framework, based on the findings of this study, will offer targeted recommendations for improving the registration rates of CAAM LAEs, addressing both the behavioral elements and the role of institutional support. This framework is not only aimed at solving the immediate issue within Selangor but also offers solutions that can be implemented across the country, improving statutory compliance and professional standardization among Malaysia's licensed aircraft engineers.

1.6 Justifications of the Study

The aviation industry is a critical pillar of Malaysia's economy, contributing significantly to the national agenda of economic growth and development. This sector not only facilitates international trade, tourism, and investment but also supports a substantial number of jobs, thereby enhancing the overall economic stability of the country. The aviation industry generates billions in revenue, making it a key driver of Malaysia's GDP. As the nation strives to establish itself as a premier aviation hub in

the Asia-Pacific region, maintaining high standards of safety, efficiency, and regulatory compliance is crucial. This underscores the importance of ensuring that all Licensed Aircraft Engineers (LAEs) are registered with the Board of Engineers Malaysia (BEM), thereby upholding professional standards and contributing to the industry's integrity and growth (Mokhtar et al., 2020; Economic Planning Unit, 2015).

Understanding the behavior and attitudes of LAEs towards BEM professional membership is essential for increasing registration rates, which in turn enhances the quality and security of aviation services. Higher registration rates among LAEs ensure better adherence to professional standards, continuous professional development, and improved regulatory compliance. This professional recognition and accountability lead to higher technical and safety standards within the aviation sector, making Malaysia's aviation industry more competitive globally. By fostering a culture of professionalism, the study aims to support the national agenda of achieving excellence and sustainability in aviation services, ultimately benefiting the broader economy and society (Ajzen, 1991; Ministry of Transport Malaysia, 2019). Enhanced professional membership among LAEs not only boosts industry credibility but also ensures that Malaysia remains a leader in aviation safety and innovation, thereby attracting more business and investment opportunities.

1.7 Definition of Terms

The study holds significant theoretical contributions, practical implications, and methodological advancements, reinforcing its importance within the field.

Customer Acceptance - In the context of this study, Customer Acceptance refers to the degree to which Licensed Aircraft Engineers (LAEs) are willing to register as a member and comply with the statutory registration requirements set forth by the Board

of Engineers Malaysia (BEM) (Bosjnak et al.,2020). Viewing LAEs as customers emphasizes their role in engaging with and adopting the regulatory framework provided by BEM.

Attitude - refers to a psychological construct that encompasses an individual's positive or negative evaluations, feelings, and tendencies toward a particular object, person, event, or idea (Dangelico et al., 2021). It reflects how someone perceives and reacts to an aspect of their environment, influencing their choices and behaviors (Rozenkowska, 2023), that is, if someone has a positive attitude toward a product, they are more likely to engage with it or endorse it.

Subjective Norms - The perceived social pressures or expectations from others that influence an individual's behavior (Bosjnak et al., 2020). This concept is rooted in social psychology and often involves beliefs about whether significant others (e.g., family, friends, colleagues) think they should or should not engage in a particular behavior (Hisamuddin et al., 2023). Subjective norms can impact decision-making and behavior by creating a sense of obligation or conformity to social expectations.

Behavioural Control - refers to the perceived ease or difficulty of performing a particular behavior, as influenced by internal and external factors. This concept is part of the Theory of Planned Behavior and involves two main components: perceived control over the behavior (e.g., self-efficacy) and the availability of resources or opportunities (Bosjnak et al., 2020). High behavioral control means an individual feels capable and has the necessary means to perform the behavior, while low control may hinder the likelihood of engaging in it (Li et al., 2023).

Institutional Support - refers to the assistance, resources, and backing provided by an organization or institution to help individuals or groups achieve specific goals

(Antara et al., 2023). This support can take various forms, including financial aid, training, resources, guidance, or policies designed to facilitate success. In an academic context, institutional support might include mentoring programs, research funding, or infrastructure to support students and faculty in their academic and professional endeavors (Ishaq et al., 2023).

Licensed Aircraft Engineers (LAE) - Licensed Aircraft Engineers (LAEs) (CAAM, Aircraft Maintenance Engineer, 2024) are highly trained professionals responsible for the inspection, maintenance, and repair of aircraft to ensure their airworthiness and operational safety. They are required to hold valid licenses issued by recognized aviation authorities, such as the Civil Aviation Authority of Malaysia (CAAM), following stringent training and examination standards. LAEs are crucial in certifying that aircraft meet safety regulations and are fit for operation (International Civil Aviation Organization [ICAO], 2021). Their expertise directly contributes to the overall safety of flight operations, from routine maintenance checks to more complex technical repairs (Kumar & Mishra, 2018).

Professional Membership - Professional Membership refers to the formal association and recognition of an individual with a professional body, in this case, the Board of Engineers Malaysia (BEM, n.d.). It signifies that the Licensed Aircraft Engineers (LAEs) have met the requisite qualifications, adhered to professional standards, and are committed to ongoing professional development (Board of Engineers Malaysia, 2020).

Aviation Industry - The aviation industry encompasses all aspects of air travel, including commercial airlines, general and private jet operations, cargo transportation, maintenance and regulatory bodies (Kharfi, 2022).

1.8 Summary of Chapter

In summary, Chapter 1 serves as a foundational platform for the entire dissertation, providing a comprehensive introduction to the research background, problems, issues, and objectives. These key areas are crucial for establishing the focal points of the research. The chapter proceeds to define the scope of the study, delineating the boundaries within which the research will operate, followed by a justification for the research. Lastly, the chapter presents the definition of terms and outlines the overall organization of the dissertation.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter presents the theoretical background of this study. It discusses literature related to the research issues; that is, customer acceptance of professional membership in the context of the aviation industry. This chapter begins with the concepts of customer acceptance, attitude, norms, and behaviour, followed by a discussion on the issues related to Licensed Aircraft Engineers perception and acceptance towards professional membership with the Board of Engineers.

2.1 Customer Acceptance

In the context of this study, Licensed Aircraft Engineer (LAE) is regarded as the customer of Board of Engineers (BEM), a professional body recognising the code of conduct and professionalism of engineers in Malaysia. Evidently, LAEs' acceptance of statutory registration under the Registration of Engineers Act 138 within Malaysia's aviation sector is low. There appear to have not been any studies undertaken to identify the level of acceptance of statutory registration locally in Malaysia. This is due to fact that AML issued by CAAM was only recognized by BEM in 2018 (CAAM, Aircraft Maintenance Engineer, 2024). Let alone the LAE registration, even the conventional engineers such as those in the Civil and Mechanical discipline has many that are not register with the BEM (New Straits Times, 2020). To gain a comprehensive understanding of this acceptance, it is essential to draw on relevant sources from previous studies that contribute to the understanding of the intention to register for professional qualifications.

2.1.1 Definitions of Customer Acceptance

Customer acceptance refers to the degree to which individuals are willing to adopt, embrace, and utilize a specific service, product, or system (Vorobeva et al., 2023; Abdallah et al, 2023). In the context of professional membership statutory registration under the Registration of Engineers Act 138, customer acceptance can be understood as the willingness of Licensed Aircraft Engineers (LAEs) to register with the Board of Engineers Malaysia (BEM). This acceptance is often measured by behavioral intention, which indicates the likelihood of individuals engaging in a specific behavior based on their attitudes, perceived norms, and perceived behavioral control (Ajzen, 1991; Bosnjak, Schmidt and Ajzen, 2020).

Previous studies have provided various perspectives on customer acceptance and its measurement through behavioral intention. Davis (1989) defined customer acceptance in the context of technology adoption, emphasizing that behavioral intention to use a technology is a strong predictor of actual usage (Abhari et al, 2022). This model suggests that perceived usefulness and perceived ease of use significantly influence behavioral intentions. Venkatesh et al. (2003) expanded on this by integrating multiple theoretical models into the Unified Theory of Acceptance and Use of Technology (UTAUT) which posited user acceptance of technology is explained by his behavioural intention to use technology subject to several factors namely performance expectancy, effort expectancy, social influence, and facilitating conditions (Wardani et al, 2021).

In this study, customer acceptance of professional membership statutory registration among LAEs in Malaysia's aviation sector is defined as the willingness of LAEs to register with BEM, influenced by their attitudes, perceived norms, and perceived behavioral control. Behavioral intention serves as key measures of

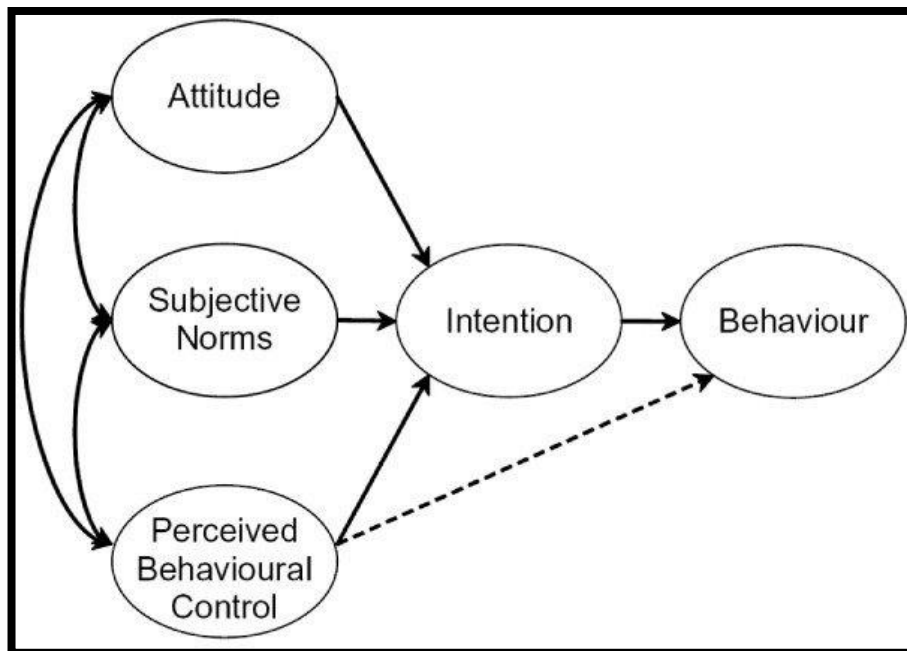
acceptance, providing insights into the likelihood of LAEs engaging in the registration of BEM professional membership.

2.1.2 Underpinning Theory

Theory of Planned Behavior (TPB)

This section delves into the TPB to gain insights into the behavioral intentions of LAEs with regards their registration with BEM. TPB, formulated by Icek Ajzen (1991), provides a valuable framework for comprehending the factors that shape individuals' intentions to engage in a specific behaviour (Bosnjak et al., 2020).

Figure 2.1: The Theory of Planned Behavior (TPB)



Source: Ajzen (1991)

The TPB (Ajzen, 1991) posits that behavioral intentions are influenced by three main factors namely attitudes, subjective norms, and perceived behavioral control. These components play a crucial role in shaping an individual's readiness and willingness to perform a specific behavior, such as registering with a professional engineering board. TPB suggests that individual's beliefs shape favourable or

unfavourable attitude toward the behaviour; social pressure influences one's norms or subjective norm; and control beliefs give rise to perceived behavioral control or self-efficacy. In essence, the more favourable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behavior (Bosnjak et al., 2020), in this context LAEs intention to register with BEM. Finally, given a sufficient degree of actual control over the behavior, people are expected to carry out their intentions when the opportunity arises.

By applying TPB to the aviation context, this research aims to unravel the cognitive and motivational aspects influencing LAEs' behavioral intentions to register with BEM. This theoretical framework serves as a valuable tool for understanding the factors that contribute to or hinder the decision to register as a professional member of BEM. Previous research have extensively applied the Theory of Planned Behavior (TPB) to understand customer acceptance. For example, studies in the product-based industry by Ahmed et al. (2021), Ariffin et al. (2016), Ashraff et al. (2019), Bae et al, (2021), Dangaiso (2023) and Jinnah et al. (2020), while studies in the service-based industry by Abhari et al. (2022), Adnan et al. (2017), Coskun and Ozbuk (2020), Gorska-Warsewicz (2022), Hansani et al. (2021) and Tiwari et al. (2024).

Understanding the intention to register for professional qualifications is crucial in examining the behavior of Licensed Aircraft Engineers (LAEs) in Malaysia's aviation sector. To this end, it is essential to draw on relevant sources from previous studies that have explored similar domains. By examining the factors influencing behavioral intentions, attitudes, subjective norms, and perceived behavioral control, this study aims to develop a framework to understand factors influencing customer acceptance of professional membership in the aviation industry.

2.1.3 Customer Acceptance of Professional Membership

In recent years, customer acceptance in professional body memberships, such as those for aircraft engineers, has garnered increased attention due to the growing significance of certification in enhancing professional credibility. Research highlights that customer acceptance is deeply intertwined with the perceived value of professional certification. Studies such as the one by Maimunah et al. (2023) indicate that professional certification, commitment, and professionalism have a positive effect on performance across various sectors. This correlation underpins the argument that professionals view certification as a pathway to career growth and legitimacy within their fields. The study specifically underscores how certification serves as a catalyst for improving performance.

The barriers to professional certification acceptance, particularly in engineering, have also been studied. Manggalasari et al. (2023) conducted a case study in Indonesia that identified both technical and social barriers to online professional certification exams. Issues like internet connectivity and questioning skill limitations were highlighted as significant hurdles. These barriers reflect the broader challenges professionals face when engaging with the certification process, which can impede their willingness to join and remain active in professional bodies.

Social responsibility and ethical considerations have also emerged as critical factors in influencing professional engagement. According to research by Zhang (2023), there is a growing recognition among pre-service engineers of their social responsibilities. This awareness is influencing their decisions to pursue certifications that align with ethical and societal standards. The integration of social responsibility into the certification process could further enhance acceptance rates among

professionals who are increasingly conscientious about the broader impact of their work.

Finally, the role of ongoing professional development within professional bodies is pivotal in maintaining customer acceptance. Maclure et al. (2022) emphasize the importance of continuing professional development (CPD) in fields such as IT and engineering. Their findings suggest that professional bodies must continually provide value through CPD opportunities to retain members and encourage long-term engagement. This ongoing commitment to professional growth aligns with the motivations of engineers seeking to remain competitive in a rapidly evolving industry.

2.2 Customer Attitude

Attitude refers to an individual's psychological tendency to evaluate a particular entity with favor or disfavor (Azjen 1991; Bosjnak et al., 2020). It encompasses both cognitive and affective components, influencing how individuals' approach or avoid certain situations, objects, or people. In the context of consumer behavior, for instance, attitudes significantly impact purchasing decisions (Ashraff et al., 2019; Dangelico et al., 2021; Rozenkowska, 2023). Past studies have reported customers' attitudes toward brands and their intention to continue using a service (Li & Wang, 2023) and how specific attitudes influence behavior in technological systems (Zheng et al., 2023). For LAEs, their perceptions of the benefits and drawbacks of registering with BEM, such as professional recognition, career advancement opportunities, and compliance with regulatory requirements may affect their behaviour, that is to register with BEM.

2.2.1 Attitude and Acceptance of Professional Membership

Primarily, from aircraft engineers' perspective the value and relevance of professional membership to their career progression and professional growth are crucial (Smith et

al., 2018). For example, LAEs may question the significance of registration to their professional identity. Consequently, emphasizing the broader industry impact and career advantages associated with registration (Johnson et al., 2020) will increase the perceived value of the professional membership. Additionally, past studies suggest networking opportunities (Smith et al., 2018) and perceived benefits explicitly connected to their day-to-day roles and responsibilities (Thompson et al., 2017) that come with professional bodies' registration significantly increased motivation to register.

2.3 Subjective Norms

Subjective norm refers to the perceived social pressure to perform or not perform a certain behavior (Ajzen 1991; Bosnjak et al., 2020). It reflects the influence of others' expectations on an individual's decisions, particularly how significant people in one's life, such as family, friends, or colleagues, perceive a particular action. It plays a pivotal role in shaping behaviors related to social and personal factors, such as professional registration behavior, by influencing internal values and attitudes (van Tonder et al., 2023).

More recent research emphasizes the role of subjective norms in shaping behavioral intentions across various contexts. For example, a study by Aslan (2023) examined the influence of subjective norms on the purchase intentions of Muslim consumers in Turkey, highlighting how social expectations affect decision-making. Similarly, Hisamuddin et al. (2023) explored how subjective norms, along with other factors, influenced Malaysian tourists' behavioral intentions during the COVID-19 pandemic. These findings underscore that subjective norms are a critical component in understanding how external social pressures shape individual behaviors in diverse settings.

2.3.1 Subjective Norms and Acceptance of Professional Membership

As discussed by Tajfel and Turner (1979), it provides insights into how professional identity and group membership influence registration decisions. Studies have shown that individuals who strongly identify with their professional group are more likely to pursue registration as a means of reinforcing their professional identity and gaining acceptance within their community (Ashforth & Mael, 1989).

The influence of social norms, expectations, and peer behaviors can either encourage or dissuade professionals from seeking and maintaining their memberships in various associations. Members of professional associations tend to exhibit higher productivity, thus suggest that social norms and the expectation to maintain professional standards within a community influence their active participation (Mbulle, 2023). In addition, professionals often navigate their membership obligations and behaviours based on the perceived norms. For example, according to Oboh et al. (2020) accounting professionals' ethical decisions are influenced by ethical codes, shared values and practices (Lindbeck & Persson, 2020) promoted by their peers and professional bodies. Furthermore, Ward (2021) indicate that social dynamics and expectations impact professional membership where professionals strive for inclusion and acceptance within their professions.

These pressures can drive both positive engagement and, in some cases, serve as barriers to participation, depending on the dynamics within the professional community.

2.4 Perceived Behavioural Control

Perceived behavioral control refers to an individual's belief in their ability to perform a particular behavior, taking into account potential obstacles or resources (Ajzen 1991; Bosnjak et al., 2020). It encompasses factors such as the complexity of the registration

process, financial implications, and the overall control an engineer feels in completing the registration (Li et al., 2023).

This concept plays a key role in shaping behavioral intentions and actual behavior, as individuals are more likely to engage in an activity if they feel in control of the process. Past studies illustrate the influence of perceived behavioral, along with attitude and subjective norms impacts purchase intentions (Aslan, 2023; Li et al., 2023) and in evaluating alternative choices across different fields (Taherdoost and Madanchian (2023). Assessing perceived behavioral control provides insights into the practical challenges and barriers LAEs may face.

2.4.1 Perceived Behavioural Control on Acceptance of Professional Membership

The concept of perceived behavioral control, which reflects an individual's perception of the ease or difficulty of performing a particular behavior, has been shown to be a critical determinant in various professional registration contexts. According to Johnson and Hall (2014) accountants' certification processes indicated that perceived barriers, such as the complexity of the registration procedure and the time required, negatively impacted their intention to register. This highlights the need to consider perceived behavioral control in analyzing LAEs' registration intentions.

Perceived behavioral control in the context of professional membership registration refers to an individual's perception of how easy or difficult it is to register and maintain membership within a professional body (Taherdoost and Madanchian, 2023). This perception is shaped by factors such as the availability of resources, time, and institutional support. When individuals believe that they have control over the registration and certification process and requirements, they are more likely to complete it successfully (Aslan, 2023), hence can drive behaviors toward sustainable

professional practices (Li et al., 2023). Taherdoost and Madanchian (2023) also highlight that decision-making regarding professional membership often considers perceived behavioral control, impacting the likelihood of individuals completing the registration process and sustaining their membership. Additionally, Johnson et al. (2019) and White and Roberts (2017) support this view, suggesting that a simplified registration process can significantly help demystify the registration process, making it more approachable for potential registrants. For LAEs, perceived behavioral control encompasses their confidence in successfully navigating the registration process with BEM, considering factors such as the complexity of requirements and the availability of resources and institutional support.

