The Influence of Gender Diversity on the Innovation Capacity of Leading I.T. Companies in Vietnam

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Abstract—Women are commonly considered the weaker sex, yet in information technology, there is a difference compared to other jobs. Nowadays, information technology firms increasingly attach significance to women’s role in producing goods and generating great innovation platforms and capabilities. This study investigates the impact of gender diversity on innovation capacity in leading information technology companies in Vietnam. Questionnaire surveys were conducted with 78 employees (21 women, 57 men) at a large-scale software development firm to examine how gender diversity in teams affects the working environment. The research focuses on gender diversity and innovation ability within the context of Vietnamese I.T. companies, using KMS Solutions as a case study. Effects of gender diversity on performance and productivity were analyzed, synthesizing prior literature on diversity in the workplace. The proportion of women employees was evaluated in relation to company innovation capacity at a leading I.T. firm. Fostering supportive, appreciative organizational cultures towards women in the workplace can enhance employee performance and benefit companies. Organizations should develop an atmosphere that supports and appreciates women in the workplace, which will boost employee performance and benefit the firm. Further research into optimizing gender diversity for maximizing innovation is warranted.

Keywords—innovation capacity, I.T. companies, gender diversity

I. INTRODUCTION

Vietnam is one of the world’s leading countries in terms of the proportion of women engaged in economic activity and 1st ranking in the Asia Pacific region on the proportion of women in the National Assembly (Nguyễn, 2022). It is regard as a pioneer in the advancement of gender equality. Vietnam has the policies in place to guarantee equal rights for men and women, and has made significant strides to close the gender gap in health and education, as well as improve the overall situation of women. However, these accomplishments are not entirely synchronous, and along with this progress there are still a number of deficiencies. In addition, as a result of the transition to an ever-expanding market economy, the obstacles of gender equality are evolving in tandem with the structural transformation of the labor force to accommodate economic growth. Business companies attract and retain people from varied origins and cultures to satisfy the needs and expectations of all types of clients in different geographic regions.

The varied work environment is comprised of workers of many cultures, religions, ages, genders, and abilities. Gender diversity in the workplace may be characterized as the presence of men and women of various cultures. This variety in the workplace has both positive and negative effects on the firm and its gender. Diverse gender employees assist the business in creating and manufacturing goods and services that meet the needs of male and female consumers and clients of various gender and cultural backgrounds. Additionally, a diverse workplace helps workers comprehend one another’s cultures and languages, allowing them to form positive connections (Nguyễn, 2022). Today, it is thought that all humans are of equal value and entitled to the same chances, regardless of gender. In certain nations, however, the gender gap in the workplace is still persistent (Ahmed, 2013). The analysis of gender diversity in the workplace is a continuous process that focuses on more than equal chances and fairness for all employees. This strategy calls for expanding our understanding and promoting the societal value of respecting the human rights of all workers, regardless of gender. Additionally, the responsibilities of both genders in the workplace have altered continually. Throughout history, women were traditionally confined to the domestic sphere. However, over time, they have been allowed to engage in occupations previously dominated by men. Despite women no longer being restricted to these traditional roles, gender diversity in the workplace continues to be a prominent issue. Particularly, the ongoing debates surrounding wage disparities, employment, promotions, and unfair privileges persist today (Eagly & Carli, 2007).

The purpose of this study is to increase readers’ knowledge of gender diversity concerns and deepen their critical understanding of the topic. Kirton and Greene’s text provides future HR professionals and business managers with information on diversity policies, reflecting new developments in equality and inclusion laws as well as emerging debates (Kirton & Greene, 2015). In addition, the study seeks to promote global citizenship that we now face or will face in the future, so that they may contribute to an equitable and just society and globe (Akbarian, 2017). However, diversity in the workplace occasionally creates numerous problems, as misunderstandings between male and female workers and their cultural disparities lead to disputes between them. Conflicts and misunderstandings among mixed-gender directly or indirectly reduce productivity and performance, hurting the organization’s total output (Xie et al., 2020). The current study investigates the gender diversity of the KMS Solution I.T. and Innovation Company. KMS solution employs many men and female workers with varied cultural & gender origins, faiths, and ages. The shop has several challenges due to its diversified employees and their
varied competencies but also enjoys numerous advantages. This allows KMS solution to satisfy the demands of a broad consumer base. However, gender inequalities may lead to misunderstandings and arguments among staff, so affecting the business’s overall effectiveness.

