
Navigating Diversity: A Demographic Analysis of the Employment Opportunities and Disparities among Aircraft Maintenance Technicians

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Abstract

The work of aircraft maintenance personnel is crucial for aviation safety and efficiency, yet there is limited research on how demographic variables impact their career development in the workforce. This study was conducted to explore employment opportunities and disparities among aircraft maintenance graduates, with a focus on demographic factors such as race, age, and gender. Using a mixed-methods approach, a researcher-designed survey questionnaire was administered to aircraft maintenance graduates already employed in the industry. The data obtained were analyzed using descriptive statistics to determine their employment opportunities and disparities experienced. An in-depth interview was also conducted to cross-check and validate the results, and the data were analyzed using thematic analysis. Results revealed that maintenance graduates were employed across various sectors, including operations, engineering, customer service, management, and support roles, all of which are highly appealing. Despite these compelling opportunities, significant employment disparities persist across demographic groups, resulting in underemployment among some graduates who end up in non-aviation jobs, such as the military and call center agents. Women face significant barriers to entry in maintenance work and discrimination in work assignments compared to their male counterparts. Older employees face discrimination due to their physical abilities and technological skills. Filipinos working abroad have likewise faced discrimination over their foreign counterparts in terms of position and salary. These employment disparities stem from interconnected causes, including systemic issues, cultural biases, organizational practices, and external influences. They require targeted interventions and policy changes to promote a more inclusive, equitable employment environment and ensure equal opportunities for all aircraft maintenance technicians, thereby encouraging more students to pursue aircraft maintenance courses.

Keywords: *Employment opportunities, disparities, aircraft maintenance, demographic analysis, diversity*

Introduction

The aviation sector relies heavily on specialists in aircraft maintenance for their expertise and commitment to providing commercial, reliable, and secure transportation for people and products.

Aircraft Maintenance Technicians (AMTs) make up the core component of the aviation industry's safety ecosystem through their extensive technical training and hands-on skills that allow them to inspect, repair, and service aircraft components. The work of AMTs includes performing scheduled and routine checks, regular and emergency maintenance, and troubleshooting; all designed to ensure that aircraft remain safe throughout their entire service life, within accepted safety limits.

Due to the extensive nature of their responsibilities, AMTs require unparalleled precision and professionalism; the potential threat that even the smallest oversight could cause creates an atmosphere in which they cannot afford to make mistakes.

Additionally, AMTs must navigate an increasingly complex regulatory framework. Aviation authorities such as the Federal Aviation Administration (FAA) and the European Union Aviation Safety Agency (EASA) establish stringent standards for AMT inspection, AMT documentation, and AMT licensing; therefore, AMTs must understand the regulations that govern the aviation industry and ensure compliance with all maintenance activities to both local and international regulatory requirements governing aviation. This compliance guarantees that all maintenance activities performed by AMTs maintain the aircraft's safety and that all maintenance performed on an aircraft does not diminish the airline's operational and legal credibility.

While AMTs primarily focus on mechanical reliability, they also contribute to improving airline operational efficiency. Maintaining aircraft to a high standard upon successful completion of the appropriate maintenance cycle reduces unplanned downtime, delays due to technical problems, and repair costs, thereby maximizing the airlines' ability to provide scheduled flights, minimize fuel consumption, and ultimately enhance passenger satisfaction.

The conventional definition of an AMT consists solely of an aviation mechanic; however, AMT responsibilities also include the continual assessment and prediction of specific areas of each aircraft component that require replacement, modification, or repair in order to realize optimum lifecycle value, reduced operational costs, and improved performance, indicating the strategic role of AMTs to airline management.

As AMTs continue to serve as the foundation of the aviation industry, they provide expert technical knowledge, regulatory compliance, and hands-on experience to ensure safe and efficient air travel. This includes establishing and maintaining the confidence of all aviation stakeholders, including airlines and passengers, while reinforcing the aviation industry's reputation for providing safe, reliable, and efficient air transport solutions. The future growth of the aviation industry globally will continue to require AMTs, and AMTs will remain critical to maintaining the safety and efficiency of air travel. The industry offers numerous opportunities for employment growth and professional advancement. Careers in aircraft maintenance are widely regarded as rewarding, offering prestige, technical challenge, and

long-term career stability. This has made the field increasingly attractive to new graduates, who enter training programs each year in hopes of contributing to and advancing within the aviation sector.

Despite their critical role and strong labor demand, employment opportunities for AMTs are marked by significant disparities, driven by demographic factors such as gender, race, and age, which affect access to jobs, career progression, and representation in leadership roles. These disparities not only limit individual opportunities but may also hinder the industry's ability to address labor shortages and adapt to evolving workforce demands.

The urgency of addressing these disparities is underscored by the growing global demand for skilled maintenance technicians. According to Clark (2015), several aviation-related career fields are already experiencing labor shortages—a trend expected to intensify. Forecasts estimate a global need for up to 600,000 aircraft maintenance technicians by 2031. Furthermore, as experienced mechanics retire, the shortage is expected to worsen (Wyman, 2017, as cited in Sobieralski & Hubbard, 2019). These projections highlight the importance of attracting and retaining a more diverse and inclusive workforce.