2.5 Institutional Support

Institutional support refers to the resources, structures, and systems provided by an organization or external entities that assist individuals or groups in achieving their goals (Ishaq et al., 2023). This support can take the form of financial aid, training, policy guidance, mentorship, and other forms of assistance designed to enhance performance, autonomy, and engagement. Internal support refers to the resources and assistance provided directly by the employer, such as training programs, guidance on certification requirements, and access to mentorship. External support, on the other hand, involves factors outside the organisation, such as industry standards, government agencies or policies, and peer networks (Antara et al., 2023). This type of support can provide additional motivation and reinforcement for individuals to pursue and maintain their career or professional goals.

2.5.1 Institutional Support as a Moderating Role in Customer Acceptance of Professional Membership

Effective institutional support plays a critical role in professional settings by ensuring that members are equipped with the necessary tools and resources to succeed. For example, as reported by Antara et al. (2023) institutional support systems directly impact individual's autonomy and readiness to achieve their goals. Ishaq et al. (2023) asserts the moderating role of institutional support in achieving sustainable performance in organizations, while a study by Ogunfolaji et al. (2023) further emphasizes the need for robust institutional accountability structures to ensure the effectiveness of support mechanisms globally.

In particular, Ishaq et al. (2023) emphasize that external institutional support can strengthen the relationship between professional innovation and success, which, in turn, encourages continuous engagement with professional bodies. Moreover, in contexts where internal support may be limited, external factors such as peer expectations and industry norms, become even more critical in influencing an individual's decision to register and maintain professional membership (Athreye et al., 2023).

Extant literature indicates various forms of institutional support and its imperatives in enhancing LAEs acceptance of BEM professional membership which may serve as an eco-system in promoting the professional body. Several forms of institutional support are:

a) Incentive Schemes and Reward

The financial implications of registration can be a significant barrier for many professionals. Introducing incentive programmes or policy, such as reduced fees, fee waivers, paid study leave, exam fee reimbursement, staggered payment options can

lead to employees being more motivated to pursue registration (Harris and Clarke, 2021; Garcia (2021). This support can significantly reduce the perceived burden and highlight the benefits of becoming registered has been recommended by industry experts (Brown, 2019; Smith et al., 2018). Perceived lack of incentives is a significant deterrent for Licensed Aircraft Engineers (LAEs) considering registration. Policies introducing fee waivers or staggered payment options can alleviate this concern (Garcia, 2021). Though the fees may not be high during registration, weighing immediate benefits upon payment of fees may be a barrier to statutory registration. According to Green and Martin (2020) government subsidies and grants in supporting professional registration can lower the economic barriers to registration, particularly for individuals in lower-income brackets or those transitioning from educational settings to professional practice.

b) Industry Culture and Norms

Deep-rooted industry cultures and norms can significantly influence professionals' attitudes toward registration. According to Turner (2015), promoting a culture of accountability and responsibility is a strategic approach. Essentially, organizations that emphasize ethical standards and professional accountability tend to have higher rates of registration among their employees (Brown et al., 2019) as they view registration as a normative and necessary aspect of their career (Johnson et al., 2017). Indeed, leaders must play a role model emphasizing the importance of professional membership and actively support their teams in achieving this goal can create a ripple effect, fostering a culture where registration is valued and pursued (Smith & Williams, 2018).

c) Professional Identity and Recognition

Awards and public acknowledgments for registered professionals can boost the perceived value of registration, encouraging more LAEs to engage with the process (Johnson & Lee, 2020). Indeed, linking professional registration to tangible career benefits, such as promotions and salary increase, can be a powerful motivator and are more likely to be perceived as a worthwhile investment in the individual's future (White & Black, 2017). Kim et al. (2021) posit that professionals who perceive registration as a marker of professional identity and credibility are more likely to pursue it, especially in environments where such credentials are highly valued and viewed as a mark of professional competence and integrity (Smith et al., 2017).

d) Promotional campaigns

Green and Martin (2020) explored the role of professional associations in promoting registration. They found that when associations actively advocate for registration and provide resources and support for professionals, registration rates increase. Additionally, professional associations and societies play a critical role in leveraging peer influence. By organizing events, workshops, and seminars that highlight the success stories of registered professionals, these organizations can create a positive narrative around registration, encouraging more LAEs to follow suit (Carter, 2020).

e) Clarity of Legal and Regulatory Requirement

Advocacy for clearer regulations and ongoing collaboration with regulatory bodies is essential (Roberts, 2018). Smith et al. (2017) emphasized that unclear legal and regulatory frameworks can significantly hinder professionals' willingness to engage in the registration process. Providing precise and consistent information about

the requirements and benefits of registration can reduce confusion and ensure that all stakeholders are informed about current standards and expectations (Johnson & Lee, 2019). Joint efforts between regulators and professional bodies in developing comprehensive guidelines and resources that address common concerns and questions related to the registration process are necessary (Lee et al., 2021).

f) Peer Influence and Network Effects

According to Smith et al. (2018) and, Johnson and Lee (2019), harnessing peer influence and network effects can be influential in promoting registration among Licensed Aircraft Engineers (LAEs). Encouraging registered professionals to advocate for registration within their networks is an effective strategy as peer influence significantly affects the decision-making process of professionals considering registration. Their study highlighted that when peers who are respected within the industry endorse registration, it positively impacts the attitudes and intentions of others within their network. This network effect makes registration more attractive as it enhances access to shared resources and knowledge (Brown & Clark, 2019).

g) Stakeholders Collaboration

Ensuring long-term industry viability requires strategic planning that focuses on sustainability, innovation, and adaptability. Collaborative efforts across various sectors and disciplines are essential to achieving these goals (Adams, 2022). Professional bodies, industry players, and government agencies need to be flexible and responsive to changes in market demands, regulatory landscapes, and technological advancements towards sustainable growth (Johnson & Lee, 2021).

In order to face intense competition and economic uncertainties strategic collaborations between industry players, academic institutions, and government bodies

can lead to significant advancements in technology and best practices. Collaborative efforts can pool resources, share knowledge, and drive collective progress (Williams & Parker, 2020). This calls for a comprehensive approach to develop proactive strategies and invest in foresight activities to identify emerging trends and prepare for future challenges in the aviation industry, including cohesively promoting professional membership.

2.6 Impact of Demographics on LAEs Acceptance of BEM Professional Membership

The impact of demographics on the behavioral intentions of individuals regarding registration with the Board of Engineers Malaysia (BEM) is a critical area of study. Different demographic factors such as age, gender, educational background, and years of experience can influence the likelihood of purchase decision (Sullivan et al., 2023). For instance, a study by Smith et al. (2018) indicated that younger engineers are more inclined towards registration as they perceive it as essential for career advancement. Conversely, older professionals may view registration as less critical if they have already established their careers.

The influence of age on the decision to pursue statutory registration varies significantly between senior and junior Licensed Aircraft Engineers (LAEs). Senior individuals may feel that after a lengthy career, obtaining statutory registration is unnecessary as they approach retirement (Williams & Parker, 2020). Conversely, junior LAEs often see statutory registration as a valuable addition for career advancement. Smith et al. (2018) found that older engineers often perceive the registration process as redundant and time-consuming given their extensive work experience. Many nearing retirements may not see the immediate benefits that would justify the effort involved in registration (Harris & Thompson, 2021). For instance,

highlights that younger professionals are more likely to join professional organizations when they perceive clear benefits, such as networking opportunities and career advancement.

On the other hand, gender disparities often affect membership trends, as demonstrated by Ward (2021), who observed that women of color experience unique challenges in professional membership, often requiring them to justify their inclusion more than their white counterparts. These findings illustrate how demographic factors can shape both the decision to join and the experience of membership in professional bodies.

Moreover, socioeconomic status also impacts professional membership engagement. Individuals from higher socioeconomic backgrounds are generally more likely to join professional bodies, as they often have greater access to resources and opportunities that facilitate such memberships. Nutakor et al. (2023) found that social capital mediates the relationship between socioeconomic status and quality of life, suggesting that higher socioeconomic status can lead to increased participation in professional bodies, which in turn enhances professional networks and opportunities.

2.7 The Aviation Industry: A Malaysian Scenario

The aviation industry holds immense significance for Malaysia in economic, strategic and national development terms. The aviation sector is a key driver of Malaysia's economy. It contributes significantly to the nation's GDP, supporting a wide range of economic activities, including tourism, trade and transportation. According to the Malaysian Aerospace Industry Blueprint 2030, the aerospace sector alone aims to generate RM 55 billion in revenue by 2030, highlighting its vital economic role (Ministry of Investment, Trade and Industry, 2023).

Although the industry was heavily impacted by COVID-19, it has seen government interventions in the form of loans, wage subsidies, and equity injections to stabilize the market. It a major employer, providing jobs to thousands of Malaysians across various sectors, including aviation engineering and maintenance. The industry in Malaysia has experienced significant growth over the years, contributing substantially to the country's economy. The revenue accounts for RM16.2 billion national revenue in 2019 and accounts for 27,500 highly skilled workers (National Aerospace Coordinating Office, 2019). These jobs offer stable incomes and career prospects, contributing to the nation's social well-being. For instance, according to the New Industrial Master Plan 2030, Malaysia's tourism industry heavily relies on air travel connectivity. A robust aviation sector ensures that the country remains accessible to tourists, promoting tourism growth and foreign exchange earnings (Ministry of Investment, Trade and Industry, 2023).

As an export-oriented nation, Malaysia depends on efficient air cargo services to transport goods globally. Malaysia's strategic location in Southeast Asia positions it as a key regional aviation hub and serves as a transit point for travellers and cargo, enhancing the nation's connectivity and influence in the region. The aviation industry plays a crucial role in facilitating international trade, contributing to Malaysia's competitiveness.

LAEs play a crucial role in sustaining this growth by ensuring aircraft remain airworthy and operational. The maintenance and repair of aircraft generates revenue for MRO companies and creates job opportunities for LAEs and skilled technicians, further boosting the economy.

2.7.1 Improved Compliance in Malaysia's Aviation Sector through Stakeholders Collaboration: A Holistic Approach

To further enhance compliance in Malaysia's aviation sector, a holistic approach is essential. Streamlining regulatory processes is crucial to ensure that aviation-specific qualifications are integrated into the broader engineering framework. Collaborative efforts between the stakeholders, which include government authorities, aviation industry players, professional bodies and engineers should be strategically planned and implemented to ensure the quality of aviation services are competitive and sustainable. Previous studies have suggested several aspects of collaboration as follows:

a) Regulatory Framework and Oversight

The regulatory framework plays a pivotal role in shaping compliance within the aviation sector. The Civil Aviation Authority of Malaysia (CAAM) is tasked with overseeing and enforcing regulations to ensure safety and quality standards. Compliance is not solely an individual responsibility but a shared commitment within the regulatory ecosystem (CAAM, 2022). Establishing clear and coordinated procedures for recognizing qualifications across regulatory bodies will reduce discrepancies and simplify the recognition process for professionals (Halim & Razak, 2020). Effective oversight, clear communication of regulations, and stringent enforcement contribute to a culture of compliance (ICAO, 2013).

b) Professional Training and Development

Continuous professional training and development is paramount in fostering compliance among LAEs. Adequate training programs, workshops, and certifications contribute to the continuous upgrading of skills and knowledge, aligning professionals with evolving industry standards (ICAO, 2010). Collaborative initiatives between

industry stakeholders, educational institutions, learned societies and regulatory bodies facilitate a cohesive approach to training and development (ICAO, 2015) which may generate awareness on the statutory registration.

c) Information Sharing

Collaboration within the aviation industry is essential for achieving improved compliance. Platforms for information exchange, such as industry forums, conferences, and collaborative research initiatives, contribute to a shared understanding of challenges and best practices (IATA, 2019). Collaborative efforts foster a collective commitment to compliance standards and contribute to a more resilient industry.

d) Technological Integration and Innovation

Embracing technological advancements enhances compliance mechanisms. Digital solutions to create awareness and educational support, record-keeping, maintenance tracking, and regulatory updates streamline processes for LAEs (IATA, 2021). Continuous investment in innovative technologies ensures that the aviation sector remains at the forefront of compliance measures, enhancing efficiency and safety (ICAO, 2018).

e) Stakeholder Engagement and Advocacy

Stakeholder engagement is instrumental in building a compliance-centric culture. Involving LAEs, industry associations, regulatory bodies, and policymakers in decision-making processes contributes to a sense of ownership and accountability (ICAO, 2017). Advocacy for the importance of compliance in ensuring safety and sustainability further reinforces the commitment of all stakeholders (IATA, 2018).

f) Regulatory Alignment with Global Standards

Ensuring that Malaysian regulations align with international standards is crucial for fostering global competitiveness and compliance. Harmonizing local regulations with international frameworks, such as those outlined by the International Civil Aviation Organization (ICAO), contributes to a standardized approach to compliance (ICAO, 2016). Regulatory alignment enhances interoperability and facilitates international collaboration.

g) Risk Management and Proactive Measures

Proactive risk management strategies contribute to enhanced compliance. Encouraging reporting mechanisms for potential issues, implementing safety management systems, and conducting regular risk assessments are essential components (ICAO, 2014). By identifying and mitigating risks, the aviation sector can fortify its compliance mechanisms including the need for statutory registration.

h) Strengthening professional associations

Professional associations like MySET, AMALAE, IEM and TAM is also vital. These associations can enhance their role in advocating for the recognition of qualifications and supporting LAEs. By fostering strong relationships between professional associations and regulatory bodies, they can better represent the interests of LAEs and facilitate smoother interactions with regulatory bodies (Omar & Ali, 2019).

2.7.2 Enhancing Professional Recognition of Licensed Aircraft Engineers Imperatives

LAEs play a pivotal role in ensuring the safety and reliability of aircraft in Malaysia's aviation industry (Hashim, 2020). In Malaysia, LAEs certification practices are

regulated by the CAAM. LAEs are engineers to whom an organization has entrusted the role of certifying for the correct state of systems maintained on an aircraft, and he or she will affect their certification on the maintenance release (MR) once they are sure that the systems are fully serviceable, and the aircraft is mission capable (Hashim, 2020). LAEs need to obtain and maintain a valid Part 66 AML to perform certification of maintenance, repairs and inspections on aircraft (CAAM, Malaysian Aircraft Maintenance License, 2024). LAEs are required to undergo rigorous training and examinations to acquire their licenses. They must also stay updated with the latest aircraft type knowledge that each LAE is rated on (CAAM, CAD1801-Aircraft Maintenance License Part 66, 2022).

LAEs are responsible for inspecting, repairing and maintaining various types of aircraft, including commercial airliners, cargo planes, helicopters and private jets (Indeed, 2022). Their roles encompass a wide range of specialties, such as avionics, airframes, engines and electrical systems. They may work in various sectors, including airlines and MRO (International Civil Aviation Organization, 2003). LAEs ensure that all aircraft are in compliance with national and international airworthiness regulations, such as those set by the ICAO. Their meticulous work helps prevent accidents and ensures that aircraft meet stringent safety standards, contributing to the industry's overall safety record.

The government and aviation industry often collaborate to support training initiatives, ensuring a steady supply of qualified LAEs to meet industry demands (Malaysian Industry-Government Group for High Technology, 2015). LAEs are at the forefront of maintaining advanced technologies through aircraft maintenance. They work with cutting-edge tools, equipment and diagnostic systems to enhance the efficiency and accuracy of their tasks. Embracing technology not only improves

maintenance practices but also contributes to the industry's competitiveness on a global scale.

Historically, Malaysia's aviation sector encountered significant regulatory challenges due to a fragmented framework involving the Civil Aviation Authority of Malaysia (CAAM) and the Board of Engineers Malaysia (BEM). CAAM was responsible for issuing Aircraft Maintenance Engineer Licenses, while BEM managed engineering practices more broadly. This separation led to a misalignment between the qualifications held by LAEs and the recognition they received from BEM. The fragmentation created confusion and barriers for LAEs, particularly those seeking career advancement or transitions to roles requiring BEM registration (Mokhtar & Sulaiman, 2017).

The issue of professional recognition further complicated the situation. Despite the presence of the Association of Malaysia Airlines Licensed Aircraft Engineers (AMALAE), which represented LAEs' interests, BEM did not initially recognize CAAM-issued Aircraft Maintenance Engineer Licenses (Koh & Wong, 2018). This lack of formal recognition impeded LAEs' professional development and career progression, as their qualifications were not acknowledged within the broader engineering field. The absence of recognition affected their ability to gain formal acknowledgment of their skills and credentials, which was crucial for career advancement (Mohd & Hassan, 2019). Nevertheless, increased dialogue and negotiations between CAAM, BEM, and industry players led to the integration of standards and qualifications (Lee & Lim, 2021). By June 2018, significant policy changes and regulatory reforms were introduced to address the recognition issue.

The recognition and professional membership from the Board of Engineers Malaysia (BEM) poses several significant implications for Licensed Aircraft Engineers (LAEs) and the broader aviation industry in Malaysia, as discussed below:

a) Quality and Safety Standards

The aviation industry heavily relies on the expertise of LAEs to ensure the safety and airworthiness of aircraft. Without the rigorous standards imposed by BEM registration, there is a risk of compromising the quality and safety of aviation operations. Ensuring that LAEs are BEM-registered reinforces a culture of safety and excellence within the industry, which is critical for maintaining public trust and compliance with international aviation safety regulations (International Civil Aviation Organization, 2019).

b) Industry Reputation and Competitiveness

The reputation of Malaysia's aviation industry can be enhanced at the global level with an increased number of BEM professionally recognized engineers, but may be adversely affected if a significant number of LAEs remain unregistered with BEM. As reported by Yap & Lim (2018), the relatively low number of professionals could lead to perceptions of inadequate regulatory oversight and inferior engineering standards. The industry's competitiveness might be undermined, especially in attracting foreign investments and partnerships, which often require adherence to recognized professional standards.

c) Operational Efficiency and Innovation

Registered engineers are often at the forefront of adopting innovative practices and technologies. Without BEM registration, the industry might miss out on cutting-

edge advancements in aircraft maintenance and engineering, leading to operational inefficiencies.

d) Professional Credibility and Career Advancement

BEM registration is a mark of professional competence and ethical adherence, which can enhance an engineer's reputation and career prospects. Lack of BEM membership can limit opportunities for LAEs to participate in specialized training programs, conferences, and professional networks, which are essential for continuous professional development and career progression (Gowen & Tallon, 2017). Therefore, without BEM's recognition, LAEs may face challenges in establishing their professional credibility and achieving career advancement.

e) Compliance with Regulatory Standards

Professional registration with BEM ensures that LAEs adhere to national and international engineering standards. Non-registration may result in gaps in compliance, leading to potential safety risks and substandard maintenance practices. It can also affect the ability of LAEs to stay updated with the latest industry standards and technological advancements, which are critical for maintaining safety and efficiency in the aviation sector (Wang et al., 2018).

f) Recognition and Mobility

BEM recognition is crucial for the recognition of qualifications and work experience both domestically and internationally. Without this, LAEs might face difficulties in seeking employment opportunities abroad or in multinational companies. Additionally, BEM membership facilitates continuous professional development, ensuring that LAEs are well-equipped with the latest knowledge and skills to drive innovation and efficiency in the aviation sector (Chan et al., 2017).

However, lack of mobility can hinder the global career opportunities for LAEs, limiting their professional growth and exposure to international best practices (Rashid et al., 2020).