The significance of the human resources department to the functioning of a business cannot be emphasized. Understanding the value of diversity management in talent recruiting and hiring is essential. Diversity in the workplace refers to the number of employees and individuals in the KMS solution who belong to diverse genders, ethnic groups, citizenship rights, and mental and physical conditions. Workplace diversity has recently been a significant problem since male and female employees must conform to laws and regulations. Managers must comprehend the complexities of diversity in the workplace in order to manage diverse activities (Elna & Imran, 2013). A workplace like the KMS solution comprises employees from many locations, each with unique attributes and skills. To ensure employees sustained and increasing support, gender equality must be seen positively inside the organization. Diversity in the workplace is causing a high turnover rate and a rise in worker dissatisfaction. The poor management of diversity refers to disparities in career development, promotion, salary, and responsibility assignment owing to gender variances. Before allocating a post, the business must evaluate the qualifications of both male and female workers. The essential part of diversity in the workplace is establishing a high degree of commitment when recruiting gender so that competent applicants contribute to attaining 4 corporate objectives. Numerous workplace disagreements and low-quality products stem from ineffective management (Al-Jenaibi, 2017).

II. RESEARCH METHODOLOGY

A. Research Type

To ensure the successful completion of research, it is of the utmost importance for us to adopt an acceptable research method. Quantitative and qualitative research methods are often while conducting studies. Qualitative research is used to obtain nonnumerical and meaning- and attribute-based information about a study topic. Quantitative research acquires numerical data and information from numbers and figures. We select and employs both studies depending on the research topic to identify accurate and trustworthy facts and a solution (Kayanakis et al., 2021). This quantitative research study has gathered and evaluated data in the form of numbers and percentages.

B. Research Philosophy

According to this belief and theory, research data is collected, interpreted, and analyzed to produce accurate and reliable findings. We typically employed two research philosophies: interpretivism and positivism. The interpretivism philosophy employs qualitative research techniques and holds that individuals shape the entire society. However, positivism employs quantitative methods and holds that society is responsible for shaping individual behavior (Chrobot-Mason et al., 2014). This research has utilized positivism, which has aided in acquiring factual knowledge and data about the research problem via measurement and observation.

C. Research Approach

This section describes the methods and processes used to collect trustworthy and accurate information and data pertinent to the research topic. Most of the research employs various techniques such as deductive, indicative, and adductive as per the applicability of the study issue. The primary distinction between the deductive and inductive approaches is that the deductive approach tests the existing data-related theory. In contrast, the inductive approach generates new theories based on research data (Kotsopoulos et al., 2022). The approach chosen for the current research is deductive, and the existing theory and hypotheses have been tested.

D. Data Collection

It is of the highest importance to find an effective strategy for gathering data and research material while undertaking the research. We employed primary and secondary approaches to collect accurate data pertinent to the study subject. The main technique is gathering data from primary sources via interview sessions and questionnaire surveys with respondents. On the other hand, the secondary technique entails gathering legitimate data from secondary sources such as journals, papers, and books. The present study utilizes the questionnaire survey data we acquired and an examination of the published works of various authors and writers. Then we devised a questionnaire regarding gender diversity in the workplace, which was sent to workers at KMS solution (Zolduorarrat & Licorish, 2021).

E. Sampling Technique

The sampling strategy is the selection of a representative sample of respondents who offered accurate and genuine data pertinent to the study subject. We had access to various sampling approaches, such as basic random, stratified, cluster, etc., depending on the scenario and issue at hand. A simple random sampling includes selecting responders at random from a large number of individuals or populations. The basic random sampling approach was used in the present study, in which a sample of 78 KMS 12 solution workers was selected randomly. We chose workers of the KMS solution to collect pertinent data and analyze gender diversity in the workplace.