However, disparities in employment outcomes for aircraft maintenance graduates persist. The profession remains heavily male-dominated, with women representing only a small percentage of the workforce. Although government and industry initiatives have sought to promote gender diversity progress has been limited, and barriers to entry and advancement for women remain prevalent. Addressing this underrepresentation is essential not only from a social equity perspective but also to sustain labor demand and support global trade and transportation systems (Sobieralski & Hubbard, 2019).

Similarly, racial and ethnic minorities often encounter systemic barriers, including limited access to professional networks and discriminatory hiring or promotion practices, which hinder their career advancement. Age-related biases and challenges related to disability further complicate employment equity within the field.

While existing research on aviation disparities has focused on pilots and aerospace engineers, relatively little has explored the specific experiences of aircraft maintenance technicians. Few studies specifically address the experiences of AMTs, particularly concerning how demographic characteristics shape their employment outcomes. Additionally, while some studies highlight gender disparities, there remains a gap in understanding how intersecting identities—such as women of color or older minority workers—impact career trajectories in aircraft maintenance. Moreover, there is a scarcity of research on how internal organizational cultures and policies influence the retention and advancement of underrepresented groups, particularly in technical roles such as aircraft maintenance.

Thus, this study examines how demographic factors influence the employment experiences of aircraft maintenance graduates. Specifically, it aims to identify the nature and the factors that cause these disparities in hiring, promotion, work assignment, and compensation. By analyzing these dynamics, the research seeks to provide evidence-based recommendations that support the development of more inclusive and equitable policies and practices within the aviation maintenance industry.

Methodology

This research uses a mixed-methods approach employing both quantitative and qualitative methods through triangulation, which allows cross-validation of findings and enhances the reliability and validity of the results.

The respondents were 53 graduates of the Aircraft Maintenance Technology program at the Philippine State College of Aeronautics. They comprise 18 females and 35 males, aged 25 to 60, who were employed in both aviation and non-aviation sectors locally and abroad. Seven (7) of these, who were working abroad, served as informants for the qualitative data.

A purposive sampling technique was employed, selecting graduates whom the researchers know and are in contact with, to ensure representation of various demographic groups. This involves selecting graduates who are already employed in various sectors. However, the researchers failed to obtain firsthand information from different races; instead, they interviewed informants who had been working with them.

Quantitative data were collected using a researcher-developed survey in Google Forms, consisting of three (3) parts: Part 1 - Profile of the Respondents, Part II - Employment Opportunities, and Part III - Disparities Experienced. Survey questionnaires were administered via Google Forms, and responses were collected immediately upon submission.

Qualitative data collection with the seven informants was done using a researcher-made interview guide consisting of five (5) questions as follows:

1. Have you experienced or witnessed any form of discrimination or bias in the workplace? Please share your experience.
2. Can you provide examples of how disparities in compensation or benefits have affected individuals within the aviation industry?
3. What have you perceived as factors that cause all these disparities in your workplace or in the aviation industry?
4. How do you perceive the representation of various demographic groups (gender, race, age) in different roles within the aviation sector?
5. Have you observed any notable disparities in hiring practices or promotion opportunities within your organization or the industry as a whole?

The quantitative data gathered through the survey questionnaires were statistically treated using simple percentages to determine the profile of the respondents and the employment opportunities and disparities by weighted mean with a four-point scale, with their corresponding description and interpretation to indicate their agreement or disagreement with each questionnaire item. The four-point scale responses were: strongly agree (4), agree (3), disagree (2), and strongly disagree (1). These responses correspond to respondents' perceived disparities in age, gender, and race, with the following categories: significant disparity (4), disparity (3), less disparity (2), and no disparity (1).

The data from interviews with seven (7) aircraft maintenance technicians working abroad were thematically analyzed to identify recurring patterns and themes in their responses.

Thematic analysis is the process of identifying the patterns of themes within qualitative data. The reliability, transferability, dependability, credibility, and confirmability (Lincoln & Guba, 1985) of the emerging patterns and themes were used to validate the quality of this research.

This methodology is designed to systematically address the research questions by selecting appropriate tools, participants, and procedures to gather and analyze data effectively, ensuring alignment between objectives and methods and contributing to reliable and valid findings.

RESULTS AND DISCUSSION

From the data gathered, the researchers carefully examined the valuable information from the respondents and participants of the study, and the following findings were revealed:

Profile of the Respondents

Table 1. Gender Profile of the Respondents

Gender	Frequency	Percentage
Male	35	66
Female	18	34
Total	53	100

Table 1, shows the gender profile of the respondents, where 35 or 66% are males and 18 or 34% are females. Six of the male respondents and one of the female respondents were the chosen informants of the study from which qualitative data were obtained.

This implies that there are more male graduates in aircraft maintenance than females. It reflects a continuing trend of male dominance in aircraft maintenance, suggesting that women remain underrepresented at the educational and entry-level stages of the profession.