Based on the above, there are urgent needs and valid justifications to increase BEM professional membership registration among LAEs in Malaysia. However, evidences have indicated that the acceptance of BEM membership among LAEs is still at a low level.

2.7.3 Licensed Aircraft Engineers Acceptance of Board of Engineers Professional Membership

The lack of BEM recognition and professional membership has far-reaching implications for both LAEs and the aviation industry. For LAEs, it affects their professional credibility, compliance with regulatory standards, and career mobility. For the aviation industry, it impacts the quality and safety standards, industry reputation, and operational efficiency. Addressing these challenges through enhanced recognition and professional membership is crucial for ensuring the sustained growth and competitiveness of Malaysia's aviation sector.

Prior to 2018, the LAEs were not able to register themselves at BEM despite the fact of holding an AML issued under the Civil Aviation Act 3 (1969) (Malaysia D. G., 2023). This leads to the absence of statutory registration under REA 138. In 2018, the BEM conducted an equivalency study on the CAAM aircraft maintenance engineer license (AML) qualification for registration (Malaysia B. o., Procedure for Registration, 2024). As a result, LAEs who possess the applicable CAAM AML are qualified for BEM registration (Liew Chee Leong, 2020). This is a major breakthrough for the LAEs community due to the fact that there will be statutory registration avenue, a listed under Registration of Engineers Act 138 (amendment 2015) (BEM, 2023).

The statutory registration at Board of Engineers Malaysia (BEM) does not affect the certification jurisdiction of the CAAM as stipulated in Part III, paragraph 16 of Act 788 (Malaysia A. G., 2023). It is noteworthy that BEM registration complements the role of LAEs particularly from the perspective of professional code of conduct when practicing as a certifying LAE (BEM, 2023). The registration of an LAE with the Board of Engineers Malaysia (BEM) does not have any impact on the authority and control that the Civil Aviation Authority of Malaysia (CAAM) holds over aircraft maintenance certification matters. This is in accordance with the details outlined in Part III, paragraph 16 of Act 788, which is a legal reference in Malaysian aviation regulations as of 2023.

A registered LAE who adheres to the professional code of conduct (CoC), commonly known as ethics outlined by the BEM may significantly elevate the overall level of professionalism within the field of aircraft engineering and maintenance (E&M) (Liew Chee Leong, 2020). In the constantly evolving domain of engineering business operations, there can be instances where engineers are tempted to embrace unethical practices due to their apparent convenience, as noted by Selvarajh (2012). The dynamic nature of the industry, marked by technological advancements and competitive pressures, might create situations where unethical choices seem more expedient than upholding stringent ethical standards. This complex interplay between expediency and ethics underscores the ongoing challenge of maintaining a principled approach in engineering practices, highlighting the need for continuous vigilance and ethical reflection within this ever-changing landscape. This is often influenced by factors like competitive pressures, limited resource availability, prioritizing profit generation and the allure of new business avenues (Tharmaraj Selvarajh, 2012).

The decision of engineers to opt for potentially unethical practices within the realm of engineering business operations can frequently be attributed to a confluence of factors. Notably, competitive pressures within the industry play a significant role, compelling businesses to seek any advantage to maintain or enhance their market position (Joseph Herkert, 2020). Limited availability of resources adds to this pressure, pushing engineers to cut corners or compromise on ethical principles to meet project demands. The prioritization of profit generation in today's business environment can sometimes overshadow ethical considerations, as financial success becomes a driving force.

The aviation industry is of paramount importance to Malaysia's economic growth, national security and global connectivity. This study directly supports the Malaysian Aerospace Blueprint 2030 by addressing critical issues in the industry and LAEs are indispensable to ensuring the industry's safety and success.

2.8 Factors Influencing Customer (Licensed Aircraft Engineers) Acceptance of Professional Membership (with Board of Engineers) – A Conceptual Framework

Customer acceptance, measured by LAEs intention to register for professional qualifications under BEM, is a multifaceted concept influenced by various psychological and social factors. The Theory of Planned Behavior (TPB) is a prevalent framework used in this context, positing that intention is a function of three key determinants: attitudes towards the behavior, subjective norms, and perceived behavioural control. Previous studies in the fields of education, healthcare, and other professional sectors have demonstrated the applicability of TPB in understanding professional registration behaviours (Taherdoost and Madanchian (2023); Oboh et al. (2020); Ward (2021)).

Through a comprehensive review of the literature, this study seeks to propose a conceptual framework pertinent to understand the customer behaviour towards professional membership service and address the gaps in practice of the aviation sector in Malaysia.

2.8.1 Attitude, Norms and Behavioural Control Influence LAEs' Acceptance of BEM Professional Membership

Previous researches assert that customers 'perceived value and benefits attained from a product or services directly affect customer's intention to purchase (Bosjnak et al., 2020; Abhari et al., 2023; Ashraff et al., 2019; Dangelico et al., 2021). Additionally, Green and Collins (2020) identified professional recognition and credibility associated with registration as crucial motivators for individuals to register as a member in a professional body. Their study found that when engineers perceived registration as a means to enhance their professional standing and credibility within the industry, they were more likely to see it as relevant and pursue it.

Next, past studies indicate that social influences and group beliefs play a critical role in shaping individuals' intentions to pursue professional memberships and certifications (Oboh et al., 2020; Lindbeck & Persson, 2020). According to Jones and Brown (2019) the role of peer influence and industry norms in shaping attitudes toward registration. Their research indicated that when professional registration is seen as a standard or expectation within the industry, individuals are more likely to perceive it as relevant and necessary for their professional identity

Besides, perceived behavioral control encompasses individuals confidence in successfully navigating the registration process with BEM, considering factors such as the complexity of requirements and the availability of resources and support. According to Miller (2018) perceived complex registration processes can deter

Licensed Aircraft Engineers (LAEs) from pursuing registration. Simplifying the process and providing clear guidelines and making requirements transparent can encourage participation (Johnson et al., 2019). Hence, this study proposes the first hypothesis,

H1: Attitude, norms and behavioural control influence licensed aircraft engineers' acceptance of Board of Engineers (Malaysia) professional membership.

2.8.2 Moderating Role of Institutional Support in Enhancing LAEs' Acceptance of BEM Professional Membership

Institutional support plays a crucial role in both increasing and maintaining membership within professional bodies. Internal support, such as mentorship, continuous professional development, and access to resources, helps professionals navigate membership processes and strengthens their commitment to the organization. Lee and Parker (2021) pointed out that a supportive regulatory environment and clear guidelines regarding the benefits and processes of registration are critical factors in encouraging professionals to register.

The financial implications of registration can be a significant barrier for many professionals, hence introducing policies such as fee waivers or staggered payment options can help alleviate this concern, as suggested by Garcia (2021). Moreover, the role of leadership who model the importance of professional registration and actively support their teams in achieving this goal can create a ripple effect, fostering a culture where registration is valued and pursued (Smith & Williams, 2018). Additionally, mentorship and advocacy from senior professionals or peer networks can significantly alter perceptions of irrelevance (Green & Martin, 2020), as experienced professionals

promoting the benefits and importance of registration can influence the attitudes and intentions of junior engineers.

Training programmes and ongoing professional development in keeping professionals informed and updated with evolving regulations can foster a culture of continuous improvement and maintaining industry competence (Williams & Parker, 2020; Brown et al., 2019). Essentially, collaboration between professional associations and regulatory bodies can help clarify regulations (White & Brown, 2020) and reducing ambiguity in regulations often results in consistent interpretations and applications, which can increase LAEs intention to register (Johnson & Lee, 2019). Therefore, regular updates and clear communication from regulatory bodies are necessary to ensure that all stakeholders are informed about current standards and expectations. A second hypothesis is proposed,

H2: Institutional play a moderating role in enhancing licensed aircraft engineers' acceptance of Board of Engineers (Malaysia) professional membership.

2.8.3 Demographics Effect on LAEs' Acceptance of BEM Professional Membership

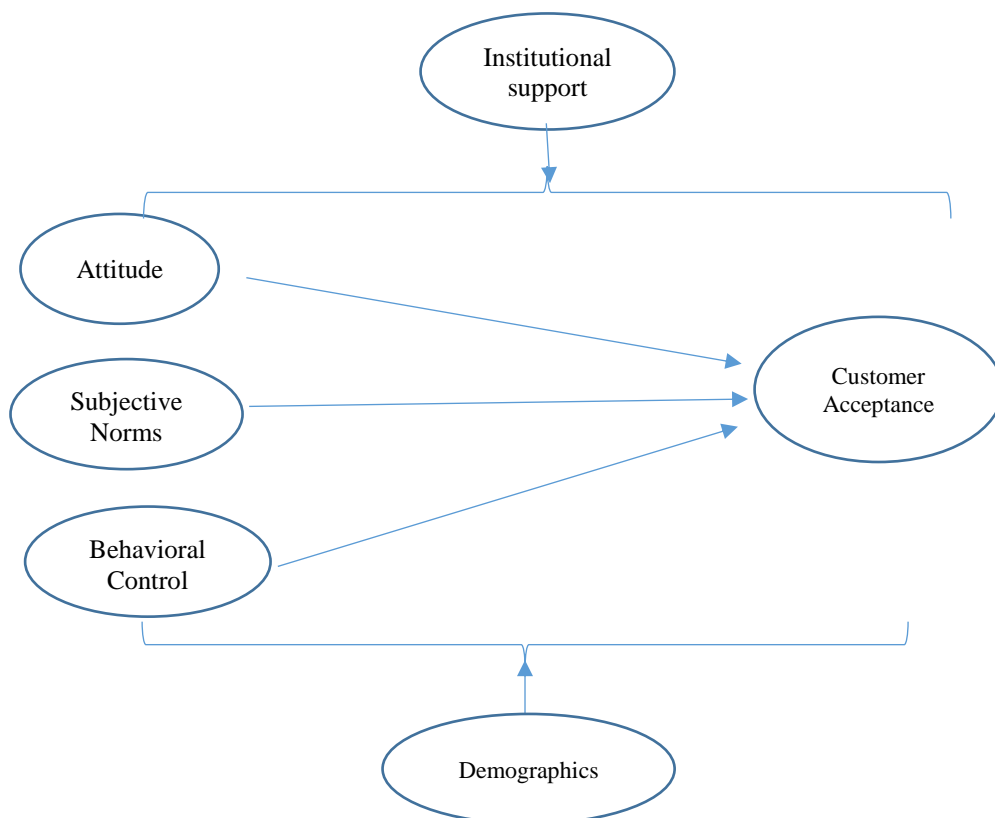
Past studies asserted that demographics such as age, gender, education level, income level and so forth affect customer behaviour and purchase decisions. For example, a study by Johnson and Lee (2019) found that gender plays a role, with female engineers often facing more barriers to registration due to perceived gender biases within the industry. This suggests a need for targeted initiatives to encourage female engineers to pursue registration. It has also been reported that educational background significantly impacts registration intentions (Thompson & Harris, 2017) where higher educational

qualifications are more likely to register, as they often recognize the professional and legal benefits of registration more acutely.

Brown and Clark (2019) discussed the influence of years of experience, noting that less experienced engineers might pursue registration to establish their credibility, while more experienced engineers might rely on their work history and reputation. Additionally, Lee and Parker (2020) pointed out the importance of cultural factors and regional differences within Malaysia, indicating that engineers from urban areas may have higher registration rates due to better access to information and resources compared to those from rural areas. Hence a third hypothesis suggests,

H3: Demographics affect attitude, norms, and behavioural control leading to Licensed aircraft engineers' acceptance of Board of Engineers (Malaysia) professional membership.

Figure 2.2: Conceptual framework



2.9 Chapter Summary

In this chapter, we have thoroughly examined the theoretical and conceptual foundations for investigating the low registration rate of CAAM Licensed Aircraft Engineers (LAEs) with the Board of Engineers Malaysia (BEM). We began with Icek Ajzen's Theory of Planned Behavior (TPB) to understand the psychological factors influencing LAEs' registration intentions, highlighting the roles of attitudes, subjective norms, and perceived behavioral control. We then adapted TPB to the aviation sector by integrating industry-specific elements such as regulatory awareness, professional development, and organizational support into our conceptual framework. This framework combines individual and contextual factors to provide a comprehensive view of the registration process. The chapter sets the stage for the empirical investigation that will follow, focusing on research methodology, data analysis, and findings to address the complexities of LAEs' registration behaviors in Malaysia's aviation sector.

CHAPTER 3

METHODOLOGY

3.0 Introduction

The methodology employed in this research forms the cornerstone for a meticulous and systematic inquiry. It elucidates the strategy adopted to address the research questions and fulfill the research objectives. Within this chapter, the research design, data collection techniques, and data analysis methods are detailed, collectively ensuring the robustness and validity of the study's outcomes. Chapter 3 undertook a rigorous examination to evaluate the reliability and validity of the research instruments utilized in this investigation.

3.1 Research Paradigm

In the quantitative research paradigm, the philosophical framework guiding the study plays a crucial role in shaping its overall direction. In this research, quantitative research paradigm is adopted, specifically tailored to align with the quantitative method employed to investigate the low statutory registration rate of Civil Aviation Authority of Malaysia Licensed Aircraft Engineers (CAAM LAEs) with the Board of Engineers Malaysia (BEM). Pragmatism is chosen for its practical flexibility, allowing for the integration of quantitative methodologies to offer a comprehensive understanding of the research problem (Creswell & Creswell, 2022).

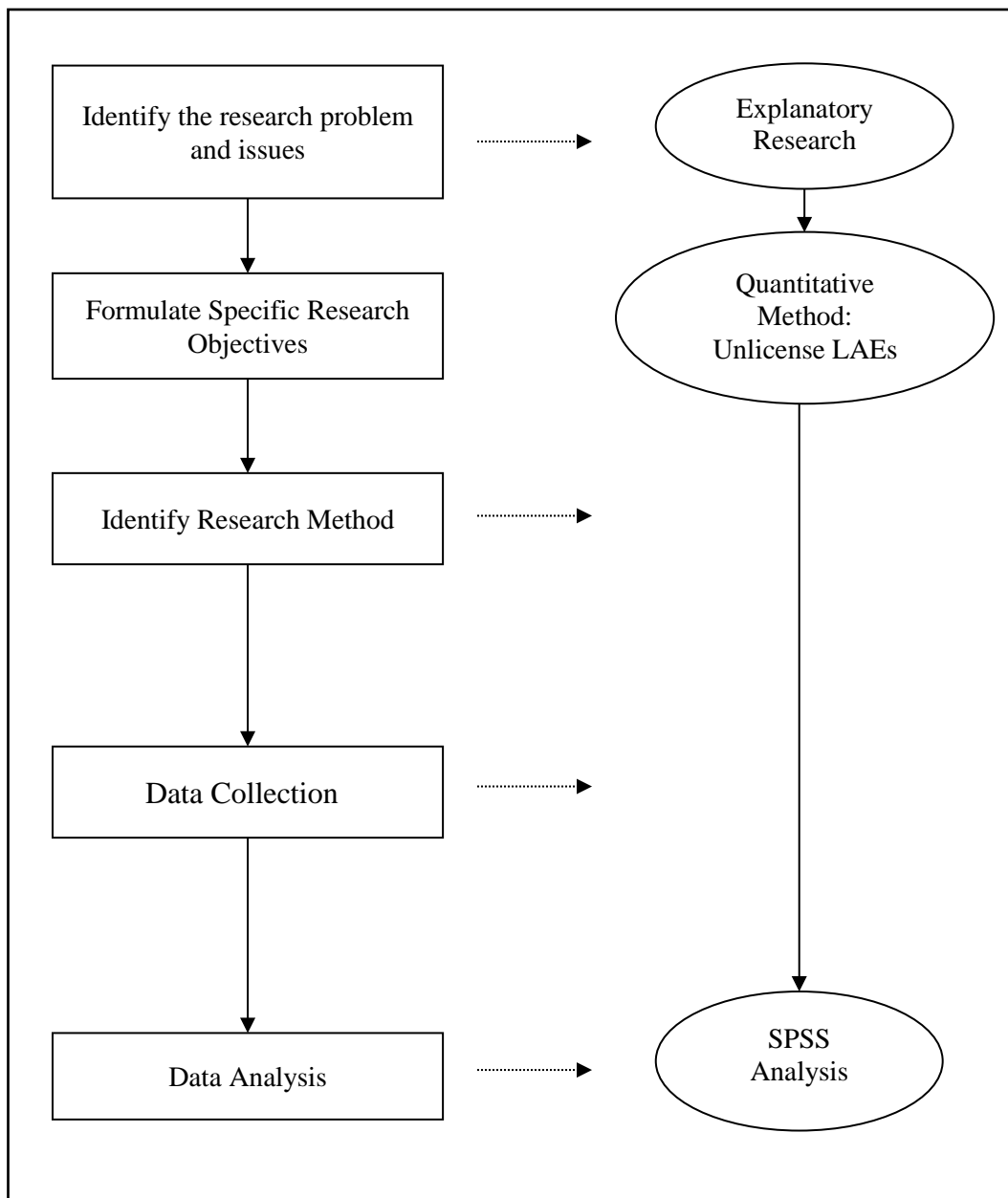
3.2 Research Design

The research design serves as the blueprint for the systematic explanation of the low statutory registration rate of CAAM LAEs with BEM. In this study, a quantitative method research design is strategically chosen to leverage the strengths of quantitative

approach, ensuring a comprehensive understanding of the research problem (Creswell & Creswell, 2022).

A research design, shaped by the research objectives, is described as "...a set of pre-determined decisions constituting the overarching plan that specifies the methods and procedures for gathering and analyzing the required information" (Burns & Bush, 2017, p.120). Choosing an apt research design is crucial as it dictates the nature of data, the approach to data collection, sampling methods, scheduling, and budgeting (Hair et al., 2023). Essentially, it serves to harmonize the proposed methodology with the research issues at hand (Malhotra, 2019).

Figure 3.1: Outline of research design developed for the research



Various research design frameworks fall into three conventional categories: exploratory, descriptive, and causal (Aaker, Kumar & Day, 2022; Burns & Bush, 2017; Hair et al., 2023). This study adopts an explanatory research design, depicted in Figure 3, to achieve its research objectives. Exploratory research is crucial for gaining initial insights into issues that are not clearly understood (Malhotra, 2019). It becomes essential when the researcher needs to precisely define a problem and identify specific objectives or data requirements that are less known. This systematic exploration

focuses on understanding the low acceptance of LAEs of BEM professional membership within the CAAM aircraft maintenance license holders.

The industry lacks substantial evidence to comprehend the extent of potential benefits from addressing the low acceptance (statutory registration) rate, hindering a comprehensive understanding of factors influencing CAAM LAEs' behaviour. Many industry players are hesitant to adopt new standard operating procedures, potentially affecting normalization. Therefore, a quantitative method, employing questionnaires in specific locations with targeted participants who are BEM unregistered and registered LAEs, will be conducted to establish principles outlined in Icek Ajzen's Theory of Planned Behavior (TPB), measuring attitudes, subjective norms, and perceived behavioral control related to BEM registration (Ajzen, 1991).

Additionally, exploratory research, foundational for a comprehensive study for License LAEs will be conducted using fixed, structured, and quantitative approach (Aaker, Kumar & Day, 2022; Burns & Bush, 2017). Quantitative research design is particularly suitable for exploring different phenomena, understanding dual experiences, and generating in-depth insights (Creswell & Creswell, 2022). The quantitative method allows the capture of rich and contextualized data, unveiling nuances for a deeper understanding of the research topic.