III. DATA ANALYSIS

The significance of gender diversity in the workplace, focusing on three primary reasons. Firstly, gender diversity promotes justice and fairness in the workplace, as it helps to eliminate discrimination and promote equal opportunities. Secondly, gender diversity can bring various organizational benefits, such as improved decision-making, creativity, and innovation. Lastly, the article emphasizes the importance of gender diversity in shaping workplace culture and fostering an inclusive environment (Fine et al., 2020). The study endeavor cannot be effectively concluded unless the acquired data is accurately analyzed using a suitable approach or instrument. We may efficiently analyze the data using various approaches and tools, such as graphs, tables, charts, and themes. We randomly asked 78 KMS solution workers research-related questions and then recorded, displayed, and
evaluated their responses using pie charts and thematic analysis.

A. Research Validity and Reliability

The gathered data or information related to the study subject must be genuine and trustworthy to deliver the right research results and effectively finish the research. The present study gathered data from KMS solution workers on gender diversity in the workplace. This assured the quality and dependability of the data acquired since it was gathered from sources or respondents who are genuinely experiencing workplace diversity. In addition, we administered the questionnaire survey and collected data directly from workers. In addition, the literature of specific well-known authors and writers was studied to guarantee the data’s legitimacy, reliability, and validity.

B. Ethical Consideration

It is the most crucial component that researchers must consider or keep in mind while performing human-related research. While conducting research, scholars must adhere to a set of ethics and standards to avoid ethical issues. Researchers need to recognize that they are not affecting the feelings and emotions of human study participants. They must ensure that sensitive information and data submitted by human respondents are not mishandled or released without their consent. The present study was done by research ethics and standards (Kirton & Greene, 2015). We have not injured the respondents’ (workers of KMS solution) feelings by asking them questions and collecting accurate data. We also assured workers that the information/data they supply would not be utilized for personal gain or abused.

C. Research Limitations

Utilizing proper methodologies, approaches, strategies, and instruments, the research project may be done effectively, yet, restrictions may restrict and hinder the study’s performance. This research endeavor has been constrained by time constraints and limited financial and human resources. It has been determined that we had challenges performing research activities and assignments within the allotted time frame. The lack of human and financial resources hindered our ability to acquire the 13 necessary instruments and research team for data collection. In addition, restricted access to data sources makes it difficult for us to acquire reliable and relevant data about gender diversity in the workplace.

D. Data Analysis and Findings

It is better to work in a purely male team? The analysis of the data collected suggests that the employer at KMS solution does not encourage recruitment through the inclusion of a diverse workforce. Diversity is one of the significant issues faced by the organization. Only ten employees from the sample feel that the recruitment process is conducted fairly and justly. Thirty-six employees, that is, a majority feel that diversity is not considered while recruiting a workforce.

In gender-diverse teams, the mood is more joyful and cheerful than in male teams? The analysis suggests that the organization’s employees favor working in an environment of diverse culture as it creates a positive workplace. Twenty-four favor recruiting employees from diverse cultures, resulting in increased learning and development. Only a few employees from the sample are against diversity in the workplace as it increases competition. Positive work culture and environment support enhancing the overall productivity.

The Fig. 1 given data represents a series of observations across five categories: mostly female, slightly female, both, slightly male, and mostly male. The percentages represent the proportions of each category in a particular observation or dataset.

- **Observation Analysis**: The category with the highest overall representation is “both”, indicating a balanced gender distribution. It consistently holds the largest percentage in each dataset, ranging from 40% to 59%. The “mostly female” category has the least consistent representation across the datasets, with the lowest at 1% and the highest at 28%. The “mostly male” category also varies, though not as widely as “mostly female”, with a low of 1% and a high of 14%.

- **Comparative Analysis**: The “slightly female” and “slightly male” categories are more balanced overall compared to the “mostly” categories. The “slightly female” category ranges from 8% to 22%, while the “slightly male” category ranges from 4% to 28%. In most observations, the “slightly female” category has a higher representation than the “mostly female” category, indicating a tendency towards more balanced gender representation rather than female dominance. Similarly, in most observations, the “slightly male” category has a higher representation than the “mostly male” category, showing a similar trend towards balance rather than male dominance.

*I have heard about cases of gender discrimination in the*
companies in which I worked? The organization’s KMS solution recruits' individuals of similar gender. Most employees strongly disagree with the statement that employees from distinct gender are respected in the organization. A few employees feel that the employees belonging female gender are respected in the organization. There is a requirement for change in the organizational culture so that the employees are respected based on their work and skills, not gender.