Table 2. Age Profile of the Respondent

Age	Frequency	Percentage
25-30	23	43
31-36	19	36
37 -42	8	15
43-51	2	4
52-60	1	2
Total	53	100

Table 2 shows the age profile of the respondents, with 43% in the 25-30 age bracket. These were the graduates within the last 5 years. This suggests that the current aircraft maintenance workforce is being increasingly populated by younger professionals, likely due to continued industry demand and active recruitment of new graduates.

The limited representation of older graduates, particularly those in the 43-51 and 52–60 age range, may be due to accessibility challenges during data collection or a broader pattern of attrition, retirement, or career shifts among older AMTs.

Employment Opportunities

Employment in the Aviation Sector

Table 3. Employment Opportunities of AMT graduates in the Aviation Sector

Employment	Frequency	Percentage
Aircraft Technician (Engineering)	24	59
Logistics Officer/Tool Keeper (Support Roles)	5	12
Air Traffic Controller (Operations)	1	2
Passenger Service Agents Customer (Service)	9	22
Flight Stewards	2	5
Total	41	100

The data presented in Table 3 indicate strong employment outcomes for Aircraft Maintenance Technology (AMT) graduates in the aviation sector, with 41 of 53 respondents, or 77%, currently employed in aviation-related roles. Notably, 59% of these individuals are directly working as Aircraft Maintenance Technicians (AMTs) in commercial airlines and Maintenance, Repair, and Overhaul (MRO) organizations. This high employment rate reflects the continued demand for skilled maintenance personnel in the aviation industry, aligning with industry forecasts on workforce shortages and the increasing need for technical manpower (Clark, 2015; Wyman, 2017, as cited by Sobieralski & Hubbard, 2019).

This trend underscores the importance of maintaining industry-aligned training programs, certification support, and career guidance for AMT graduates to sustain employability and ensure a pipeline of qualified technicians amid global labor shortages.

Employment in the Non-Aviation Sector

Table 4. Employment Opportunities of AMT graduates in Non-aviation Sector (Underemployed)

Employment	Frequency	Percentage
Call Center Agents	7	58
Military	3	25
Fast Food Chain Manager	2	17
Total	12	100

Table 4 shows the employment opportunities for AMT graduates in the non-aviation sector, who are considered underemployed. Of the 53 respondents, 12 are employed in this sector, accounting for 23%. Data show that 58% of respondents who left the aviation sector work as call center agents.

The data indicate that while most have found work in the sector, the remaining 23% are employed outside the field or underemployed, highlighting a potential area for further investigation into employment barriers, certification requirements, or regional job availability.

While this indicates that AMT graduates possess transferable skills—such as communication, technical comprehension, and problem-solving—that are valued in other industries, it also points to a potential underemployment issue. These graduates, though skilled in aircraft maintenance, may not be utilizing their specialized training in roles aligned with their field of study.

This trend suggests a dual implication. On one hand, it highlights the versatility of AMT graduates and the broad applicability of their competencies beyond aviation, reflecting the quality and adaptability fostered by their academic programs. On the other hand, it raises concerns about the alignment between graduate expectations, industry hiring capacity, and local job market realities. The preference for call center employment may also be driven by factors such as higher starting salaries, easier access, and a better work-life balance than entry-level aviation positions.

Overall, while employment opportunities for AMT graduates are indeed broad, the presence of underemployment in unrelated sectors underscores the need for stronger career guidance, improved industry linkages, and competitive compensation packages within the aviation sector to attract and retain talent where it is most needed.

Employment Disparities

Gender Disparities

Table 5. Employment Disparity in Terms of Gender

Indicator	WM	Rank	Interpretation
Female AMTs are seldom hired	2.56	5	With Disparity
There is unequal pay for the same work to Female AMT	2.42	6	With Less Disparity
Female AMTs assignment is limited to office work only	2.62	4	With Disparity
The supervisor considers gender in delegating job assignment	2.90	1	With Disparity
Men are given more challenging work especially weight-related tasks	2.70	3	With Disparity
Men are the priorities for professional growth, training & promotion	2.78	2	With Disparity
<i>Mean Average</i>	<i>2.66</i>		

Table 5 shows the gender disparity experienced by female AMTs in the workplace. Data reveal a disparity in the “delegation of job assignment,” with a weighted mean of 2.90. That “men are given the priorities for professional growth, training, and promotion” and are “given more challenging work,” which obtained the weighted mean of 2.78 and 2.70, respectively, both fall in the category of disparity. However, they disagree that “there is unequal pay for the same work to colleagues of different genders.

The findings reveal a clear pattern of gender disparity among female Aircraft Maintenance Technicians (AMTs), particularly in job assignments, access to professional development, and promotion opportunities. The highest disparity was observed in the delegation of job assignments, indicating that female AMTs are often excluded from core or technical tasks, which may limit their skill development and career advancement. Similarly, statements regarding men's priority in training and the assignment of more challenging work suggest systemic gender biases in workplace advancement and task delegation.