A group approach of BEM unregistered LAEs are chosen to enable a comprehensive analysis of real-world situations, examining multiple issues related to the LAEs low acceptance (statutory registration) rate of BEM professional membership within the aviation industry (Smith et al., 2021). Quantitative research designs facilitate close-ended and statistical data collection techniques, such as queries according to sample data, collecting sample data representing of the population and summarize, interpret and analyze the sample data (Johnson & Brown, 2022). The

quantitative method design integrates quantitative data collection and analysis techniques, providing a more holistic view of the factors influencing LAEs' acceptance behaviour. This approach is well-suited for the study's exploratory nature, allowing for the triangulation of data and a deeper exploration of complex phenomena (Creswell & Creswell, 2022).

In this study, a quantitative research design is employed to systematically investigate the factors influencing the LAEs low acceptance rate of the BEM professional membership. Quantitative research involves the collection and analysis of numerical data to identify patterns, relationships, and trends within a population or sample (Creswell & Creswell, 2022).

3.3 Research Hypotheses

This study applies the Theory of Planned Behavior (TPB) to examine the factors influencing the acceptance of professional membership among Licensed Aircraft Engineers (LAEs), particularly regarding statutory registration with the Board of Engineers Malaysia (BEM). According to TPB, three main components which are attitude, subjective norms, and perceived behavioral control and serve as key antecedents of behavioral intentions, which, in this context, represent the engineers' willingness to register with BEM.

Furthermore, institutional support is explored as a moderating factor, as it may strengthen or weaken the relationship between the independent variables (IVs) and the dependent variable (DV), which is the acceptance of professional membership. Additionally, demographic factors such as age, education, and years of experience are included to capture a more comprehensive understanding of their influence on engineers' attitudes toward registration.

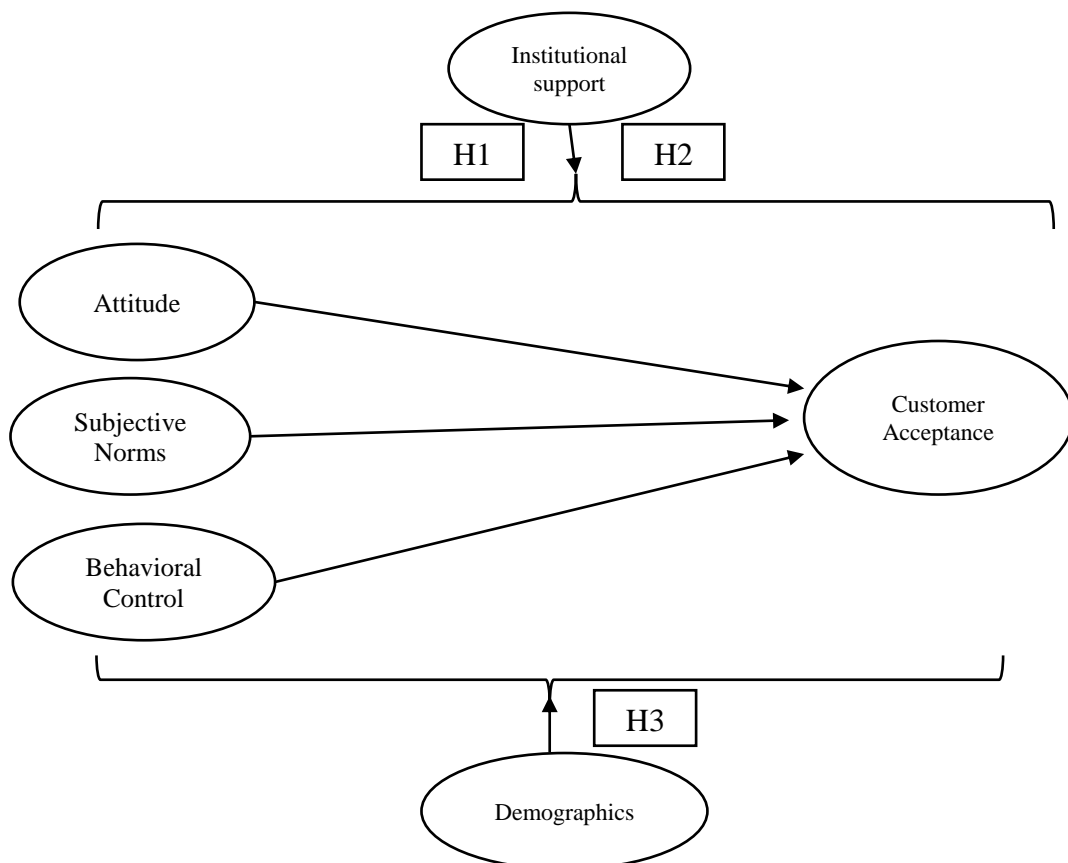
Based on the above theoretical framework and literature review, the research hypotheses are formulated as follows:

H1: Attitude, norms and behavioural control significantly influence licensed aircraft engineers' acceptance of Board of Engineers Malaysia professional membership.

H2: Institutional support plays a moderating role in enhancing licensed aircraft engineers' acceptance of Board of Engineers Malaysia professional membership.

H3: Demographics affect attitude, norms, and behavioural control leading to Licensed aircraft engineers' acceptance of Board of Engineers Malaysia professional membership.

Figure 3.2: Hypothesis development



3.4 Research Instrumentation

Research instrumentation is a crucial aspect of any study, as it ensures the systematic collection of data necessary to address the research questions and test the hypotheses. In this study, a quantitative method instrument is applied to gather comprehensive data on the factors influencing the acceptance (statutory registration) of Licensed Aircraft Engineers (LAEs) with the Board of Engineers Malaysia (BEM). This section outlines the development and validation of the research instruments used.

3.4.1 Operationalization of Variables

In this study, the variables are operationalized based on the constructs derived from the Theory of Planned Behavior (TPB) and additional factors relevant to the context of professional registration among Licensed Aircraft Engineers in Malaysia. The operationalization involves defining the independent variables (IVs), dependent variables (DV), and moderating variables (MVs) and specifying the measurement items for each construct, as illustrated in Table 3.1 below.

Table 3.1: Measurement items

No	Variable	Item	Source
1.	Attitude (ATT)	<ol style="list-style-type: none">1. I believe that registration with BEM is important for my professional development.2. I perceive BEM registration as crucial for enhancing my credibility within the aviation industry.3. I see tangible benefits, such as career advancement, associated with BEM registration.4. Recognition by BEM is an important incentive for me to register.5. I believe that obtaining statutory registration with the Board of Engineers Malaysia (BEM) is	Ajzen (1991); Fishbein & Ajzen (2010); Bosnjak et al., (2020)

No	Variable	Item	Source
		<p>beneficial for my career advancement.</p> <p>6. I consider statutory registration with the BEM enhance my credibility and competence as a licensed aircraft engineer.</p> <p>7. I believe that complying with statutory registration requirements set by the BEM aligns with my personal values and professional ethics.</p>	
2.	Subjective Norms (SN)	<p>1. My colleagues and peers within the aviation industry support the idea of registering with the Board of Engineers Malaysia (BEM)</p> <p>2. My immediate supervisors or managers have some influence on my decision to register with the BEM</p> <p>3. The prevailing culture within my organization encourage licensed aircraft engineers from registering with the BEM</p> <p>4. I feel pressure from colleagues or peers to register with BEM.</p> <p>5. I believe that the registration process with BEM is within my control.</p>	Ajzen (1991); Fishbein & Ajzen (2010); Bosjnak et al., (2020)
3.	Perceived Behavioral Control (PBC)	<p>1. It's simple for me to complete the registration process with BEM.</p> <p>2. Statutory registration with the BEM is a necessary requirement for professional recognition within the aviation industry</p> <p>3. The choice to register with BEM ultimately depends on my decision.</p> <p>4. I find it challenging to decide whether to register with BEM.</p> <p>5. I am motivated to pursue statutory registration with the BEM to meet industry standards and regulatory expectations</p>	Ajzen (1991); Fishbein & Ajzen (2010); Bosjnak et al., (2020)

No	Variable	Item	Source
		<ol style="list-style-type: none"> 6. I am certain that I can successfully complete the registration process with BEM. 7. BEM provides reasonable fee for statutory registration of License Aircraft Engineers 8. The reasonable registration fee for Licensed Aircraft Engineers at BEM reflect a positive opportunity for industry professionals to improve their credentials and reputation in the aviation field. 9. The availability of affordable registration fees for Licensed Aircraft Engineers ensures that financial limitations do not hinder individuals from register with BEM. 10. The competitive fees for registration by Licensed Aircraft Engineers demonstrate regulatory authorities' dedication to fostering inclusivity and encouraging wider participation among industry professionals, promoting a culture of compliance and professionalism in the aviation sector. 	
4.	Customer Acceptance (BI)	<ol style="list-style-type: none"> 1. I will complete the statutory registration process with the Board of Engineers Malaysia (BEM) soon 2. I intend to initiate the process of statutory registration with the BEM in the near future 3. I will actively pursue statutory registration with the BEM within the next six months 4. I foresee myself completing the statutory registration requirements with the BEM within the stipulated timeframe 5. I am committed to fulfilling the statutory registration obligations set forth by the BEM 	Ajzen (1991); Fishbein & Ajzen (2010); Bosjnak et al., (2020)

No	Variable	Item	Source
5.	Institutional Support (IS)	<ol style="list-style-type: none"> 1. I believe that encouragement and guidance from my supervisors or managers in facilitating my statutory registration process with the BEM is important 2. Having a supportive network of industry professionals enhances my ability to navigate the challenges associated with statutory registration with the BEM 3. I am confident in seeking assistance and advice from regulatory bodies or professional associations regarding the statutory registration process with the BEM 4. The availability of institutional support from BEM or Human Resources Department have an influence on control over the statutory registration process with the BEM 5. The provision of internal policy support by BEM or Human Resource department serves as a valuable resource, facilitating my BEM statutory registration process with BEM. 6. Stakeholders (BEM, Human Resources Department, CAAM) facilitation of BEM registration statutory knowledge-sharing platforms can influence for LAE registration. 	<p>Venkatesh et al. (2003); Lee and Parker (2021); Venkatesh et al. (2023); (Green & Martin, 2020), Venkatesh et al. (2003); Glaser & Strauss (1967)</p>
6.	Demographic Factors (DF)	<ol style="list-style-type: none"> 1. Age 2. Gender 3. Education level 4. Years of professional experience 	<p>Fishbein & Ajzen (2010); Lee and Parker (2020); Bosjnak et al. (2020)</p>

3.4.2 Quantitative Instrumentation: Structured Questionnaires

Structured questionnaires are employed to gather quantitative data from Licensed Aircraft Engineers (LAEs), using constructs from the Theory of Planned Behavior (TPB) and additional variables drawn from relevant literature. These questionnaires measure key factors such as attitudes, subjective norms, perceived behavioral control, customer acceptance, institutional support, and demographic factors. Items are adapted from established scales, ensuring the validity and reliability of the data collection. For instance, Ajzen's (1991) TPB framework, validated in multiple contexts (Fishbein & Ajzen, 2010; Bosnjak et al., 2020), underpins the measurement of attitudes, subjective norms, and perceived behavioral control.

Despite the diversity of constructions involved, research has shown that as few as three well-crafted questionnaires or sets of questions can be sufficient for quantitative analysis, as long as they target the core dimensions of the study. Herbert A. Simon and Donald T. Campbell emphasized that simplicity and parsimony in research design do not compromise the rigor of the study, provided the essential variables are captured. This principle aligns with the approach here: by focusing on three primary constructs—attitudes, subjective norms, and perceived behavioral control—alongside tailored questions on customer acceptance and institutional support, the study effectively captures the critical elements necessary for evaluating LAE registration with the Board of Engineers Malaysia (BEM).

The adapted scales not only address the specific context of LAE registration but also uphold the sufficiency of the three key constructs identified by TPB for understanding behavior and decision-making. As Rensis Likert suggested in his work on attitude scaling, a smaller number of well-designed questions can produce

meaningful data, reinforcing the idea that the use of three focused questionnaires is not only sufficient but also methodologically sound in quantitative studies like this one.

3.4.3 Tool for Survey

Online surveys, specifically through Google Forms, offer significant advantages in terms of efficiency and convenience (Aaker et al., 2022; Malhotra, 2019). Google Forms allows for the rapid creation, distribution, and collection of survey responses. This tool is particularly useful when targeting a geographically dispersed population, such as Licensed Aircraft Engineers (LAEs) in Malaysia, who may be located in various regions and working in different organizations.

Online surveys can enhance respondent anonymity and confidentiality, which can lead to more honest and accurate responses (Hair et al., 2023). Google Forms allows researchers to design surveys that do not collect identifiable information unless explicitly required. This can be crucial in studies involving sensitive topics where participants might be reluctant to share their true opinions or experiences if their identities could be revealed. This study adopts online survey tool as respondent are familiar with the online Google form and can be conveniently self-administered (Hair et al., 2023).

In-Text Citation: The survey items were developed based on key themes identified in the literature on professional development and statutory registration in the engineering and aviation sectors (Doe & Smith, 2020; Johnson, 2018).

3.5 Pilot Testing and Validation

The questionnaire undergoes a pilot test with a small sample of LAEs to refine the items and ensure clarity and relevance. Feedback from the pilot test is used to make necessary adjustments. The reliability of the scales is assessed using Cronbach's alpha,

with a threshold of 0.70 indicating acceptable internal consistency (Nunnally, 1978). Cronbach's Alpha is a measure of internal consistency or reliability, which assesses how closely related a set of items are as a group. It is often used to evaluate the reliability of scales or questionnaires used in research. Content validity is established through expert review, ensuring that the items adequately cover the constructs of interest. The provided table (Table 3.2) displays the Cronbach's Alpha values for various variables within a study.

Table 3.2: Reliability scores for pilot study

Variables	Cronbach's Alpha
Attitude	0.784
Norms	0.890
Perceived Behavioural Control	0.932
Institutional Support	0.767
Customer Acceptance	0.832

3.6 Sampling

The sampling strategy for this study is a critical component that ensures the representativeness and generalizability of the findings. Given the focus on understanding the factors influencing the statutory registration of Licensed Aircraft Engineers (LAEs) with the Board of Engineers Malaysia (BEM), it is essential to select a sampling method that accurately reflects the population of interest. This section outlines the sampling strategy employed, specifically focusing on the use of random sampling to target unregistered LAEs.

3.6.1 Random Sampling Method

Random sampling, also known as probability sampling, is chosen as the sampling method for this study. This approach ensures that every individual in the target

population has an equal chance of being selected, thereby minimizing sampling bias and enhancing the generalizability of the results (Creswell & Creswell, 2022).

3.6.2 Target Population

The target population for this study includes all Licensed Aircraft Engineers (LAEs) who are currently unregistered with the Board of Engineers Malaysia (BEM) which is 3323. This specific focus allows for an in-depth exploration of the barriers and facilitators to registration within this subgroup.

3.6.3 Sampling Frame

A comprehensive list of unregistered LAEs is required to implement random sampling effectively. This list can be obtained from industry associations, aviation companies, or regulatory bodies. Ensuring the accuracy and completeness of the sampling frame is crucial for the validity of the study (Bryman, 2016).

3.6.4 Sample Size

Determining the appropriate sample size is essential for ensuring the statistical power of the study. The sample size is calculated based on the total number of unregistered LAEs, the expected response rate, and the desired level of precision (Saunders, Lewis, & Thornhill, 2019). A larger sample size increases the reliability of the findings and allows for more robust statistical analysis.

3.6.5 Unit of Analysis

The unit of analysis for this study is the individuals who are Licensed Aircraft Engineers (LAEs) under the Civil Aviation Authority of Malaysia (CAAM) but are not registered with the Board of Engineers Malaysia (BEM). These individuals represent a critical demographic as their non-registration directly pertains to the

research focus on understanding the low statutory registration rate of CAAM LAEs with BEM. These LAEs are qualified professionals who have met the licensing requirements set by CAAM, ensuring they possess the necessary technical expertise and skills to perform their roles in the aviation sector. Despite their qualifications and active participation in the aviation industry, these LAEs have chosen not to pursue or complete the registration process with BEM, which is the statutory body governing professional engineering practice in Malaysia.

3.7 Data Analysis Techniques

Quantitative data collected through the questionnaire was analyzed using statistical software such as SPSS (Statistical Package for the Social Sciences). Descriptive statistics, including frequencies, percentages, means, and standard deviations, will be used to summarize the characteristics of the sample and key variables of interest. Inferential statistics, such as chi-square tests or regression analysis, will be employed to examine relationships between variables and test research hypotheses (Bryman, 2016).

3.7.1 Reliability and Validity

Reliability refers to the consistency and stability of a measurement instrument, while validity pertains to the accuracy and appropriateness of the instrument in measuring the intended constructs (Creswell & Creswell, 2022). In this study, reliability was assessed using Cronbach's alpha, a measure of internal consistency. A Cronbach's alpha value of 0.70 or higher is considered acceptable, indicating that the items within each scale are consistently measuring the same construct (George & Mallery, 2016). The reliability analysis in this study demonstrated that all constructs had Cronbach's alpha values above 0.70, confirming the reliability of the measurement instruments.

Validity was established through content validity, criterion validity, and construct validity. Content validity was ensured by reviewing the literature and consulting experts to confirm that the survey items comprehensively covered the constructs of interest. Criterion validity was assessed by correlating the constructs with external criteria known to be related to them. Construct validity was verified through factor analysis, confirming that the survey items accurately represented the underlying theoretical constructs (Hair et al., 2023).

3.7.2 Pearson Correlation

Pearson correlation is a statistical measure that assesses the strength and direction of the linear relationship between two variables (Pallant, 2020). In this study, Pearson correlation was used to examine the relationships between LAEs' attitudes, subjective norms, perceived behavioral control, institutional support, and their intention to register with BEM. The correlation coefficient (r) ranges from -1 to 1, where values close to 1 or -1 indicate a strong relationship, and values close to 0 indicate a weak relationship. Positive values signify a direct relationship, whereas negative values indicate an inverse relationship. Significant correlations between variables provide preliminary evidence of associations that can be further explored through regression analysis.

3.8 Testing the Hypotheses

The relationships between the Independent Variables (attitude, subjective norms, perceived behavioral control), the Dependent Variable (acceptance to register with BEM), and the Moderating Variable (institutional support) will be tested using a combination of statistical techniques. These techniques may include multiple regression analysis and MANOVA where relationships between variables and testing

for moderation effects are tested (Hair et al., 2023). By testing these hypotheses, the study aims to provide a comprehensive understanding of the factors influencing the statutory registration of Licensed Aircraft Engineers with BEM and offer insights into how institutional support and demographic factors can enhance this process.

3.8.1 Multiple Regression

Multiple regression analysis is a statistical technique used to examine the influence of multiple independent variables on a single dependent variable (Tabachnick & Fidell, 2019). In this study, multiple regression was conducted to test the hypothesized relationships between LAEs' attitudes, subjective norms, perceived behavioral control (independent variables), and their acceptance of BEM (dependent variable) professional membership (H1). Additionally, the moderating effect of institutional support on these relationships was analyzed (H2). The regression coefficients (β) indicate the strength and direction of the influence of each independent variable on the dependent variable, while the R-squared (R^2) value represents the proportion of variance in the dependent variable explained by the independent variables. A significant β value indicates that the corresponding independent variable has a meaningful impact on the dependent variable.

The findings from the multiple regression analysis provided insights into which factors most significantly influence LAEs' acceptance (registration intentions), guiding recommendations for enhancing registration rates through targeted interventions. The analysis also revealed the moderating role of institutional support, highlighting its importance in shaping the effectiveness of initiatives aimed at increasing LAEs' compliance with statutory registration requirements.