In gender-diverse teams, there is less focus than in all-male teams? The organization’s employees believe that the success of the workplace depends on the inclusion of people that belong to distinct gender, castes, gender, and religion. Most of the employees agree with the statement that success is based on innovation, creativity, and high productivity, which is possible through diversity in the workplace. The employees from an opinion that recruitment must not be based on the caste and gender of the people. Only three people disagree as they are provided with proper treatment at the workplace.

Different employees and their views enhance productivity and performance of the workplace? Are you agreed? The current business environment is highly contingent, and customer requirements are also changing. KMS solution is a multinational retail and clothing sector. Hence, knowledge about the requirement of customers of all cultures and backgrounds is possible through the recruitment of employees belonging to distinct gender and backgrounds. Most of the employees agree or strongly agree that the innovative ideas of the employees enhance productivity through efficient customer service and performance. The involvement of the employees in the matters of the organization directly impacts the productivity of the overall organization.

Gender diversity has a positive impact on the product quality? From the above graph, it can be concluded that respondents agree with the role of an employer who respects a gender and ethnically diverse workforce in general. Among 38 respondents, four are firmly in agreement, 17 are somewhat in agreement, 15 are neutral, two are somewhat opposed, and four are strongly opposed. Thus, most respondents agree that diverse workforces possess various characteristics and skills, and the majority are also satisfied with working with a diverse workforce. Thus, such a learning environment facilitates the attainment of desired and fruitful objectives. This response supports the argument made by (Karlsson et al., 2021) regarding the contribution of a diverse workforce to the learning environment. This development is crucial both from a research perspective and for equipping policymakers with a potent set of analytical tools. Regarding the subject at hand, the perspectives of individuals of various gender. Some of them are instructive, while others are not. Therefore, this creates an environment conducive to learning, and productive objectives can be easily attained. Challenges faced by the employees because of diversity.

IV. DISCUSSION

Gender diversity is one of the most essential but neglected aspects of a productive company. A successful workplace provides equal opportunity for men and women and ensures that all workers are compensated according to their ability, not their gender. KMS solution is a significant technology company in Vietnam, and it is among the sectors with the fewest female workers. The lack of female staff has been disastrous to the organization, as it continues to get countless complaints from both internal and external sources. KMS solution has begun to reevaluate the status of women at the firm and has begun to include more women into the system. However, in accordance with the criteria of a modern workplace, the corporation should implement methods to guarantee that it employs more women.

Diversity in the workplace is described as the number of workers in a business who are of various religions and genders and possess unique traits and skills. In KMS solution, there are 85,209 employees in all shops worldwide. In 2019, the poor treatment and uneven development prospects led to a decrease of 78,597 workers. This has significantly harmed the organization’s competitiveness and development. The KMS solution human resource manager must guarantee that all members of the Company are treated equally regardless of their nationality, religion, background, culture, gender, or native tongue. All male and female government workers are guaranteed equal treatment as a fundamental human right.

Equality in diversity plays a crucial role in ensuring that all workers have equal development and professional advancement possibilities. The study identifies the glass ceiling as one of the phenomena that have emerged in recent years due to the restrictions established by the human resource department’s inadequate gender management. It may be stated that workers want effective workplace communication so that their complaints are readily understood, and appropriate modifications are implemented to foster a good work environment. The manager of KMS solution seeks to do excellent market research so that the organization’s rules and regulations may be modified to provide a competitive edge (Kayanakis et al., 2021). Leadership techniques and staff motivation have improved, allowing the study’s objective to be realized. The study demonstrates the correct use of research techniques, including an effective research philosophy, strategy, and the determination of the most efficient method for data collecting and analysis.