These disparities highlight the persistence of traditional gender roles and stereotypes within the male-dominated field of aircraft maintenance. Such practices can result in reduced motivation, limited upward mobility, and lower retention rates among female AMTs. Although respondents disagreed with the statement that unequal pay for the same work exists, the presence of other forms of gender-based discrimination suggests that inequities persist in subtler yet equally impactful ways.

The implication is clear: while equal pay may be formalized, true workplace equity requires not just salary parity but also fair access to training, leadership pathways, and job responsibilities. Addressing these disparities requires more inclusive organizational policies, gender-sensitive performance evaluations, and active promotion of women's participation in technical and leadership roles in the aviation maintenance sector.

Age Disparities

Table 6. Employment Disparity in Terms of Age

Indicator	WM	Rank	Interpretation
Older AMTs are no longer considered for promotion	2.42	4	With Less Disparity
Less workload for older AMTs	2.21	5	With Less Disparity
Job delegation and challenging work is given to older AMTs because of experience	2.70	2	With Disparity
Younger ones are given more challenging work especially weight-related tasks	2.61	3	With Disparity
Younger AMTs are the priorities for professional growth, training, and promotion	2.72	1	With Disparity
Older AMTs are denied promotion, leadership role and training opportunities	2.16	6	With Less Disparity
Mean Average	2.47		With Less Disparity

Table 6, shows the employment disparity in terms of age. Data suggest that while some age-related disparities exist in terms of professional growth, training, and work delegation among Aircraft Maintenance Technicians (AMTs), these disparities are not absolute but rather situational and efficiency-driven. The data indicate that younger AMTs are more frequently prioritized for professional growth opportunities (WM = 2.72) and are assigned physically demanding or challenging tasks (WM = 2.70). This implies a strategic focus on investing in younger personnel, likely due to their longer potential service years and physical capability. Conversely, older AMTs are often entrusted with complex tasks and job delegation due to their accumulated experience, however denied promotion, leadership roles, and training opportunities

This duality shows that although there are age-based tendencies, they are counterbalanced by practical workplace demands and performance expectations. Therefore, disparities in

employment practices among AMTs are mitigated by a merit-based approach, in which task assignment and training opportunities are guided more by competence and operational efficiency than by age. Such findings underscore the importance of fostering an inclusive, performance-oriented work environment in which both younger and older technicians are valued for their unique strengths and contributions (Author, Year).

Racial Disparities

Data on racial disparities were collected from the seven AMTs working abroad, as the researchers had no direct contact with individuals of other racial backgrounds working in the Philippines.

Table 7. Employment Disparity in Terms of Race

Indicators	WM	Rank	Interpretation
Job opportunities (e.g., hiring or promotion) in my workplace are more accessible to certain race than others	2.57	3	With Disparity
I have witnessed or experiences unequal treatment of employees based on their race	2.86	1	With Disparity
Colleagues of certain racial backgrounds are more likely to receive challenging or high visibility assignments	2.57	3	With Disparity
Racial background influences how Supervisors evaluate performance and potential for promotion	2.57	3	With Disparity
There is a lack of representation of racially diverse individuals in higher ranking or a leadership position in my organization	2.74	2	With Disparity
Mean Average 2.66			With Disparity

Table 7 presents data on racial disparities experienced by Filipino Aircraft Maintenance Technicians (AMTs) working abroad. The results indicate that respondents perceive a disparity, particularly in terms of “unequal treatment compared to other nationalities”, as reflected by a weighted mean of 2.86. Additionally, there is notable concern regarding the underrepresentation of Filipinos in leadership or higher-ranking positions, with a weighted mean of 2.74, suggesting limited upward mobility for racially minoritized groups. Moreover, job opportunities related to hiring and promotion appear more accessible to foreign counterparts, as performance evaluation and promotional prospects are perceived to be influenced by racial background, with a weighted mean of 2.57.

These findings underscore the presence of racial inequities in the employment landscape for Filipino AMTs abroad. The perceived unequal treatment and limited access to leadership roles suggest systemic bias favoring certain nationalities, potentially affecting employee morale, engagement, and retention. The perception that race influences evaluations and

promotion decisions further implies that merit-based advancement is not consistently applied, undermining organizational fairness and inclusivity.

Qualitative Data from Interview

Qualitative data obtained from the interviews of the seven (7) informants working abroad were analyzed through thematic analysis to identify the recurring patterns and themes in their responses to the five (5) interview questions:

On Gender Disparities

Theme 1: Under-representation of women/significant barriers to entry

The data reveal a persistent under-representation of women in the aircraft maintenance technician (AMT) workforce, particularly in certain regions. Informant 1, currently employed in a Middle Eastern country, highlighted the complete absence of female AMTs in their workplace:

“We have no female counterparts here working as aircraft maintenance technicians.”

This was reinforced by another informant who observed that:

“Out of 50 AMTs, only 5 are female.”

A broader regional perspective was provided by Informant 5, who has worked across the West and Asia. He stated:

“Everyone is represented fairly in the aviation industry in the West, but it is mostly men in Asia.”