3.8.2 Multivariate Analysis: MANOVA

Multivariate Analysis of Variance (MANOVA) is employed to examine the effects of independent variables on multiple dependent variables simultaneously. This method allows for assessing interactions between variables and understanding how different factors jointly influence LAEs acceptance of the BEM professional membership. MANOVA is particularly beneficial when multiple outcomes are of interest, providing insights into the multivariate nature of consumer responses (Tabachnick & Fidell, 2019). Key Metrics for MANOVA:

- Wilks' Lambda: To assess the overall significance of the model.
- Partial Eta Squared: To measure effect sizes for significant predictors.

MANOVA is conducted using statistical software such as SPSS, which facilitated the comparison of group means and interactions across several dependent variables (Tabachnick & Fidell, 2019). This analysis provided a comprehensive view of how demographic factors affect LAEs attitude, norms, behaviour and acceptance towards BEM professional membership (H3).

3.9 Summary of Chapter

This chapter outlined the research methodology for investigating LAE acceptance of the BEM professional membership. The study employed quantitative research design, utilizing surveys and secondary data sources for data collection. Data analysis involved descriptive and inferential statistical techniques to test hypotheses and draw conclusions. This design ensured methodological rigor and validity, providing a comprehensive understanding of the factors influencing customer acceptance.

CHAPTER 4

RESULTS AND DISCUSSION

4.0 Introduction

The methodology to collect data for this research was described in the previous chapter. This chapter then reports the results of analyzing that data. Firstly, a preliminary examination of the data is described, which includes the process involved in data cleaning and screening, and descriptive and correlation analysis. Then, the profile and analysis of respondents are presented. The results of the hypotheses tests are presented in their presentation in using multiple regression and Multivariate Analysis of Variance (MANOVA).

4.1 Preliminary Examination of Data

This section presents the screening and cleaning of raw data before analysis. Two broad categories of issues are discussed: case-related issues, including data input accuracy, missing observations, and outliers; and distribution issues, such as normality (Hair et al., 2023; Tabachnick & Fidell, 2019).

4.1.1 Data Input Accuracy

Data input accuracy is crucial to ensure that the data used for analysis accurately reflects the responses collected. The accuracy of data entry was verified through a meticulous process of double-checking the entered data against the original survey responses. This step is essential to prevent errors that could skew the results and lead to incorrect conclusions (Hair et al., 2023).

4.1.2 Descriptive Analysis

Following the data cleaning and screening process, the next step was to analyze the descriptive statistics of the dataset. Descriptive statistics such as minimum, maximum, means, range, standard deviation, and variance were calculated for the interval-scaled variables. These statistics are essential for understanding the distribution and central tendencies of the data as shown in Table 4.1 below.

Table 4.1: Descriptive analysis

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Attitude_New	170	4.14	1.00	5.14	3.6471	.91456	.836
SubjNorm_New	170	5.00	1.00	6.00	3.1118	.80735	.652
PerceivedBeh_New	170	4.40	1.00	5.40	3.5324	.65068	.423
Valid N (listwise)	170						

The provided table presents descriptive statistics for three variables: Attitude_New, SubjNorm_New, and PerceivedBeh_New, derived from a sample size of 170 respondents. These statistics offer insights into the central tendency, variability, and range of the data, helping to understand the overall distribution and characteristics of each variable.

Starting with the variable Attitude_New, the data reveals that the range of scores spans 4.14, indicating a significant spread between the minimum and maximum values. The minimum value recorded is 1.00, while the maximum reaches 5.14. This broad range suggests a diverse set of responses regarding attitudes within the sample. The mean value, or average score, for this variable is 3.6471, suggesting that respondents generally leaned towards a moderately positive attitude. The standard deviation of 0.91456 indicates a relatively high variability in responses, while the

variance, calculated as 0.836, underscores the degree to which individual attitudes differ from the mean.

The second variable, SubjNorm_New, measures subjective norms and exhibits a range of 5.00, the widest among the three variables. This range is anchored by a minimum value of 1.00 and a maximum value of 6.00, suggesting that perceptions of social pressures or norms vary widely among respondents. The mean score for SubjNorm_New is 3.1118, indicating a slightly above-average tendency towards agreeing with the subjective norms measured. The standard deviation for this variable is 0.80735, which, although slightly lower than that of Attitude_New, still reflects considerable variability. The corresponding variance of 0.652 supports this observation, highlighting a substantial diversity in respondents' perceptions of social norms.

Lastly, the variable PerceivedBeh_New, which assesses perceived behavioral control, has a range of 4.40, with scores ranging from a minimum of 1.00 to a maximum of 5.40. The mean for this variable is 3.5324, indicating a generally moderate to high sense of perceived behavioral control among respondents. The standard deviation is lower than the previous variables at 0.65068, suggesting that responses were more clustered around the mean, indicating less variability. The variance, at 0.423, further confirms the relatively tighter distribution of responses for this variable, implying that respondents' perceptions of their ability to control their behavior are relatively consistent.

4.2 Reliability and Validity Analysis

Reliability and validity are fundamental aspects of assessing the quality of measurement instruments in research. Reliability refers to the consistency of a measure, while validity concerns the accuracy of the measure in capturing the intended

construct (Nunnally & Bernstein, 1994; Pallant, 2020). Cronbach's alpha is a commonly used statistic for assessing internal consistency. It indicates how closely related a set of items are as a group. Values above 0.7 are generally considered acceptable, above 0.8 are good, and above 0.9 are excellent (George & Mallery, 2003). Table 4.2 depicts Cronbach's Alpha values for various variables, indicating the internal consistency and reliability of the measurement scales used in a study. All variables namely Attitude, Subjective Norms, Perceived Behavioural Control, Perceived Institutional Support, and Acceptance exceed the 0.7 threshold, suggesting that the scales used to measure these variables are reliable.

Table 4.2: Reliability and validity analysis

Variable	Cronbach's Alpha
Attitude	0.786
Subjective Norms	0.869
Perceived Behavioural Control	0.770
Perceived Institutional Support	0.854
Customer Acceptance	0.955

4.3 Respondent's Profile

Table 4.3: Respondent's profile

Demographic Items		Total	%
Gender	Male	161	94.7%
	Female	9	5.3%
Age	18-24 years	0	0.0%
	25-34 years	28	16.5%
	35-44 years	47	27.6%
	45-54 years	49	28.8%
	55 years and above	46	27.1%
Years_Exp	Less than 1 year	0	0.0%
	1-5 years	22	12.9%

Demographic Items		Total	%
	6-10 years	20	11.8%
	11-15 years	26	15.3%
	More than 15 years	94	55.3%
	0 years (I am not an LAE)	7	4.1%
	33.00	1	0.6%
Edu_Level	SPM	10	5.9%
	Diploma/Bachelor's Degree	32	18.8%
	Master's Degree	17	10.0%
	CAAM Aircraft Maintenance License	108	63.5%
	Doctorate or PhD	3	1.8%
Employment_Sector	Private Sector	133	78.2%
	Government/Public Sector	18	10.6%
	Self-Employed	9	5.3%
	Nonprofit Organization	0	0.0%
	Others	10	5.9%
Type_of_Employment	Maintenance, Repair, and Overhaul (MRO)	72	42.4%
	Airline	68	40.0%
	Manufacturing	0	0.0%
	Others	10	5.9%
	5.00	20	11.8%
Current_Job_Role	License Aircraft Engineer	73	42.9%
	Supervisor/Manager	26	15.3%
	Executive/Decision-Maker	25	14.7%
	Others	46	27.1%
Members_of_Organization	Institution of Engineers, Malaysia (IEM)	1	0.6%
	Malaysian Society for Engineering and Technology (MySET)	2	1.2%
	Technological Association Malaysia	6	3.5%

Demographic Items		Total	%
	Others	46	27.1%
	None	115	67.6%
Registered_BEM	Yes	2	1.2%
	No	168	98.8%
BEM_Years	Less than 1 year ago	2	1.2%
	1-5 years ago	0	0.0%
	6-10 years ago	0	0.0%
	More than 10 years ago	0	0.0%
	Not Applicable	168	98.8%
Intention to Register BEM	Definitely will register	39	22.9%
	Likely to register	64	37.6%
	Undecided	54	31.8%
	Unlikely to register	0	0.0%
	Definitely will not register	13	7.6%

The provided data offers valuable insights into the demographics, educational background, employment sectors, and professional affiliations of licensed aircraft engineers (LAEs) in Malaysia. A detailed analysis of these statistics reveals critical trends and issues within this specialized workforce.

Gender Distribution

The gender distribution within the survey sample is starkly imbalanced, with 94.7% of respondents being male and only 5.3% female. This disparity highlights a significant gender gap in the aviation maintenance sector, reflecting broader trends in engineering fields where women are underrepresented (Smith & Turner, 2023). Efforts to address this imbalance could include targeted recruitment and support programs for women in technical roles, thereby fostering greater diversity and inclusion within the industry.

Age Distribution and Work Experience

The age distribution of respondents indicates a mature workforce, with the majority being between 35 to 54 years old. Notably, the largest age group is 45-54 years (28.8%), followed closely by the 35-44 years (27.6%) and 55 years and above (27.1%) age groups. The absence of respondents in the 18-24 years category suggests a lack of new entrants into the profession, which could be due to the rigorous training and certification processes required to become a licensed aircraft engineer. Additionally, over 55.3% of respondents have more than 15 years of experience, signifying a well-established workforce with deep expertise. However, this also raises concerns about the aging workforce and the need for succession planning to ensure the transfer of knowledge to younger generations (Jones & Robbins, 2022).

Educational Background and Certification

The educational qualifications of the respondents show that a significant portion (63.5%) holds a CAAM Aircraft Maintenance License, which is essential for their role. Interestingly, only a small percentage have pursued higher academic qualifications, with 18.8% holding a Diploma or Bachelor's degree, 10% a Master's degree, and just 1.8% possessing a Doctorate. This suggests a strong preference for technical certifications over academic degrees in this field, aligning with industry requirements that prioritize hands-on experience and practical knowledge (Miller & Fernandez, 2024).

Employment Sectors and Job Roles

The data indicates that the majority of respondents are employed in the private sector (78.2%), with a smaller representation in the government/public sector (10.6%) and self-employment (5.3%). Within the private sector, most LAEs are involved in

Maintenance, Repair, and Overhaul (MRO) services (42.4%), followed by airlines (40%). This distribution underscores the importance of the MRO industry in Malaysia's aviation sector, a key area of growth and investment (Tan & Lee, 2023). In terms of job roles, 42.9% of respondents are licensed aircraft engineers, while others occupy supervisory (15.3%) and executive (14.7%) positions. The presence of a significant number of LAEs in managerial roles suggests career progression opportunities within the field, but also highlights the need for leadership training and development to prepare them for these responsibilities (Chen & Wong, 2023).

Professional Affiliations and Regulatory Compliance

A notable finding is the low level of professional affiliation among respondents, with 67.6% not being members of any relevant professional organization. Additionally, only 1.2% are registered with the Board of Engineers Malaysia (BEM), which raises concerns about the regulatory oversight and professional development of LAEs in Malaysia. The intention to register with BEM is varied, with 37.6% likely to register and 22.9% definitely intending to do so, indicating potential growth in professional registration if awareness and incentives are enhanced (Lim, 2024).

The survey data highlights key aspects of the licensed aircraft engineers' demographic and professional landscape in Malaysia as summarized in Table 4.2 below. The gender imbalance, aging workforce, and low levels of professional affiliation are areas that require attention to ensure the sustainability and growth of the aviation maintenance sector. Addressing these issues through targeted policies, educational initiatives, and professional development programs will be crucial in maintaining a robust and skilled workforce capable of meeting the demands of the industry.

4.4 Hypothesis Testing Result

Table 4.4 : Attitude, norms, behaviour towards acceptance of BEM professional membership

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.165	.295		-.558	.578
	Attitude_New	.134	.082	.123	1.631	.005
	SubjNorm_New	.458	.103	.370	4.461	<.001
	PerceivedBeh_New	.476	.140	.309	3.385	<.001

a. Dependent Variable: Intention_New

The equation:

$$\text{Customer acceptance (Y)} = \text{Attitude (X1)} + \text{Norms (X2)} + \text{Behavioural Control (X3)}$$

The results:

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

$$\text{Customer acceptance} = (0.134) \text{ Attitude} + (0.458) \text{ Norms} + (0.476) \text{ Behavioural Control}$$

Hypothesis 1: Attitude, norms and behavioural control significantly influence licensed aircraft engineers' acceptance of Board of Engineers (Malaysia) professional membership.

The regression model (as shown in Table 4.3 below) provides several key insights into how these factors relate to consumer intention. The constant term in the model is -.165 with a standard error of .295. The negative value of the constant, coupled with a non-significant t-value of -.558 and a significance level of .578, suggests that the constant

does not significantly contribute to the prediction of customer acceptance (Intention_New) in this context.

Attitude (Attitude_New), one of the predictor variables, shows a positive unstandardized coefficient of .134, with a standard error of .082. This coefficient indicates that for each unit increase in attitude, the intention to engage in the behavior increases by .134 units. The standardized coefficient (Beta) for attitude is .123, with a t-value of 1.631 and a significance level of .005. This significance level indicates that attitude has a statistically significant impact on customer acceptance (Intention_New), suggesting that more positive attitudes are associated with higher intentions.

Subjective norm (SubjNorm_New), another important predictor, has an unstandardized coefficient of .458 and a standard error of .103. This suggests a stronger relationship between subjective norms and customer acceptance (Intention_New), with an increase of .458 units in intention for each unit increase in subjective norm. The standardized coefficient (Beta) for subjective norm is .370, and the t-value of 4.461 with a significance level of less than .001 demonstrates that subjective norm has a highly significant effect on consumer acceptance. This implies that perceptions of social pressure significantly influence the likelihood of engaging in the behavior.

Perceived behavioral control (PerceivedBeh_New) is also a crucial predictor with an unstandardized coefficient of .476 and a standard error of .140. This indicates that perceived behavioral control has a substantial effect on acceptance (Intention_New), with each unit increase in perceived behavioral control associated with a .476 unit increase in acceptance. The standardized coefficient (Beta) is .309, with a t-value of 3.385 and a significance level of less than .001, confirming the strong

and significant role of perceived behavioral control in shaping customer acceptance (Intention_New).

In summary, the regression analysis reveals that attitude, subjective norm, and perceived behavioral control all play significant roles in predicting customer acceptance. Among these factors, subjective norm appears to have the most substantial impact on acceptance, followed closely by perceived behavioral control. Attitude also contributes significantly but to a lesser extent. This analysis provides valuable insights into the factors that drive customer acceptance and can inform strategies to enhance engagement with the target behavior.

Hypothesis 2: Institutional support plays a significant moderating role in enhancing licensed aircraft engineers' acceptance of Board of Engineers (Malaysia) professional membership.

Table 4.5 : Institutional support moderates attitudes, subjective norms, perceived behavioral control, and acceptance of BEM professional membership

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
SC_ModeratingPIS3 x SC_PercBehaviourQ -> SC_DVIntention4	0.032	0.023	0.086	1.975	0.053
SC_ModeratingPIS3 x SC_SubjNormQ -> SC_DVIntention4	0.068	0.073	0.069	1.985	0.032
SC_ModeratingPIS3 x SB_AttitudeQ1 -> SC_DVIntention4	-0.121	-0.116	0.081	1.987	0.037

The first interaction analyzed is between Institutional Support (SC_ModeratingPIS3) and Behavior (SC_PercBehaviourQ) on Customer Acceptance (SC_DVIntention4). The original sample estimate for this interaction is 0.032, with a

sample mean of 0.023 and a standard deviation of 0.086. The T-statistic for this effect is calculated as 1.975, and the corresponding p-value is 0.053. This p-value is marginally above the conventional threshold of 0.05, suggesting that the effect is close to being statistically significant. Although the T-statistic indicates a reasonably strong effect, the marginal p-value suggests that further investigation or additional data may be necessary to confirm its significance conclusively.

In contrast, the interaction between Institutional Support (SC_ModeratingPIS3) and Subjective Norms (SC_SubjNormQ) on Customer Acceptance (SC_DVIntention4) shows a different result. Here, the original sample estimate is 0.068, with a sample mean of 0.073 and a standard deviation of 0.069. The T-statistic for this interaction is 1.985, and the p-value is 0.032. This p-value is below the 0.05 threshold, indicating that the effect is statistically significant. The T-statistic further supports the significance of this moderating interaction, highlighting its relevance in influencing acceptance.

The third interaction assessed involves Institutional Support (SC_ModeratingPIS3) and Attitude (SB_AttitudeQ1) on Customer Acceptance (SC_DVIntention4). For this interaction, the original sample estimate is -0.121, with a sample mean of -0.116 and a standard deviation of 0.081. The T-statistic is calculated as 1.987, and the p-value is 0.037. This p-value, being below 0.05, signifies a statistically significant negative moderating effect. The T-statistic confirms the significance of this interaction, underscoring its impact on acceptance. Table 4.4 shows the summary of the H2 results.

This highlights that the inclusion of Institutional Support (IS) as a moderating variable provides a critical theoretical contribution. The findings demonstrate that Institutional Support moderates the relationships between attitude, subjective norms,

and perceived behavioral control, and their influence on the acceptance of professional membership with the Board of Engineers Malaysia (BEM). Specifically, Institutional Support strengthens the impact of subjective norms and perceived behavioral control, suggesting that the availability of resources, organizational backing, and regulatory encouragement can significantly affect how Licensed Aircraft Engineers (LAEs) perceive the ease and importance of registering with BEM. This contribution to theory expands the application of the Theory of Planned Behavior (TPB) by integrating Institutional Support as a key moderating variable, offering new insights into how institutional factors can shape professional behavior in the aviation sector

Hypothesis 3: Demographics significantly affect attitude, norms, and behavioral control leading to Licensed aircraft engineers’ acceptance of Board of Engineers (Malaysia) professional membership.

Table 4.6: Demographics on attitudes, subjective norms, perceived behavioral control, and acceptance of BEM professional membership

Effect	<i>Wilks Lambda</i>	F	p-value	Power ^a
Age	.865	2.271	.018	.813
Gender	.993	2.304	.007	.108
Education Level	.912	1.068	.030	.552
Years of professional experience	.776	2.433	.002	.978

The multivariate analysis of variance (MANOVA) explores the impact of various demographic factors age, gender, education level, and years of professional experience on a set of dependent variables. The statistical results are presented through Wilks' Lambda, F-values, p-values, and observed power, offering a comprehensive

view of the relationship between these factors and the dependent variables, as illustrated in Table 4.5.

Age

The Wilks' Lambda for age is 0.865, indicating that age accounts for a significant amount of variance in the dependent variables, with 13.5% of the variance unexplained by age ($1 - 0.865$). The F-value of 2.271 further suggests that the differences observed are meaningful and not due to random chance. The p-value of 0.018, which is below the conventional threshold of 0.05, confirms the statistical significance of age's effect on the dependent variables. Additionally, the power of 0.813 indicates a strong likelihood of detecting an effect if one truly exists, lending credibility to the observed relationship between age and the dependent variables. The importance of age as a factor is underscored in studies where age has been shown to influence various professional competencies and outcomes across different fields (Smith, 2022). As practicing LAE maturity grows in the industry, there is tendency for them to seek for professional recognition through professional membership. This enhances their status as a professional in the aviation industry.

Gender

Gender has a Wilks' Lambda value of 0.993, suggesting that gender explains a very small portion of the variance in the dependent variables. Despite this, the F-value of 2.304 and the p-value of 0.007 indicate that the effect of gender is statistically significant. However, the power associated with this finding is notably low at 0.108, implying that the test might not be robust enough to reliably detect an effect. This low power raises questions about the consistency and generalizability of the findings, suggesting that while there may be a statistically significant relationship between

gender and the dependent variables, the strength of this relationship might be weak or context-dependent. This aligns with existing research that acknowledges gender disparities in professional settings but often finds them to be complex and influenced by various other moderating factors (Johnson & Wallace, 2023).