Based on the performed analysis, it can be determined that it is capable of achieving the intended goals and objectives. In the present research, the idea of discrimination is centered on actions based on gender. It may be evaluated that worker unhappiness directly correlates with staff productivity. In the workplace, discrimination occurs when an employer favors a specific gender. The employer plays a crucial role in addressing discrimination-related actions. In addition, the firm must execute critical policies and procedures to sustain the satisfaction of its gender. In addition, the staff’s unhappiness affects productivity, which must be increased by providing proper training and maintaining pleasant contact among the employees. Via simultaneous questioning of 30 individuals, data gathered through interview questions aided in acquiring vital information about gender. This technique is useful for establishing research hypotheses. The mixed approach to data analysis contributes to the quality and dependability of the data.
A. Gender Discrimination Caused by the Impact of Confucianism

Confucianism, the most exemplary exponent of patriarchy in Vietnam, has shown an old social framework including the interaction between Person – Home; Nation – World. Mencius said that nations construct the world. Nation is founded in Home, whereas Home is rooted in Person. People (men-the author’s comment) must first study and cultivate (Self-improvement must adhere to human, charitable, and prestigious norms), then construct and manage their houses to the best of their ability, and then ascend to national management (governance) and dominate other nations. According to this pattern, males will forever establish authority and societal stability. King and subject, Father and kid, and Husband and wife are the three fundamental connections in society, according to Three Moral Bonds. These three relationships in a classed society are unequal. On this principle, people who do well for others are the most powerful and influential members of society and the family. In this framework, women belong to the social categories “I,” “child,” and “wife,” which suffer the burden of men’s absolute 18 education and domination. In accordance with Confucianism, women are deemed subhuman and should be loathed rather than ignored. According to Confucius, it is impossible to instruct solely women and the simple-minded. Consequently, the term “sexism” is often used when discussing societies dominated by men. According to Confucianism, the function, duty, and natural role of women are to serve males without condition. Concepts and ideals have bound the lady to her family like chains. Therefore, after marriage, many women are not permitted to engage in social work. They are only allowed to conduct domestic tasks such as cooking, cleaning, and child care. This issue persists in many rural and isolated regions where women have little access to scientific information.

B. Gender Discrimination in Wages and Recruitment

Despite the fact that the published Law on gender equality explicitly states: “Men and women are treated equally at working place, pay, bonuses, social insurance, working conditions, and other working circumstances,” discrimination against women is prevalent in the recruiting process. Given the varying standard requirements for males and females, or the fact that women must achieve greater standards than men to do the same work, it is common for Vietnamese media to run adverts that indicate the gender criteria of applicants.

C. Age Discrimination in the Labor Process

Age disparity impacts the professional chances of women, particularly in the public sector. However, debate still surrounds the topic of retirement age since this also refers to five-year greater pension expenses—a potentially considerable transfer of resources for women, which will be eliminated if we increase the retirement age of women to match that of men. While a longer life expectancy causes there to be more women than males among those who retire at age 65 or older, the gender factor in pension disputes has a significant impact. This is the preceding issue since it fits two of the criteria for selection. First, it’s a matter of human rights when women individually encounter job and advancement restrictions that favor males. Second, this issue is the root cause of various forms of gender inequality. Reduced retirement age justifies lowering the age restriction for training. Less-educated and less-skilled women are often less accessible for higher-level positions, and the number of women competent to compete with males in the agency declines.

D. Unfair Workload

Women and men devote the same amount of time to earning a livelihood, but different amounts of time to housekeeping. A Vietnamese lady must work very long hours in order to balance her employment and family commitments. The typical female spends 13 hours per day working, whereas the average guy spends just nine hours per 19 day. This shows that although women and men spend similar amounts of time on income-generating activities, males do not contribute significantly to domestic duties. Consequently, women must endure an unequal share of the burden of labor. In Vietnam, the traditional mindset and conduct accord women the role of caretaker. Vietnam’s government recognizes the importance of women in the family with awards and recognition certificates, but does not honor the efforts of males. Aside from the policy for child care, there is no comprehensive policy for health care. According to the Labor Code as revised in 2002 and other relevant rules, only new mothers are eligible for leave to care for newborns or ill children. Allowing dads to leave for child care may be the first step in relieving women of their burdens. Gender analysis provides us with a viewpoint on gender equality concerns and the need to promote equality for women in Vietnam’s labor market. Although Vietnam has made significant progress in advancing gender equality, culture continues to have a significant impact on gender relations. Persistent gender disparities have caused women to work significantly longer hours, restrict their access to resources, and face discrimination in recruitment and compensation. The implementation of measures to implement gender equality and the creation of a solid legal foundation, the sharing of household chores... in an effort to create fairness and equality between men and women during the labor process is crucial and should receive greater social attention at this time.