These narratives reflect the regional imbalance and suggest that cultural, institutional, or socio-economic factors continue to impede women's participation in the field. The findings align with existing literature, such as Wyman (2017, as cited in Sobieralski & Hubbard, 2019), which documents the consistent underrepresentation of women in aviation roles and the persistent gender pay gap, largely driven by women's heightened vulnerability to economic instability.

Despite numerous studies that highlight the operational, organizational, and economic benefits of a diverse workforce (Ferla & Graham, 2019; Opengart & Ison, 2016; Zhang, 2020; Lutte, 2021), the participation rate of women in aviation-related professions, including AMTs, has shown minimal progress over the past three decades (Marete & Wang, 2024).

The findings underscore the urgent need to address systemic and cultural barriers that hinder women's entry and progression in the aircraft maintenance sector. The regional disparities suggest that workplace inclusion in aviation is not solely a matter of global policy but is heavily influenced by local norms, industry practices, and institutional biases.

This underrepresentation not only limits women's career opportunities but also constrains the potential for a more innovative and resilient aviation workforce. Given that a diverse workforce is linked to improved problem-solving, greater organizational performance, and a stronger safety culture (Opengart & Ison, 2016; Lutte, 2021), excluding women represents a missed opportunity for both economic and operational advancement in the industry.

Theme 2: Discrimination in work assignments

The qualitative data reveal a form of occupational segregation where female aircraft maintenance graduates are not afforded equal opportunities in fieldwork. One informant highlighted a discriminatory practice in job assignments:

"Female aircraft maintenance graduates were assigned to the office rather than to actual maintenance jobs."

This practice reflects a broader systemic issue rooted in gender stereotypes and traditional perceptions of women's roles in the workplace. The aircraft maintenance industry, being historically male-dominated, tends to perpetuate biases that question women's physical capabilities or technical competence in hands-on roles. These assumptions, whether explicit or implicit, result in discriminatory work assignment practices that prevent women from applying their full skill set and gaining relevant field experience.

Such practices reinforce the idea that women are better suited for administrative rather than technical roles, further marginalizing their professional growth and reducing their visibility in core operational functions. This discrimination not only undermines gender equality but also contributes to a cycle where women are denied the practical exposure necessary to progress in their careers.

The findings suggest that entrenched gender stereotypes continue to influence job assignments in the aircraft maintenance industry, resulting in indirect discrimination that disadvantages female graduates. When women are systematically assigned to office roles instead of technical ones, it limits their skill development, reduces their opportunities for advancement, and perpetuates the gender imbalance in the core workforce.

This discriminatory practice also signals deeper organizational and cultural issues that must be addressed. Companies risk not only violating equal employment opportunity principles but also missing out on the benefits of a diverse and technically skilled workforce.

On Racial Discrimination

Racial minorities face biases in the hiring process, including preconceived notions about their abilities or fit for the job. This can result in underrepresentation and unequal opportunities for employment.

The aviation industry has among the lowest numbers of minority representation in its workforce of any industry. The percentage of minority women, such as Black and Hispanic/Latino women, is much lower (Marete, C. K., & Wang, C., 2024).

The following themes were identified in interviews with seven informants who have observed or experienced discrimination against their foreign counterparts.

Theme 1: Salary Gap

Interviews with the seven informants revealed varied perceptions and experiences related to salary disparities among Aircraft Maintenance Technicians (AMTs), particularly between Asian workers and their foreign or local counterparts in other countries.

Informant 1 shared a direct observation of unequal pay in the Middle East, stating:

“In terms of salary, Asians have lower salaries, while others who are newly hired receive higher salaries. Maybe it’s based on the rates in their country.”

This perception suggests that nationality, rather than experience or performance, may be influencing compensation decisions, raising concerns about fairness and potential systemic bias.

Informant 2 offered a different view, noting that:

“Salaries here are mostly based on experience.”

This reflects a more meritocratic approach, suggesting that not all disparities are rooted in discrimination but may be due to professional background.

However, Informant 4 highlighted the negative consequences of perceived or actual compensation disparities:

“The difference in compensation or benefits leads to feelings of inequality and dissatisfaction among employees, potentially leading to higher turnover rates.”

Notably, this sentiment was not shared universally. Informant 5 contextualized the issue:

“This issue of the salary gap is happening in the Middle Eastern countries in order to attract their locals to work in the industry.”

And Informant 6 countered the notion of discrimination:

“No. I have been compensated fairly and equally.”

While Informant 3 stated that:

“Europeans have different rate on their Basic salary and more allowances.”

These contrasting experiences indicate that salary disparities are influenced by multiple factors, including geographic location, nationality, local labor policies, and individual company practices.

The findings point to a complex and region-specific issue regarding salary equity. While some AMTs, particularly those from Asia, perceive a salary gap that favors local or Western employees, others report fair treatment based on experience and qualifications. This discrepancy may be due to local hiring policies, labor market dynamics, or institutional practices that prioritize the employment of nationals, especially in countries in the Middle East.