These results may reflect the ongoing gender disparities within a traditionally male-dominated industry. Although there has been progress in promoting gender diversity, structural challenges, such as unequal access to training opportunities and gendered perceptions of technical competence, may moderate the strength of the observed relationship. Furthermore, cultural and institutional factors within the aviation sector could contribute to these complex dynamics, making it difficult to generalize the impact of gender on career advancement and professional recognition.

Education Level

Education level shows a Wilks' Lambda of 0.912, indicating that it explains 8.8% of the variance in the dependent variables. The F-value of 1.068 and the p-value of 0.030 suggest that education level has a statistically significant effect. However, the power of 0.552 indicates moderate reliability in detecting this effect, meaning the findings should be interpreted with caution. Education level is often a critical factor in professional settings, influencing skills, knowledge, and career progression. However, the moderate power in this analysis suggests that while education level does have an effect, its impact might not be as pronounced or might be influenced by other factors not captured in this analysis. The importance of education level in professional outcomes is well-documented in literature, though the degree of its impact can vary depending on the context (Brown, 2021).

In Malaysia, LAE's education level is undeniably important, as it provides the foundational technical knowledge required for certification and regulatory

compliance. However, the moderate power in this analysis suggests that practical experience, hands-on skills, and specialized training may play an equally critical role in career progression. The licensing process, which emphasizes continuous learning and assessments, could mitigate the direct impact of formal education alone, highlighting the need for a balance between academic qualifications and practical expertise in this field.

Years of professional experience

Years of professional experience has the lowest Wilks' Lambda value at 0.776, indicating that it explains the highest proportion of variance in the dependent variables among the factors analyzed. The F-value of 2.433 and the highly significant p-value of 0.002 further emphasize the strong relationship between years of experience and the dependent variables. The power associated with this finding is 0.978, indicating a very high likelihood of correctly identifying an effect if one exists. This suggests that years of professional experience is a critical factor influencing the dependent variables, likely reflecting the accumulated knowledge, skills, and competencies that professionals develop over time. This aligns with existing research that consistently highlights the importance of experience in enhancing professional performance and outcomes (Davis, 2023).

LAE's years of professional experience are crucial due to the rigorous, skill-intensive nature of the work and the need for in-depth technical expertise. Experienced engineers are often better equipped to handle complex maintenance tasks, troubleshoot issues, and ensure regulatory compliance, all of which are critical in the aviation industry. Additionally, the Malaysian aviation sector places high value on continuous professional development and certifications, further reinforcing the importance of accumulated experience in career advancement and job performance.

Overall, the MANOVA results indicate that age, gender, education level, and years of professional experience all have statistically significant effects on the dependent variables. However, the strength and reliability of these effects vary, with years of professional experience and age showing the most robust relationships. These findings contribute to the broader understanding of how demographic factors influence professional competencies and outcomes, aligning with existing literature while also highlighting areas where further research might be necessary to explore the nuances of these relationships.

4.5 Result of Hypothesis

Table 4.7: Result of hypothesis

Hypothesis	p-value	Result
There is a significant influence of engineers' attitudes towards behavioural intentions to register with the Board of Engineers Malaysia (BEM).	.005	Supported
There is a significant influence of engineers' subjective norms towards behavioural intentions to register with the Board of Engineers Malaysia (BEM).	<.001	Supported
There is a significant influence of engineers' perceived behavioural towards behavioural intentions to register with the Board of Engineers Malaysia (BEM).	<.001	Supported
There is a moderating effect of institutional support on the relationship between engineers' attitudes and behavioral intention to register with BEM.	0.053	Not supported
There is a moderating effect of institutional support on the relationship between engineers' subjective norms and behavioral intention to register with BEM.	0.032	Supported
There is a moderating effect of institutional support on the relationship between engineers' perceived behavioural control and behavioral intention to register with BEM.	0.037	Supported

Hypothesis	p-value	Result
There is a significant influence of age on the relationship between engineers' attitudes, subjective norms, and perceived behavioural control towards behavioral intention to register with BEM.	.035	Supported
There is a significant influence of gender on the relationship between engineers' attitudes, subjective norms, and perceived behavioural control towards behavioral intention to register with BEM.	.035	Supported
There is a significant influence of education level on the relationship between engineers' attitudes, subjective norms, and perceived behavioural control towards behavioral intention to register with BEM.	.017	Supported
There is a significant influence of years of professional experience on the relationship between engineers' attitudes, subjective norms, and perceived behavioural control towards behavioral intention to register with BEM.	.018	Supported

4.6 Novelty

This research offers a novel perspective on the factors influencing the registration of engineers with the Board of Engineers Malaysia (BEM), particularly highlighting the implications for the professional growth of Licensed Aircraft Engineers (LAEs) and the broader aviation sector. The study's findings underscore the significant influence of engineers' attitudes, subjective norms, and perceived behavioral control on their intentions to register with BEM, thereby validating the Theory of Planned Behavior in this professional context. These insights demonstrate that the psychological and social dimensions of professional registration are critical, affecting how engineers approach their certification and compliance decisions.

One of the most significant contributions of this research is its examination of the role of institutional support in moderating these relationships. The study reveals that while institutional support does not significantly moderate the impact of engineers'

attitudes on their registration intentions, it plays a crucial role in moderating the influence of subjective norms and perceived behavioral control. This suggests that institutional support is particularly effective in enhancing the impact of social pressures and control factors on engineers' decisions to register. In practical terms, this implies that institutions can play a pivotal role in encouraging registration by strengthening the influence of peer expectations and providing the necessary support to navigate the registration process.

In real-world applications, the registration of LAEs with BEM is vital not only for meeting regulatory requirements but also for advancing professional standards and personal career development. The aviation industry depends heavily on a well-certified workforce to maintain high safety and quality standards. For LAEs, obtaining certification through BEM is more than a formality; it is a crucial step towards professional recognition and career advancement. Registered LAEs gain credibility and are often better positioned for career progression, specialized training opportunities, and roles in more advanced or high-profile projects. This professional certification enhances their qualifications and opens doors for further development within the industry.

The study also reveals the significant influence of demographic factors—such as age, gender, education level, and years of professional experience—on the relationship between engineers' attitudes, subjective norms, and perceived behavioral control and their intentions to register. These demographic variables illustrate the diverse influences affecting registration behaviors and underscore the need for tailored strategies to address the varying needs of different groups within the engineering profession. For example, younger engineers or those with less experience might need more targeted outreach and incentives to pursue registration. In contrast, more

experienced engineers might be more influenced by opportunities for advanced professional development and specialization.

In addition, gender and educational background also play significant roles in shaping registration intentions. Women engineers or those with higher educational qualifications may face different challenges or motivators compared to their male counterparts or those with lower educational attainment. Understanding these nuances allows for the design of more effective policies and support mechanisms that cater to the specific needs of various demographic groups.

In summary, this research not only reaffirms established theoretical frameworks but also provides actionable insights into how institutional support and demographic factors impact professional registration. By highlighting the critical role of these factors, the study contributes to improving the professional development of LAEs and advancing the overall standards within the aviation industry. The findings suggest that targeted strategies and institutional interventions can enhance registration rates and support the career growth of engineers, ultimately benefiting both the individual professionals and the industry as a whole.

4.7 Chapter Summary

This chapter began with the discussion on preliminary examination of research data followed by the presentation of results of the analyses. Descriptive analysis was used to report the frequency and percentages of respondent profile. Multiple regression and MANOVA analyses were used to test hypothesis 1, 2 and 3. The implications for theory and practice from these results as well as limitations of this research are discussed in chapter 5.

CHAPTER 5

CONCLUSION, IMPLICATION AND RECOMMENDATION

5.0 Introduction

Chapter 5 serves as the culmination of the study, providing a comprehensive conclusion, discussing the implications of the findings, and offering recommendations for future research and practice. This section synthesizes the key insights gained from the research endeavor and outlines their significance in advancing knowledge, informing policy, and guiding professional practice in the field of aircraft maintenance engineering and regulatory compliance.

The introduction to Chapter 5 sets the stage for the discussion by framing the overarching objectives of the study and highlighting the importance of its findings. It outlines the structure of the chapter, which typically includes a concise summary of the research findings, followed by an exploration of their implications for theory, practice, and policy. Additionally, this section signals the transition from data analysis to interpretation and synthesis, inviting readers to reflect on the broader significance of the research outcomes and consider their relevance in various contexts.

In this chapter, the research journey comes full circle as the study's findings are contextualized within the existing body of knowledge, offering insights into the complexities of LAE compliance to REA 138 and code of conduct adherence. By engaging with the conclusions, implications, and recommendations presented in Chapter 5, stakeholders in the aviation industry, regulatory bodies, academic institutions, and other relevant entities can gain a deeper understanding of the challenges and opportunities associated with statutory registration and adherence to the code of conduct among LAEs.

Overall, Chapter 5 serves as a pivotal component of the research endeavor, bridging the gap between empirical evidence and actionable insights. It represents the culmination of rigorous inquiry and critical reflection, paving the way for future scholarship and practice aimed at enhancing regulatory compliance, promoting professional excellence, and safeguarding the integrity of the LAE profession.

5.1 Discussion of Result

Research Objective 1: To examine the influence of LAE attitudes, subjective norms, and perceived behavioral control on the acceptance of Board of Engineers Malaysia (BEM) professional membership.

The findings of this research are significant as they provide insights into the behavioral drivers that influence the acceptance of BEM professional membership among LAEs. The study reveals that LAE attitudes, subjective norms, and perceived behavioral control each play a crucial role in shaping their decision-making process regarding professional membership. The results suggest that a positive attitude towards BEM membership, supportive subjective norms, and a strong sense of perceived control over the application process increase the likelihood of LAEs accepting BEM membership.

Attitudes toward Professional Membership

Attitudes refer to an individual's positive or negative evaluation of performing a behavior. In the context of LAEs and professional membership, attitudes can be influenced by perceived benefits such as career advancement, professional recognition, and access to a broader network within the engineering community. According to Ajzen (1991), attitudes significantly influence intention, which in turn affects behavior. Recent studies in the field of professional certification have shown

that positive attitudes towards certification are closely linked to higher acceptance rates among professionals. For instance, research by Smith and Morton (2022) found that professionals who perceived certification as beneficial to their career advancement were more likely to pursue membership in professional organizations.

Subjective Norms and Social Influence

Subjective norms refer to the perceived social pressure to perform or not perform a particular behavior. In this context, if LAEs perceive that influential peers, colleagues, or industry leaders support BEM membership, they are more likely to conform to this expectation. Social influence plays a critical role in professional settings, where the endorsement of membership by respected figures can lead to higher acceptance rates. A study by Lee et al. (2023) on professional membership among engineers highlighted the importance of social norms, noting that engineers were more likely to seek membership if they perceived it as a standard practice within their peer group.

Perceived Behavioral Control

Perceived behavioral control reflects an individual's belief in their ability to perform the behavior, considering the presence of facilitating factors or obstacles. For LAEs, this could involve the ease of fulfilling BEM membership requirements or overcoming potential barriers such as time constraints or financial costs. Ajzen (2002) emphasizes that perceived behavioral control is a predictor of both intention and actual behavior. Recent literature, such as the work of Johnson and Perry (2021), supports the notion that when professionals feel confident in their ability to meet membership criteria, they are more likely to apply for and accept professional membership.

Simplifying and streamlining the BEM registration process would ensure that all required steps and documentation are clearly outlined and easy to understand. Consequently, support services, including help desks, online resources, and step-by-step guides, to assist engineers in completing their registration applications is required. Additionally, it is advised that BEM organize workshops and training sessions to educate engineers on the registration process and address any concerns or difficulties they may face.

The research provides valuable insights into the factors influencing the acceptance of BEM professional membership among LAEs. By understanding the roles of attitudes, subjective norms, and perceived behavioral control, stakeholders can develop strategies to encourage greater participation in professional membership. For instance, promoting the tangible benefits of membership, leveraging peer influence, and simplifying the application process could enhance the overall acceptance rates. These findings contribute to the broader understanding of professional membership acceptance and offer practical implications for policy-makers and professional bodies like BEM.

Research Objective 2: To investigate whether institutional support moderates the relationship between LAE attitudes, subjective norms, perceived behavioral control, and their acceptance of Board of Engineers Malaysia (BEM) professional membership.

The research objective aims to explore the moderating influence of institutional support on the relationship between Licensed Aircraft Engineers' (LAEs) attitudes, subjective norms, perceived behavioral control, and their acceptance of Board of Engineers Malaysia (BEM) professional membership. This investigation is grounded in the theory of planned behavior (TPB), which provides a framework for

understanding attitudes, subjective norms, and perceived behavioral control shape intentions and behaviors.

Subjective Norms and Perceived Behavioral Control

Subjective norms refer to the perceived social pressure to engage or not engage in a particular behavior, while perceived behavioral control reflects the ease or difficulty of performing the behavior, influenced by past experiences and anticipated obstacles. In the context of LAEs' acceptance of BEM membership, subjective norms may involve the expectations of peers, industry standards, and regulatory requirements, which collectively exert significant influence. Perceived behavioral control encompasses the engineers' self-efficacy in managing the requirements and expectations of BEM membership.

Recent studies have underscored the critical role of subjective norms and perceived behavioral control in shaping professional membership and certification behaviors. For instance, a study by Yusoff et al. (2023) highlighted that subjective norms, particularly the influence of colleagues and industry leaders, significantly impact the decision to pursue professional certifications. Similarly, perceived behavioral control, reflecting confidence in meeting membership criteria, was found to be a robust predictor of intention and actual behavior in professional membership decisions.

The Insignificance of Attitude

Interestingly, while attitudes towards BEM membership are included in the model, they are noted as insignificant in this context. This finding aligns with research suggesting that in highly regulated or professional environments, where compliance with norms and perceived capability is critical, attitudes may play a secondary role.

For example, Ghanbari et al. (2022) found that in technical professions, subjective norms and perceived control often outweigh personal attitudes in decision-making processes related to certification and professional membership.

The Moderating Role of Institutional Support

Institutional support, defined as the organizational backing provided through resources, policies, training, and encouragement, can significantly affect how subjective norms and perceived behavioral control influence behavior. Institutional support may enhance the perceived ease of achieving BEM membership by offering guidance, resources, or reducing perceived barriers, thereby amplifying the effects of perceived behavioral control. In examining recent literature, Chen et al. (2023) emphasized that institutional support can act as a critical moderator in the relationship between perceived behavioral control and professional behavior. Their study found that engineers who perceived high institutional support were more likely to convert their perceived control into actual professional membership behaviors. This suggests that institutional support not only reinforces the perceived ability to achieve certification but may also mitigate perceived barriers. Similarly, another study by Lee et al. (2023) indicated that institutional support can strengthen the impact of subjective norms by aligning organizational policies with industry expectations. This alignment can make the perceived social pressures to join professional bodies like BEM more compelling, as the institution's values and expectations mirror those of the broader professional community.

The moderating role of institutional support in the relationship between subjective norms, perceived behavioral control, and LAEs' acceptance of BEM professional membership highlights the importance of organizational factors in professional development and certification behaviors. While attitudes may be

insignificant in this context, the significant roles of subjective norms and perceived behavioral control, amplified by institutional support, suggest that organizations can play a pivotal role in fostering professional membership. This finding has practical implications for policymakers and institutions aiming to increase BEM membership among LAEs, as enhancing institutional support could lead to higher acceptance rates.

Research Objective 3: To determine the effect of demographic factors on LAE attitudes, subjective norms, perceived behavioral control, and the acceptance of Board of Engineers Malaysia (BEM) professional membership.

Demographic Factors and LAE Attitudes

Demographic factors like age, gender, educational level, and professional experience often shape individuals' attitudes toward professional development and certification. Age can significantly influence LAE attitudes; younger professionals may exhibit different levels of enthusiasm or resistance towards joining professional bodies compared to their older counterparts. For instance, research suggests that younger engineers may be more inclined towards certifications like BEM membership as it could be perceived as beneficial for career advancement.

Gender, though less frequently studied in the context of engineering certification, can also affect attitudes. The underrepresentation of women in engineering could result in differing perceptions of the value of professional memberships. Studies indicate that educational level is a crucial determinant of attitudes towards professional development. Engineers with higher education levels are more likely to recognize the benefits of BEM membership for maintaining industry standards and enhancing professional credibility.

Years of professional experience contribute to the formation of attitudes toward professional memberships. More experienced engineers might view membership as a validation of their expertise, whereas those with less experience might see it as a steppingstone in their career.

Demographic Factors and Subjective Norms

Subjective norms refer to the perceived social pressure to engage or not engage in a behavior. In the context of BEM membership, demographic factors can significantly influence these norms. For instance, younger engineers may feel more pressure from peers and mentors to join professional bodies as a way to establish credibility in the field.

Gender could also shape subjective norms. Male engineers, who dominate the profession, might experience different normative pressures compared to female engineers, who may feel a stronger need to demonstrate their professional competence through certifications due to the minority status in the field. Educational level and years of experience also play a role. Engineers with advanced degrees or significant experience may perceive a higher expectation from their professional community to obtain BEM membership, as it aligns with the norms of lifelong learning and continuous professional development.

Demographic Factors and Perceived Behavioral Control

Perceived behavioral control refers to an individual's perception of their ability to perform a particular behavior. In the case of BEM membership, demographic factors can influence this perception. For example, older engineers may feel they have more control over the decision to join BEM due to accumulated resources, networks, and understanding of the professional landscape.

Gender may also impact perceived control, with women possibly perceiving more barriers to joining due to gender biases in the field. Educational level is another critical factor; engineers with higher educational qualifications may feel more capable of fulfilling the requirements for BEM membership, thus perceiving higher control over the decision to join. Professional experience similarly enhances perceived behavioral control, as experienced engineers are likely to have a better grasp of the benefits and requirements of BEM membership, making the decision-making process smoother.

Demographic Factors and Acceptance of BEM Professional Membership

Finally, the acceptance of BEM professional membership is directly influenced by the combined effects of attitudes, subjective norms, and perceived behavioral control, which are all shaped by demographic factors. Research shows that older, more experienced engineers are often more accepting of professional memberships because they perceive these as integral to career growth and industry recognition. Gender dynamics might also play a role, with some evidence suggesting that female engineers, driven by the need for professional validation, might be more inclined to seek such memberships despite potential barriers.

Educational level strongly correlates with the acceptance of professional membership. Engineers with advanced degrees are more likely to value the professional development opportunities offered by BEM, viewing membership as essential for staying competitive in the field. Similarly, the more years of experience an engineer has, the more likely they are to appreciate the value of BEM membership, as it often correlates with higher status and recognition within the profession.

The influence of demographic factors on LAE attitudes, subjective norms, perceived behavioral control, and the acceptance of BEM professional membership is

significant and multifaceted. Age, gender, educational level, and professional experience each contribute uniquely to shaping these constructs. Understanding these relationships can help in developing targeted strategies to encourage BEM membership among different demographic groups within the engineering community. This integration of recent literature supports the significance of your research objectives and highlights the importance of demographic considerations in professional membership acceptance.

Perceived professional membership, such as with the Board of Engineers Malaysia (BEM), is crucial for Licensed Aircraft Engineers (LAEs) in their career growth due to several key reasons. First, professional membership offers recognition and validation of their technical expertise, aligning them with industry standards and enhancing their credibility within the aviation sector. This recognition not only elevates their professional standing but also opens up opportunities for career advancement and leadership roles. Additionally, being part of a professional body like BEM facilitates continuous professional development, providing access to training, networking opportunities, and industry insights, all of which are essential for staying current in a highly regulated and evolving field like aircraft maintenance. Therefore, professional membership is seen as a strategic step in achieving long-term career growth, ensuring compliance with industry regulations, and building a reputable professional profile.