E. Recommendations

The research indicates that gender diversity has both good and negative effects on the productivity of workers and the firm. According to the responses of KMS solution workers, it has been determined that female employees are paid less than male employees, hence creating an inequality problem at KMS solution. It is advised that the KMS solution provide and pay similar compensation or earnings to all workers working in the same department in the same role, regardless of gender. This boosted female workers’ morale and productivity, extending their tenure. Therefore, the KMS solution must treat male and female workers equally and offer them similar compensation, training, and advancement chances to maximize their work contribution and productivity. The management of the KMS solution must take comprehensive measures to detect the glass ceiling and eliminate the many hurdles that inhibit the advancement of women in the workplace. The management of KMS solution can implement training programs to build leadership skills.
for both male and female employees. These programs should teach techniques for effective communication, conflict resolution, and team motivation. By developing strong leaders of all genders, the company can foster mutual respect and equal opportunities for advancement. The trainings should also raise awareness of unconscious biases and aim to eliminate prejudices that impede women’s career growth. With enhanced leadership abilities and an inclusive mindset, managers can support women in attaining higher positions and compensation on par with male peers. Policies that promote gender diversity in leadership roles have been shown to boost innovation, as documented in research on global companies by scholars like Barak (Michällè, 2014). Choi and Rainey study examined how diversity and diversity management policies affect employees’ perceptions of organizational performance in U.S. federal agencies, finding that racial diversity alone correlates negatively with perceived performance but positively when coupled with effective diversity management and team processes. The research provides evidence that actively managing diversity can produce benefits for organizational performance in public sector contexts (Choi & Rainey, 2010).

**F. Promoting the Diversification of Women’s Roles inside the Company**

While working at their postings, employees might broaden their skill sets via a process of continual learning, despite being hired due to their suitability for a particular role. For example, a woman working as a data analysis specialist at KMS solution may be pushed to acquire new abilities in software development and installation in order to expand her skill set. When a promotion opportunity arises in any of the two areas, the woman will be qualified academically and professionally for the post. In comparison, the second abstract focuses specifically on gender diversity at the Indian IT company TCS. It analyzes TCS’s strategies to increase women’s participation over 5 years, arguing organizations should foster respectful, encouraging environments for women to benefit employee performance. While the first study looks at diversity’s impact on perceived organizational performance broadly, the second analyzes specific steps taken by one company to improve gender diversity and women’s workplace experience. Both point to the potential benefits of diversity and inclusion efforts, but have different geographic and organizational contexts (Yadav et al., 2022).

In order to provide abundant opportunities for women to acquire new skills and grow in their professions, the organization should encourage job rotation for women. Such alternatives guarantee that women have a level playing field with their male counterparts and are empowered to earn the same amount as men. It is also suggested that researchers devote greater attention to primary research and data collection from sources. This is because primary research delivers more trustworthy and genuine data/information pertinent to the study issue than secondary research. This might be useful for effectively finishing the study assignment with fruitful outcomes or results.

**V. CONCLUSION**

The basis of the term “gender equality” is the equality between men and women, and it is one of the fundamental human rights concerns. The more a civilization advances, the more individuals focus on sexual equality. Gender equality exists in every aspect of social life, including the work market. Gender equality is neither limited to the number of men and women engaging in the work force, nor does it suggest that men and women are same independent of psychological, physical, and social characteristics. Gender liberation in labor field implies that men and women have the same social standing to participate and work in the labor process; the differences and similarities of men and women (gender perspective and gender) are recognized and valued equally to fully enhance the potential of each gender; and both male and female labors have the reasonable chance, obligations, and benefits in the same labor based on certain principles.

**CONFLICT OF INTEREST**

The authors declare no conflict of interest.

**AUTHOR CONTRIBUTIONS**

Nguyen Quoc Huy conducted the research, designed the study, collected and analyzed the data, and wrote the initial draft of the paper; Nguyen Manh Dung contributed to the study design, data analysis, and revisions of the manuscript; Tran Hau Ngoc assisted with data collection, literature review, and editing of the paper. Together, the authors leveraged their complementary expertise in information technology, innovation studies, survey methods, and data analysis. Through close collaboration, they designed the study, executed the research, analyzed the results, and refined the manuscript to produce a rigorous contribution to knowledge on gender equality and innovation capability; all authors had approved the final version.

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