Regardless of the justification, the perception (and reality) of unequal pay can lead to demotivation, reduced morale, and increased turnover—ultimately affecting operational efficiency and organizational cohesion. Furthermore, inconsistent compensation structures may undermine international labor standards and damage the reputation of aviation companies seeking to attract global talent.

Theme 2: Promotion and Advancement

Promotion and career advancement emerged as a major concern among Asian Aircraft Maintenance Technicians (AMTs), particularly those working abroad. Informants described a clear disparity in opportunities for top-level positions compared to their foreign or local counterparts.

Informant 1 stated bluntly:

*“Sa promotion, mas hinay ang Asian gihapon.”
(In terms of promotion, Asians still progress more slowly.)*

This perception was echoed more explicitly by Informant 6, who attributed the issue to systemic bias:

“I have faced racial and ethnic bias that affected my career progression in the aviation industry. We have limited opportunities and advancement compared to other nationalities.”

These statements reflect a pattern in which Asian AMTs, despite having the skills and experiences, are not being promoted at the same rate as their peers from other national or ethnic backgrounds. This suggests a potential case of institutional discrimination or a lack of inclusive promotion policies in some aviation workplaces.

The findings point to an underlying issue of unequal access to career progression within the aviation industry, particularly among Asian AMTs working abroad. The slower rate of promotion and advancement for these individuals, despite their qualifications, highlights possible racial or ethnic bias embedded in the organizational structure or culture of some companies.

Theme 3: Position and Rank

Several informants highlighted a recurring trend of racial disparity in workplace hierarchies, particularly affecting non-local employees such as Filipinos and other Asian nationals. Informant 1 observed that newly hired individuals from other nationalities were often placed

in higher-ranking positions and offered more competitive salaries, which they perceived as unjust:

“Some other nationalities are new hires, but are already in high positions with higher salaries. It’s unfair to us Filipinos.”

This was corroborated by Informant 2, who noted the absence of Filipinos in managerial roles:

“I haven’t seen a Filipino manager here—only people from other nationalities.”

Informant 6 suggested that this underrepresentation might also be partly due to cultural tendencies among Filipino workers to settle into supportive, low-profile roles rather than actively pursue leadership opportunities:

“Filipinos are more likely to settle in low-key roles; only a few explore higher-responsibility positions.”

Reinforcing these experiences, Informant 5 pointed to delayed promotions and lower compensation based on racial or ethnic background:

“Employees of my racial ethnicity experience delayed promotions and receive lower salaries.”

Similarly, Informant 7 emphasized the lack of racial and ethnic diversity in top-level positions:

“It is less common to see racial and ethnic diversity in high-paying roles.”

Collectively, these statements highlight a lack of representation of Asian AMTs, particularly Filipinos, in leadership or managerial positions. The consistent underrepresentation suggests that race or nationality may be a determining factor in access to higher ranks, rather than merit or tenure.

The findings suggest that systemic inequities in position and rank continue to affect Asian AMTs, particularly in international workplaces. When newly hired individuals from other nationalities are promoted more quickly and placed in higher roles despite equivalent or even lesser experience, it signals potential bias in organizational promotion and leadership selection processes.

The lack of racial and ethnic diversity in management not only stifles motivation among underrepresented employees but also deprives organizations of diverse perspectives in decision-making roles. Moreover, visible leadership inequality can perpetuate a culture of favoritism, erode morale, and drive skilled workers to seek opportunities elsewhere.

This lack of diversity at the upper levels not only affects the morale and career aspirations of racially marginalized employees but also signals a broader organizational failure to implement inclusive practices. The implication is twofold: first, aviation companies must assess and address potential biases in their promotion and compensation systems; second,

culturally responsive leadership development programs should be established to encourage capable individuals from underrepresented backgrounds, including Filipinos, to aspire to and attain higher roles.

On Age Discrimination

Older candidates face biases that favor younger applicants, including assumptions about physical ability, technological skills, and willingness to adapt to new training and certifications.

Theme 1: Devaluation of Experience

Age discrimination remains a subtle yet persistent issue within the aviation industry, particularly affecting older Aircraft Maintenance Technicians (AMTs). Although experience is typically considered an asset in technical fields, several informants observed that older AMTs are increasingly being sidelined in favor of younger, less experienced workers, especially in contexts where physical agility and adaptability to new technologies are emphasized.

Informant 1 recounted that during the COVID-19 pandemic, older technicians, despite their long years of service, were among the first to be let go:

“Many of my peers, despite being long-time employees, were sent home during the pandemic.”

This indicates that tenure and loyalty were not enough to protect older AMTs from retrenchment. Instead, younger workers were often retained, possibly due to assumptions about their physical capabilities, digital fluency, or long-term return on investment.

Informant 7 added that:

“Old age, where you will be offered a lucrative old-age retirement package that is difficult to refuse.”

While these retirement packages may appear beneficial on the surface, they often mask an age-based exit strategy that effectively encourages older employees to leave, even when they remain capable and experienced contributors to the workforce.