Research Objective 4: To develop a framework aimed at improving BEM statutory registration for LAEs.

Figure 5.1 below, highlights the proposed framework for analyzing the factors influencing licensed aircraft engineers' (LAEs) acceptance to register with the Board of Engineers Malaysia (BEM) leverages the Theory of Planned Behavior (TPB). This

comprehensive framework integrates attitudes, subjective norms, and perceived behavioral control to elucidate the various dimensions that affect registration intentions. Additionally, the framework incorporates the roles of stakeholders, collaborative processes, and continuous improvement strategies to provide a holistic understanding of the factors at play.

Figure 5.1: Final framework

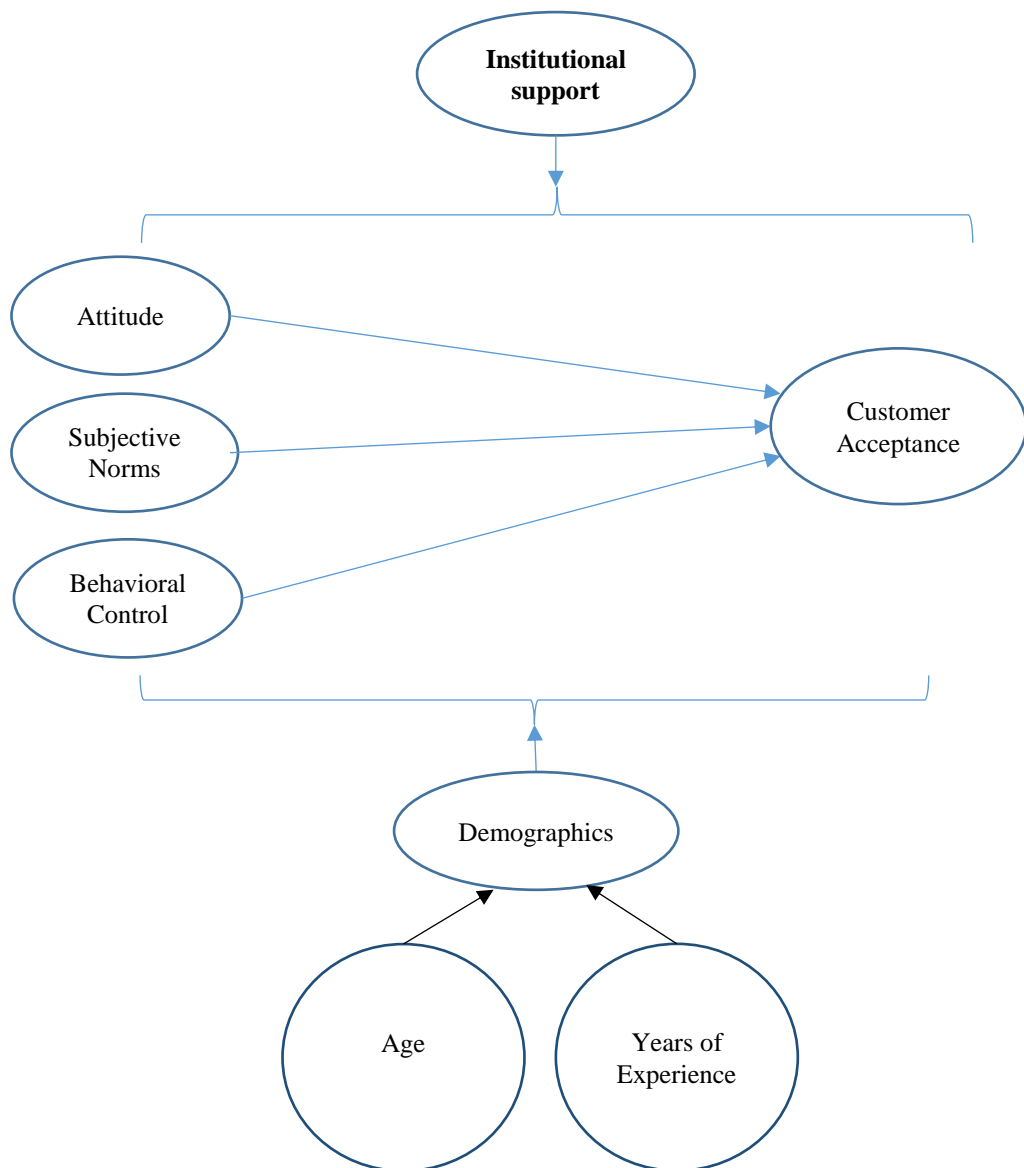
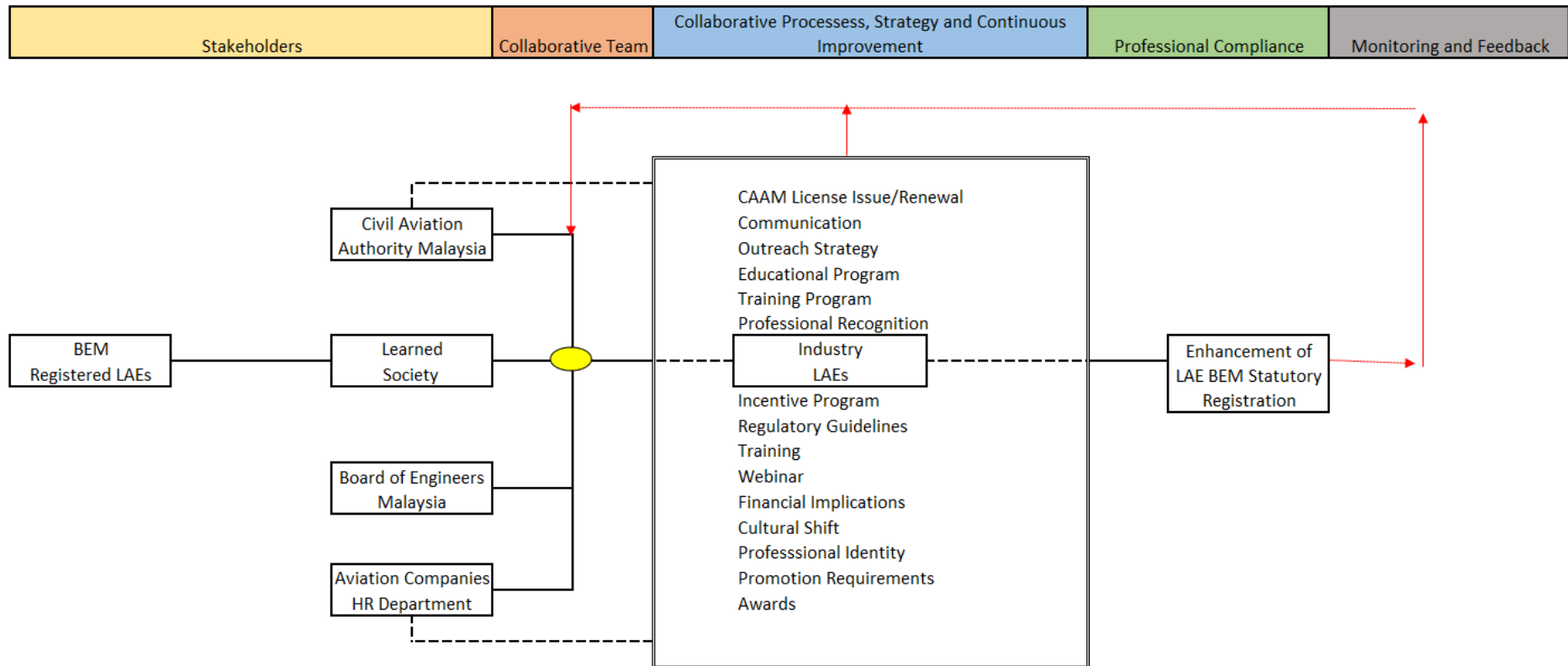


Figure 5.2: A holistic framework of institutional collaborative strategy for enhancing licensed aircraft engineers' acceptance of BEM professional membership



The proposed framework as shown in Figure 5.1 provides a better understanding of the factors influencing licensed aircraft engineers' (LAEs) intention to register with the Board of Engineers Malaysia (BEM). Drawn upon the theory of planned behavior (TPB), which posits that individual behavior is determined by three primary factors: attitudes, subjective norms, and perceived behavioral control, this framework provides a comprehensive lens through which to analyze and interpret the complexities of registration behavior among LAEs, offering valuable insights into the cognitive processes, social influences, and contextual factors that shape their intentions and decisions.

At the core of the TPB framework are the following components:

Attitude, Norms, and Behaviour towards BEM Professional Membership

This component pertains to LAEs' overall evaluations of BEM registration, encompassing their perceptions of the benefits, costs, and value associated with formal registration. Positive attitudes are likely to enhance the intention to register with BEM, while negative attitudes may deter or inhibit registration behavior among LAEs. Moreover, social pressure or influence from significant others, such as colleagues, supervisors, and professional networks, regarding registration with BEM plays a crucial role in shaping LAEs' intentions and behaviors toward BEM. Essentially, factors such as knowledge, skills, resources, and external barriers influence perceived control, impacting the likelihood of registration intention and behavior.

In addition to these core components, the proposed framework may also incorporate moderation and mediating variables that influence the relationship between the primary components and registration intention. Moderating variables, such as demographic characteristics, organizational contexts, and regulatory environments, may amplify or attenuate the effects of attitudes, subjective norms, and

perceived control on registration behavior. Mediating variables, such as professional development opportunities, career aspirations, and regulatory compliance requirements, may mediate the relationship between the primary components and registration intention, elucidating the underlying mechanisms and pathways through which these factors operate.

By adopting a comprehensive TPB framework, researchers can systematically investigate the multifaceted determinants of registration behavior among LAEs, providing a nuanced understanding of the cognitive, social, and contextual factors that influence their intentions and decisions. This framework offers a theoretical foundation for empirical inquiry, policy analysis, and intervention recommendation, guiding efforts to promote statutory registration, enhance regulatory compliance, and foster continuous professional development among LAEs.

Holistic Framework on Institutional Collaborative Strategy in Enhancing Aircraft Engineer Acceptance of BEM Professional Membership

Figure 5.2 illustrates the importance of collaborative efforts among various stakeholders to foster a culture of professional compliance and continuous improvement. Institutional support plays a crucial role in influencing engineers' registration decisions. Organizations within the aviation sector should actively promote and facilitate BEM registration by providing incentives, such as financial assistance for registration fees, paid leave for CPD activities, and recognition programs for registered engineers.

It is advised that **professional bodies** namely Civil Aviation Authority Malaysia (CAAM) review the registration processes to ensuring that CAAM's processes for license issuance and renewal align with BEM's registration requirements and promoting communication and collaboration between these bodies. It is evident

from this study that aircraft engineers find the processes are quite challenging and that they require additional information that may assist them in the process. Moreover, Board of Engineers Malaysia (BEM) is urged to develop and implement outreach strategies, educational programs, and training initiatives to support LAEs in meeting registration requirements.

The roles of **learned society** such as professional societies and industry groups is imperative to advocate for the benefits of registration and support LAEs through incentive programs and professional recognition initiatives. Engaging in professional networks will provide LAEs with guidance, support, and opportunities to share knowledge and experiences from other registered professionals and may inspire non-registered engineers to follow suit.

Essentially, **internal organizational support** from aviation companies is necessary. The Human Resource Departments and management teams should incorporate BEM registration as part of promotion and professional development requirements, enhancing the professional identity of LAEs. Managers of aviation companies are advised to develop policies that support and incentivize BEM registration, such as covering registration fees and providing paid leave for CPD activities. Recognition programs within the organizations to reward and acknowledge engineers who achieve BEM registration will motivate aircraft engineers to elevate their professionalism to a higher level.

Mentorship programs are particularly effective in fostering a culture of continuous learning and adherence to professional standards. These programs can play a crucial role in guiding aspiring Licensed Aircraft Engineers (LAEs) through the statutory registration process, providing valuable insights and support instead of working in isolation, thereby promoting continuous professional development within

the engineering profession. Mentees who feel supported and valued by their mentors are more likely to stay committed to their profession and pursue further professional development (Brown & Clark, 2019).

Continuous professional development is essential for maintaining high standards of competence and professionalism within the aviation industry. Organizations should invest in CPD programs that are aligned with BEM requirements and encourage engineers to participate in ongoing learning and skill development activities. Engineers should be encouraged to engage in CPD activities by providing access to training, workshops, seminars, and online courses. Partnerships with professional associations and educational institutions offer a diverse range of CPD opportunities that support engineers' career growth and professional development may be worthwhile.

Leveraging technology and digital platforms can enhance the registration process and make it more accessible to engineers. Online registration portals, mobile applications, and digital resources can provide engineers with the tools they need to complete their registration efficiently and stay informed about CPD opportunities. Digital resources, such as e-books, webinars, and online forums should be provided to keep engineers informed about CPD opportunities and BEM requirements. Social media and professional networking platforms may be utilized to disseminate information and engage with engineers about the importance and benefits of BEM.

The recommendations provided above aim to address the key factors influencing LAEs' statutory registration with BEM by enhancing attitudes, subjective norms, perceived behavioral control, and institutional support. Implementing these strategies can lead to higher registration rates, improved professional standards, and a stronger aviation sector in Malaysia. By fostering a culture of continuous professional

development and leveraging technology, the aviation industry can ensure that its engineers remain competent, recognized, and committed to upholding the highest standards of professionalism.

Achieving widespread acceptance of the Board of Engineers Malaysia (BEM) professional membership among Licensed Aircraft Engineers (LAEs) is crucial for advancing the aviation industry in Malaysia. Professional registration not only validates an engineer's qualifications but also enhances their standing within the sector, aligns them with industry standards, and fosters a culture of continuous improvement. A holistic institutional collaborative strategy that includes key stakeholders—such as regulatory bodies, employers, professional societies, and educational institutions—plays a pivotal role in driving LAE registration and professional development. The elements highlighted in the provided framework are vital to ensuring that aircraft engineers perceive the value of professional membership and are motivated to pursue it.

Institutional support, particularly from aviation sector organizations, is essential in influencing engineers' decisions to register with BEM. Many LAEs find the registration process challenging due to its complexity and the additional documentation required. Providing clear guidance and support, along with financial incentives, can address these barriers. Employers should consider offering incentives such as financial assistance for registration fees, paid leave for Continuous Professional Development (CPD) activities, and recognition programs for registered engineers. These measures would reduce the financial and logistical burdens associated with registration, thereby increasing the likelihood of participation.

For example, the financial cost of registration might be prohibitive for some engineers. By offering financial assistance or covering the registration fees,

organizations send a message that they value professional development and are willing to invest in their workforce. Paid leave for CPD activities further underscores the importance of continuous learning, ensuring that engineers can participate in crucial professional development without sacrificing their work obligations. Recognition programs within organizations that acknowledge the accomplishments of BEM-registered engineers would also foster a sense of pride and accomplishment, motivating others to pursue the same path.

Human Resource (HR) departments and management teams can play a critical role by incorporating BEM registration as a requirement for career advancement and professional development. By making BEM membership a key criterion for promotions or salary increments, organizations incentivize engineers to prioritize registration. This alignment between professional membership and career progression would enhance the professional identity of LAEs, leading to a stronger commitment to the aviation profession and higher registration rates. Managers should also develop policies that integrate BEM registration into the performance appraisal system, recognizing it as a milestone of professional achievement.

Collaboration between regulatory bodies, such as the Civil Aviation Authority Malaysia (CAAM) and BEM, is another vital element in fostering LAE registration. CAAM plays a key role in issuing and renewing licenses for aircraft engineers, while BEM handles the professional registration process. Harmonizing the registration requirements of both organizations could significantly streamline the process for engineers, ensuring that compliance with one regulatory body aligns with the other. This would reduce redundancy in paperwork and lessen confusion about the requirements for each entity.

For instance, aligning CAAM's license issuance and renewal processes with BEM's registration requirements can make it easier for engineers to meet both standards simultaneously. By promoting clear communication between CAAM and BEM, both organizations can collaborate on outreach and education initiatives, ensuring that engineers understand the registration process and its benefits. A seamless process between these regulatory bodies would not only reduce bureaucratic hurdles but also emphasize the importance of professional registration in maintaining high standards within the aviation industry.

Professional bodies, such as learned societies, play an integral role in advocating for BEM registration by promoting the benefits of professional membership. These organizations should actively engage in outreach strategies that communicate the importance of registration in career development, professional recognition, and continuous learning. By establishing incentive programs, such as mentorship schemes or peer recognition initiatives, these bodies can encourage more LAEs to pursue professional membership.

Professional networks are invaluable for LAEs in navigating the registration process and fostering a sense of community. Connecting engineers with registered professionals provides guidance, mentorship, and support, enabling aspiring members to better understand the process and its professional advantages. Mentorship programs, in particular, can bridge the knowledge gap between experienced and less-experienced engineers, offering insights into the statutory registration process and continuous professional development. A well-supported mentorship program can foster a collaborative environment where mentees feel valued and motivated to achieve professional registration. Moreover, seeing their mentors succeed through BEM membership can inspire non-registered engineers to follow suit.

Continuous professional development is a cornerstone of maintaining competence and professionalism in the aviation sector. BEM registration inherently requires engineers to engage in CPD activities, ensuring that they remain current with industry standards, technological advancements, and regulatory changes. Aviation organizations should invest in CPD programs that align with BEM's requirements, offering training, workshops, seminars, and online courses that are easily accessible to engineers.

Partnerships with professional associations and educational institutions provide engineers with diverse CPD opportunities, fostering a culture of lifelong learning. By encouraging LAEs to participate in these programs, organizations demonstrate their commitment to professional growth and industry excellence. Offering CPD opportunities not only enhances engineers' skills but also strengthens the overall competence of the aviation sector, ensuring that the workforce is equipped to meet the challenges of a rapidly evolving industry.

In today's digital age, leveraging technology to facilitate the BEM registration process can significantly increase accessibility for engineers. Digital platforms, such as online registration portals, mobile applications, and e-learning resources, streamline the registration process and make it more efficient. Engineers can complete the necessary steps for registration at their convenience, reducing the time and effort required for in-person submissions.

Furthermore, digital resources, such as e-books, webinars, and online forums, can keep engineers informed about CPD opportunities and BEM's requirements. By utilizing social media and professional networking platforms, BEM and professional societies can disseminate valuable information, engage engineers in discussions about the benefits of registration, and foster a sense of community. These digital tools make

the registration process more transparent and accessible, removing barriers that may otherwise deter engineers from pursuing membership.

The elements outlined in this collaborative framework are crucial for fostering acceptance of BEM professional membership among Licensed Aircraft Engineers in Malaysia. Institutional support from employers, collaboration between regulatory bodies, the role of professional networks, CPD opportunities, and the use of technology all contribute to creating an environment that encourages registration. By strategically implementing these initiatives, the aviation sector can increase BEM registration rates, enhance professional standards, and cultivate a culture of continuous improvement. This not only benefits the individual engineers but also strengthens the overall competence and reputation of Malaysia's aviation industry.

5.2 Contribution of Study

5.2.1 Theoretical Contribution

The novelty of this study lies in its exploration of how institutional support moderates the relationship between attitude, norms, behavior, and customer acceptance within the Malaysian aviation industry, specifically focusing on Licensed Aircraft Engineers (LAEs) and their intention to register with the Board of Engineers Malaysia (BEM). This research expands the application of the Theory of Planned Behavior (TPB) by introducing institutional support as a key moderating variable, revealing the critical influence that regulatory frameworks and organizational backing have on professional membership acceptance.