These experiences reveal a troubling trend: the value of institutional knowledge and seasoned expertise is diminished in favor of perceived flexibility and technological savvy among younger hires.

Theme 2: Job Delegation

Job delegation disparity among AMTs refers to the unequal or imbalanced distribution of tasks, responsibilities, or workloads within a maintenance team.

Causes of Employment Disparities

Causes are something that a group of people supports or fights for. There were six categories or themes that surfaced from the informants' interview, which have caused these employment disparities in aviation and include the following factors:

Theme 1. Historical Gender Roles

Traditionally, certain roles within aviation, such as pilots and aircraft maintenance technicians, have been dominated by men, while others, like flight attendants, have been dominated by women. These historical roles create barriers for individuals seeking to enter non-traditional roles. One informant reflected on the gendered perception of certain aviation professions, stating:

“Being an aircraft maintenance technician needs courage and guts and is a job for men only.”

Another informant highlighted the absence of female representation in their workplace:

“We don’t have any women here because none have applied.”

These sentiments reflect deeply ingrained patriarchal norms, where jobs that are perceived as risky, physically demanding, or requiring high levels of technical skill are often reserved for men.

A systematic literature review on the gender gap in the aviation industry identifies several contributing factors, including the lack of mentorship and role models for women, ineffective recruitment and retention programs, gender stereotyping, and a masculine-dominated work culture (Marete et al., 2022). Such challenges, including the prevalence of masculine work environments and gendered expectations for women in aviation, pose significant obstacles to women aspiring to succeed in aviation careers (Marete et al., 2022).

Theme 2: Organizational Practices

2.1 Recruitment and Hiring Biases

Another factor contributing to the disparity is the recruitment process. Most aviation companies use an unconsciously biased recruitment and hiring process in their job postings, resume screenings, and interviews. Unconscious biases in recruitment and hiring practices can disadvantage certain groups.

2.2 Promotion and Advancement Opportunities

Discriminatory practices in promotions and career advancement can result in fewer leadership opportunities for women, minorities, and other underrepresented groups. This may be due to biased performance evaluations, a lack of mentorship, and limited access to professional development.

Other participants' experience on disparity includes,

Informant 3 said,

“I have experienced racial and ethnic bias that affected my career progression. We have limited opportunities of advancement compared to other nationalities.”

Another informant said,

“I was previously declined for the job I applied for (as FA) because of my height.”

This implies that physical attributes are also considered in the recruitment process for a certain job.

Theme 3: Cultural and Social Factors

3.1 Workplace Culture

A non-inclusive workplace culture can deter underrepresented groups from entering or staying in the aviation industry. Harassment, lack of support, and microaggressions contribute to a hostile work environment.

According to Informant 3,

“Culture barrier (different cultures and attitudes on every nationality), Language barrier since not all nationalities can speak English well, and accents that are very difficult to understand. Asians are less priorities than Europeans and Americans.”

3.2 Stereotypes and Prejudices

Stereotypes and prejudices continue to shape employment practices in the aviation industry, particularly for women, older workers, individuals with disabilities, and those from developing countries. These biases often manifest in hiring decisions, credential recognition, and opportunities for career advancement.

One informant (Informant 4) pointed out the issue of international credential recognition:

“Our CAAP AMT License is not honored in other countries.”

This was echoed by Informant 6, who emphasized the role of perceived prestige tied to educational background and nationality:

“Seniority, education, and the country where education was earned [matter].”

Meanwhile, Informant 3 highlighted that selection decisions tend to prioritize specific qualifications:

“Proof of type of rating, training, and certification, as well as work experience.”

Additionally, discriminatory physical standards were mentioned by another informant who recounted being denied a flight attendant position:

“I was previously declined the job I applied for (as FA) because of my height.”

These testimonies reveal how deeply embedded biases—whether based on nationality, physical attributes, or credentialing systems—can undermine equal access to aviation careers.

The findings suggest that persistent stereotypes and prejudices continue to limit equitable participation in aviation employment, particularly for individuals from marginalized or underrepresented backgrounds. Discriminatory attitudes toward nationality—such as the non-recognition of licenses issued in certain countries like the Philippines—undermine the professional credibility of skilled workers and restrict global mobility. Similarly, factors such as physical appearance, age, and educational background are used as exclusionary filters rather than as objective assessments of competence.

Theme 4: Policy and Regulatory Factors

4.1 Inadequate Anti-Discrimination Policies

Insufficient or poorly enforced anti-discrimination policies can fail to protect employees from bias and unfair treatment despite all the laws and move by the Government on Equal Employment Opportunity.

According to Informant 4,

Under-representation of various demographic groups is “less likely to occur in North America and Europe due to their non-discriminatory policies adopted by most aviation company but it cannot be denied that it is happening in other parts of the world.”

4.2 Lack of Diversity Initiatives

The absence of proactive diversity and inclusion initiatives can perpetuate existing disparities. Companies that do not actively promote diversity may continue to have homogeneous workforces.