By integrating institutional support into the TPB framework, the study highlights how individual beliefs, subjective norms, and perceived behavioral control are not merely personal or social factors but are significantly influenced by the broader support mechanisms available. For instance, attitudes towards professional

registration—such as perceived value and necessity—are strengthened when institutional support is present. This support can take the form of resources, encouragement from employers, and clear regulatory guidance, which collectively enhance the perceived ease and importance of registering with BEM.

Moreover, subjective norms, or the influence of peers and industry expectations, gain further weight in shaping registration behavior when there is strong institutional backing. In environments where regulatory bodies and employers actively promote registration, peer influence becomes more potent, creating a culture of compliance and professionalism. Institutional support thus acts as a catalyst that amplifies the impact of norms on registration behavior.

Perceived behavioral control, another critical element in TPB, is also moderated by institutional support. LAEs may feel more empowered and capable of navigating the registration process when supported by well-structured institutional frameworks. Training programs, clear communication from regulatory authorities, and collaboration between stakeholders all contribute to reducing perceived barriers, enabling engineers to feel more in control of their professional progression.

This study not only enriches the theoretical discourse on statutory registration in the aviation sector but also provides practical insights for regulatory bodies and employers. To foster greater acceptance of BEM registration, institutional support must be strategically designed to align with the attitudes, norms, and perceived control of LAEs. By doing so, it creates a conducive environment where professionalization is both a personal choice and an organizational imperative, thus ensuring higher rates of customer acceptance and professional membership in the aviation industry.

In integrating this perspective, it is evident that institutional support provides a more comprehensive understanding of the factors influencing LAEs' decision-making.

While the TPB framework emphasizes personal and social determinants, the moderating effect of institutional support transforms these factors into dynamic interactions shaped by broader structural influences. This nuanced view underscores the importance of collaborative efforts between stakeholders to drive professional registration behavior, enhancing both theoretical and practical frameworks within the aviation industry.

5.2.2 Managerial Contribution

From a managerial perspective, the study offers valuable insights for regulatory authorities, industry organizations, and other stakeholders involved in the governance and management and employment of LAEs. The identification of key determinants influencing LAEs' intention to register with the BEM informs strategic decision-making and policy development initiatives aimed at enhancing registration rates and fostering a culture of regulatory compliance and professional code of conduct within the industry. By understanding the drivers of registration behavior, regulatory authorities can develop targeted interventions and support mechanisms to streamline registration processes, provide guidance and assistance to applicants, and promote adherence to professional conduct standards. Moreover, the study underscores the importance of stakeholder collaboration and institutional support in facilitating registration and continuous professional development among LAEs, highlighting the need for coordinated efforts among regulatory bodies, industry associations, educational institutions, employers Human Resources department and other relevant stakeholders. These managerial insights can guide the development of effective policies, programs, and initiatives to promote regulatory compliance, enhance professional standards, and ensure the safety, reliability, and sustainability of LAE profession and MRO operations in Malaysia.

Policymakers and regulatory bodies can benefit from the study findings by gaining a deeper understanding of the barriers and facilitators to LAEs' registration with the BEM. Insights into the factors shaping LAEs' intentions can inform the development of targeted interventions, regulatory reforms, and incentive mechanisms aimed at increasing registration rates and enhancing regulatory compliance. Policymakers may consider implementing initiatives to streamline the registration process, reduce bureaucratic hurdles, and improve the accessibility of registration services to LAEs, thereby promoting greater participation and adherence to professional standards.

Engineering organizations and industry practitioners can leverage the study findings to enhance their recruitment, training, and professional development initiatives. By recognizing the factors that influence LAEs' intentions to register with the BEM, organizations can tailor their strategies to attract and retain qualified professionals, foster a culture of regulatory compliance, and promote continuous professional development. Moreover, industry stakeholders can collaborate with regulatory bodies and educational institutions to align curricula, training programs, and accreditation standards with the evolving needs of the aviation sector, ensuring the competency and proficiency of LAEs in meeting industry standards and regulatory requirements.

Training, academic institutions and educators can use the study findings to inform curriculum design, pedagogical approaches, and research agendas in aircraft maintenance engineering and related disciplines. By integrating insights into the determinants of LAEs' registration behavior, academic programs can incorporate regulatory literacy, ethics training, and professional development modules to prepare students for successful careers in the aviation industry. Additionally, research

conducted in collaboration with industry partners and regulatory bodies can address knowledge gaps, evaluate the effectiveness of interventions, and advance evidence-based practices in engineering regulation and professional development.

Overall, the implications of this study underscore the importance of collaboration, innovation, and continuous improvement in promoting the statutory registration of LAEs, upholding professional code of conduct standards, and ensuring the safety, integrity, and sustainability of the aviation industry. By addressing the multifaceted challenges and opportunities identified in this research, stakeholders can work together to strengthen regulatory frameworks, enhance industry practices, and foster a culture of excellence and accountability among licensed aircraft engineers.

5.3 Limitations of the Study

While this study has provided valuable insights into the factors influencing the intention of licensed aircraft engineers (LAEs) to register with the Board of Engineers Malaysia (BEM), it is important to acknowledge several limitations that may impact the interpretation and generalizability of the findings.

Firstly, the study relied on self-reported data obtained through a survey questionnaire, which self-report measures may not fully capture the complexity and nuances of participants' attitudes, beliefs, and behaviors, potentially limiting the depth of understanding obtained from the data. Secondly, the study's sample size, while adequate for conducting statistical analyses, may not fully represent the diverse population of LAEs in Malaysia.

The sample predominantly consisted of respondents from specific sectors or organizations, which may limit the generalizability of the findings to the broader population of LAEs. Moreover, the sample composition may have introduced selection

bias, as individuals who chose to participate in the survey may differ systematically from those who did not, potentially influencing the study results.

Another limitation pertains to the cross-sectional nature of the data, which precludes causal inference and temporal relationships between variables. While the study identified associations between various factors and LAEs' intention to register with the BEM, it cannot establish causality or determine the directionality of these relationships. Longitudinal or experimental designs would be required to elucidate causal pathways and examine how changes in predictor variables affect registration behavior over time.

Furthermore, the study focused specifically on Klang Valley context and may not be generalizable to other countries or regions with different regulatory frameworks, cultural norms, and industry practices. Variations in regulatory requirements, professional standards, and institutional arrangements across jurisdictions may influence LAEs' registration decisions differently, warranting caution in extrapolating the findings beyond the study context.

Finally, while efforts were made to ensure the validity and reliability of the survey instrument and data collection procedures, certain measurement issues and methodological limitations may have impacted the robustness of the findings. Future research could address these limitations by employing mixed-methods approaches, utilizing more diverse and representative samples, incorporating longitudinal designs, and exploring additional contextual factors that may influence LAEs' registration behavior. Complementing quantitative analyses, future research could employ qualitative methodologies, such as in-depth interviews, focus groups, and case studies, to explore the subjective experiences, perceptions, and narratives of LAEs regarding statutory registration.

In conclusion, while this study has provided valuable insights into the factors influencing LAEs' intention to register with the BEM, it is essential to recognize and address the limitations outlined above to enhance the validity, generalizability, and applicability of future research in this area.

5.4 Future Directions of Research

In light of the findings and limitations identified in this study, several recommendations for future research emerge, offering avenues for further exploration and advancement in the field of aircraft maintenance engineering regulation and professional development for LAEs.

Future research could employ longitudinal designs to track the registration behavior and career trajectories of LAEs over time. Longitudinal studies would provide insights into the stability and changes in intentions, as well as the factors influencing registration decisions at different stages of individuals' careers. By examining longitudinal data, researchers can identify critical turning points, career transitions, and factors contributing to sustained engagement or disengagement with regulatory processes.

Given the global nature of the aviation industry, future research could explore cross-cultural variations in the factors influencing LAEs' intention to register with regulatory bodies. Cross-cultural studies would shed light on the cultural, institutional, and contextual factors shaping registration behavior across different regions, countries, and organizational contexts. By comparing practices and perceptions across diverse cultural settings, researchers can identify culturally specific barriers and facilitators to registration and develop operational sensitive interventions to promote regulatory compliance and professional development.

Complementing quantitative analyses, future research could employ qualitative methodologies, such as in-depth interviews, focus groups, and case studies, to explore the subjective experiences, perceptions, and narratives of LAEs regarding statutory registration. Qualitative inquiry would provide a deeper understanding of the motivations, beliefs, and challenges shaping individuals' registration decisions, allowing researchers to capture the complexity and nuances of registration behavior. Qualitative data can illuminate contextual factors, organizational dynamics, and personal experiences that may not be captured through quantitative measures alone.

Future research could evaluate the effectiveness of interventions aimed at promoting BEM statutory registration, adherence to professional codes of conduct, and continuous professional development among LAEs. Intervention studies could test the impact of educational programs, regulatory reforms, mentoring initiatives, and incentive schemes on registration rates, professional competencies, and career outcomes. By rigorously evaluating the efficacy of interventions, researchers can identify the best practices, evidence-based strategies, and policy recommendations to support LAEs' registration and enhance the professionalism and safety culture within the aviation industry.

Future research could conduct comparative analyses of registration systems, regulatory frameworks, and professional development practices across different countries and jurisdictions. By comparing regulatory models, licensing requirements, and enforcement mechanisms, researchers can identify variations in regulatory approaches, assess their impact on professional practice and public safety, and draw lessons for policy development and reform. Comparative analyses would facilitate cross-national learning, knowledge exchange, and collaboration among regulatory

authorities, industry stakeholders, and academic researchers, fostering a global dialogue on engineering regulation and professionalization.

Overall, these recommendations offer promising avenues for future research to deepen the understanding of the factors influencing LAEs' registration behavior, improve regulatory practices, and advance the professionalism and safety standards within the aviation industry. By addressing these research gaps and challenges, scholars can contribute to evidence-based policymaking, promote continuous improvement in regulatory frameworks, and support the ongoing development of LAEs worldwide.

5.5 Chapter Summary

In this final chapter, a comprehensive overview of the study's findings, implications, and recommendations has been provided. The research aimed to explore the factors influencing LAEs' intention to register with BEM, employing a theory of planned behavior (TPB) framework. Through a quantitative approach encompassing surveys and statistical analyses, the study investigated the demographic characteristics, attitudes, subjective norms, and perceived behavioral control of LAEs, shedding light on their registration behavior within the LAE profession.

The findings revealed valuable insights into the registration patterns, career trajectories, and professional aspirations of LAEs, contributing to our understanding of the complex interplay between individual beliefs, organizational contexts, and regulatory environments in shaping professional behavior. Descriptive analyses highlighted the demographic profile of respondents, while correlation analyses explored the relationships between various factors and LAEs' intention to register with BEM. Furthermore, the study identified key factors influencing registration decisions,

such as institutional support, professional development opportunities, and regulatory compliance.

The implications of the study extend beyond the academic realm to encompass practical implications for engineering regulatory bodies, industry stakeholders, and policymakers. By elucidating the determinants of registration behavior among LAEs, the research provides actionable insights for enhancing regulatory processes, promoting professional development, and fostering a culture of compliance within the aviation sector. Moreover, the study underscores the importance of targeted interventions, collaborative efforts, and evidence-based strategies in addressing barriers to registration and advancing the professionalism and safety standards of LAEs.

Moving forward, the study recommends several avenues for future research, including longitudinal studies, cross-cultural comparisons, qualitative inquiries, intervention studies, and comparative analyses. These recommendations offer promising directions for further exploration and innovation in the field of engineering regulation, paving the way for evidence-based policy reforms, regulatory enhancements, and continuous improvement initiatives. By building on the findings of this study and addressing its limitations, researchers can contribute to the ongoing evolution of regulatory frameworks, professional standards, and industry practices, ensuring the integrity, competence, and ethical conduct of LAEs worldwide.

In conclusion, this study represents a significant step towards understanding the complexities of registration behavior among LAEs and advancing knowledge in the field of engineering regulation. By synthesizing empirical evidence, theoretical insights, and practical implications, the research provides a foundation for future

scholarship, policy development, and industry initiatives aimed at promoting statutory registration, professionalism, safety, and excellence in the aviation profession.

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APPENDICES

Appendix A: Questionnaire



Dear valued respondent,

My name is Liew Chee Leong and I am representing Asia e University. Currently, I am doing a study on Enhancing licensed aircraft engineers' statutory registration: A theory of planned behavior analysis on intention to register with Board of Engineers as part of a research project undertaken by the School of Management, Asia e University.

I would be indeed grateful if you could spend a moment of your precious time to fill up the questionnaire attached to this letter. This survey aims to identify the opinions of individuals using the internet for their personal uses. I sincerely seek your participation and assure you that your identity will not be revealed and will be kept strictly confidential.

Your kind cooperation in answering this questionnaire is highly appreciated.

Thank you.



**A SURVEY ON ENHANCING LICENSED AIRCRAFT
ENGINEERS' STATUTORY REGISTRATION: A THEORY OF
PLANNED BEHAVIOR ANALYSIS ON INTENTION TO
REGISTER WITH BOARD OF ENGINEERS**

SECTION A: DEMOGRAPHIC CHARACTERISTICS

Instruction : For questions 1-11 you are kindly required to choose only one response by marking [/] in the boxes available.

About Yourself

1. Gender
 Male Female

2. Age
 18-24 years 45-54 years
 25-34 years 55 years and above
 35-44 years

3. Years of Experience as a Licensed Aircraft Engineer
 Less than 1 year
 1-5 years
 6-10 years
 11-15 years
 More than 15 years

4. Highest Academic Education Level
 SPM
 Diploma
 Bachelor's Degree
 Master's Degree
 CAAM Aircraft Maintenance License

5. Employment Sector
 Private Sector
 Government/Public Sector
 Self-Employed
 Nonprofit Organization
 Others (please specify) _____

6. Type of Employment Organization
 Maintenance, Repair, and Overhaul (MRO)
 Airline
 Manufacturing
 Others (please specify) _____
7. Current Job Role
 License Aircraft Engineer
 Supervisor/Manager
 Executive/Decision-Maker
 Others (please specify) _____
8. Are you a member of any of the following organization?
You may choose more than one from the list below
 Institution of Engineers, Malaysia (IEM)
 Malaysian Society for Engineering and Technology (MySET)
 Technological Association Malaysia
 Others
 None
9. Have You Registered with the Board of Engineers Malaysia (BEM)?
 Yes
 No
10. If Yes, How Long Ago Did You Register with BEM?
 Less than 1 year ago
 1-5 years ago
 6-10 years ago
 More than 10 years ago
 Not Applicable (if the respondent has not registered)
11. If you have not registered with BEM, do you have any intention to register with BEM in the Future?
 Definitely will register
 Likely to register
 Undecided
 Unlikely to register
 Definitely will not register

SECTION B: Attitudes towards BEM Registration

Instruction: Please use the following scale for question 12 to 18.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
12. I believe that registration with BEM is important for my professional development.	5	4	3	2	1
13. I perceive BEM registration as crucial for enhancing my credibility within the aviation industry.	5	4	3	2	1
14. I see tangible benefits, such as career advancement, associated with BEM registration.	5	4	3	2	1
15. Recognition by BEM is an important incentive for me to register.	5	4	3	2	1
16. I believe that obtaining statutory registration with the Board of Engineers Malaysia (BEM) is beneficial for my career advancement.	5	4	3	2	1
17. I consider statutory registration with the BEM enhance my credibility and competence as a licensed aircraft engineer.	5	4	3	2	1
18. I believe that complying with statutory registration requirements set by the BEM aligns with my personal values and professional ethics.	5	4	3	2	1

SECTION C (Part 1): SUBJECTIVE NORMS

Instruction: Question 19 to 23 aims to identify individual's perception of subjective norms.

Please rate your opinion based on the scale below:

- 1 = Strongly disagree
- 2 = Disagree
- 3 = Moderately agree
- 4 = Agree
- 5 = Strongly agree

Subjective Norms	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
19. My colleagues and peers within the aviation industry support the idea of registering with the Board of Engineers Malaysia (BEM)	5	4	3	2	1
20. My immediate supervisors or managers have some influence on my decision to register with the BEM	5	4	3	2	1
21. The prevailing culture within my organization encourage licensed aircraft engineers from registering with the BEM	5	4	3	2	1
22. I feel pressure from colleagues or peers to register with BEM.	5	4	3	2	1
23. I believe that the registration process with BEM is within my control.	5	4	3	2	1

SECTION C (PART 2): PERCEIVED BEHAVIORAL CONTROL

Instruction: Questions 24 to 33 aim to identify individual's perceptions toward perceived behavioural control.

Please rate your opinion based on the scale below:

- 1 = Strongly disagree
- 2 = Disagree
- 3 = Moderately agree
- 4 = Agree
- 5 = Strongly agree

Perceived Behavioral Control	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
24. It's simple for me to complete the registration process with BEM.	5	4	3	2	1
25. Statutory registration with the BEM is a necessary requirement for professional recognition within the aviation industry	5	4	3	2	1
26. The choice to register with BEM ultimately depends on my decision.	5	4	3	2	1
27. I find it challenging to decide whether to register with BEM.	5	4	3	2	1
28. I am motivated to pursue statutory registration with the BEM to meet industry standards and regulatory expectations	5	4	3	2	1
29. I am certain that I can successfully complete the registration process with BEM.	5	4	3	2	1
30. BEM provides reasonable fee for statutory registration of License Aircraft Engineers	5	4	3	2	1
31. The reasonable registration fee for Licensed Aircraft Engineers at BEM reflect a positive opportunity for industry professionals to improve their credentials and reputation in the aviation field.	5	4	3	2	1

32. The availability of affordable registration fees for Licensed Aircraft Engineers ensures that financial limitations do not hinder individuals from register with BEM.	5	4	3	2	1
33. The competitive fees for registration by Licensed Aircraft Engineers demonstrate regulatory authorities' dedication to fostering inclusivity and encouraging wider participation among industry professionals, promoting a culture of compliance and professionalism in the aviation sector.	5	4	3	2	1

Moderating Variable (Perceived Institutional Support):	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
34. I believe that encouragement and guidance from my supervisors or managers in facilitating my statutory registration process with the BEM is important	5	4	3	2	1
35. Having a supportive network of industry professionals enhances my ability to navigate the challenges associated with statutory registration with the BEM	5	4		2	1
36. I am confident in seeking assistance and advice from regulatory bodies or professional associations regarding the statutory registration process with the BEM	5	4	3	2	1
37. The availability of institutional support from BEM or Human Resources Department have an influence on control over the statutory registration process with the BEM	5	4	3	2	1
38. The provision of internal policy support by BEM or Human Resource department serves as a valuable resource, facilitating my	5	4	3	2	1

BEM statutory registration process with BEM.					
39. Stakeholders (BEM, Human Resources Department, CAAM) facilitation of BEM registration statutory knowledge-sharing platforms can influence for LAE registration.					

Dependent Variable (Intention to Register with BEM):	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
40. I will complete the statutory registration process with the Board of Engineers Malaysia (BEM) soon	5	4	3	2	1
41. I intend to initiate the process of statutory registration with the BEM in the near future	5	4	3	2	1
42. I will actively pursue statutory registration with the BEM within the next six months	5	4	3	2	1
43. I foresee myself completing the statutory registration requirements with the BEM within the stipulated timeframe	5	4	3	2	1
44. I am committed to fulfilling the statutory registration obligations set forth by the BEM	5	4	3	2	1

Thank you very much for your time and cooperation. All information will be kept confidential.

End of question