According to one informant:

“The underrepresentation of various demographic groups is less likely to occur in North America and Europe due to their non-discriminatory policies adopted by most aviation companies, however it cannot be denied that it is happening in other parts of the world especially in the Middle Eastern countries.”

Which was corroborated by informant 7, who is currently working in Western countries stated:

“Disparities in compensation and benefits is not happening in my company at present, but in Middle Eastern employers it happens.”

The absence of intentional diversity and inclusion efforts within organizations can reinforce and perpetuate employment disparities, particularly in regions where such initiatives are not mandated or prioritized. Informants noted that companies operating in regions with well-

established diversity policies, such as North America and Europe, are less likely to exhibit discrimination in hiring, promotion, or compensation practices.

One informant observed:

“The underrepresentation of various demographic groups is less likely to occur in North America and Europe due to the non-discriminatory policies adopted by most aviation companies. However, it cannot be denied that it is happening in other parts of the world, especially in the Middle Eastern countries.”

This observation was corroborated by Informant 7, who currently works in a Western country:

“Disparities in compensation and benefits are not happening in my company at present, but in Middle Eastern employers, it happens.”

These insights underscore the regional variance in workplace diversity practices and the continuing existence of unequal treatment where formal diversity and inclusion strategies are absent.

The findings suggest that the lack of proactive diversity and inclusion initiatives contributes directly to the persistence of disparities in employment, particularly in regions where such frameworks are not institutionalized. In environments where non-discriminatory policies are implemented—such as in many Western countries—employees report fairer treatment in areas like compensation and representation. Conversely, in regions like the Middle East, where diversity and inclusion policies may be less established or enforced, disparities in benefits and representation continue to be observed.

Theme 5: External Influences

5.1 Technological and Industry Changes

The increasing use of automation and advanced technologies in aviation can create new skill requirements that disproportionately affect workers who may not have access to retraining opportunities.

As per our older AMT informant:

“We already accept the fact that in terms of technology, our younger counterparts are more adept to it.”

Theme 6: Personal and Psychological Factors

6.1 Self-Selection and Interest

Individuals from underrepresented groups might self-select out of aviation careers and opportunities due to a lack of visible role models, perceived barriers, or a belief that they do not fit the industry culture.

As one informant revealed that:

“Here in our workplace, to aim for higher position we need to have some additional license, hence, for us Filipinos we no longer aspire for it, kay mahal man bayad.”

Which was concurred by informant 3, that:

“Filipinos like to settle in low key role, only few are exploring on higher responsibility positions.”

6.2 Confidence and Perceived competence

Lower confidence and perceived competence, often stemming from societal stereotypes, can affect the career choices and performance of underrepresented groups.

Informant 7, trying to prove his competence among his foreign counterparts, said that,

“I always show to the management and to my colleagues that regardless of age, race and gender, we are all equal. We can work even more productively and positively.”

Which was also concurred by Informant 3,

“Before way back in 2011, my European colleagues treated me differently with discrimination on my first few months when I joined as a Base Heavy Maintenance Technical representative until I have proven my competence.”

DISCUSSIONS

Conclusion

This study addressed three research questions and showed the following findings: (i) that AMT graduates have a vast and varied employment opportunities, not just in the aviation sector but in the non-aviation sector as well (ii) that disparities in the workplace in terms of gender, age and race still exist: women AMTs are underrepresented and discriminated in work assignment due to entrenched gender biases, stereotypes, and the pervasive glass ceiling that limits their progression; racial minorities experience disparities in various forms, including high profile positions, and salary gap; and that younger AMTs struggle as being perceived to be inexperienced, while older AMTs face devaluation of their experience and (iii) that these disparities are caused by the following factors including Systemic and Structural, Organizational Practices, Cultural and Social, Policy and Regulations, External and Personal/Psychological Factors.

Recommendations

The following recommendations are hereby proposed:

1. Implement Diversity and Inclusion Training

Organizations should institute mandatory diversity and inclusion training programs focusing on gender, racial, and age-related biases. The aviation sector should:

- Recognize and reward experience as a critical asset in maintenance roles.
- Offer ongoing training and upskilling programs that include older workers to support their continued relevance and adaptability.

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- Avoid age-based assumptions in layoff decisions, ensuring fair, performance-based criteria.
 - Develop retention strategies that allow older AMTs to mentor younger colleagues, extending their contributions while preparing the next generation of technicians.

Eliminating age discrimination is essential for maintaining a balanced, skilled, and resilient workforce that values both innovation and experience.

2. Establish Clean and Transparent Criteria

Develop and communicate clear criteria for promotions and advancement opportunities to ensure that all employees, regardless of gender, race or age understand what is required to advance within the organization.

3. Review and Revise Hiring Practices

Conduct a thorough review of recruitment and hiring practices to eliminate potential biases. This includes using diverse hiring panels, employing blind recruitment techniques where possible, and ensuring that job descriptions do not unintentionally exclude certain demographic groups.

4. Strengthen Compliance with Equal Employment Opportunity Laws

Ensure that all policies and practices align with equal employment opportunity laws.

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