
| RESEARCH ARTICLE

Digital Innovation Performance of Selected Returnee Employees Among Selected IT Companies in Guangzhou Towards an Improved Organizational Culture

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| ABSTRACT

This study examined the digital innovation capabilities of returnee employees in selected IT companies in Guangzhou and their impact on organizational culture. A sample of 235 returnee employees from 25 small and medium-sized enterprises (SMEs) was analyzed to evaluate digital innovation performance indicators, such as success rate, speed, quality, market influence, and internal efficiency improvement. The study also assessed the relationship between the employees' backgrounds and digital innovation performance on organizational culture. Findings indicated that most returnee employees were male, aged 36-40, and held college degrees. Digital innovation performance was rated highly effective, with differences significant based on age, education, and years of service in the current organization, but not gender or role. Excluding market influence, there was a positive relationship between digital innovation performance and organizational culture, with internal efficiency improvement having the strongest correlation. Recommendations were made to boost digital innovation and organizational culture through enhanced employee engagement, technology adoption, and continuous improvement.

| KEYWORDS

Digital Innovation Performance, Returnee Employees, Organizational Culture

| ARTICLE INFORMATION

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1. Introduction

1.1 Background of the Study

As globalization continues to deepen and international educational exchanges become increasingly frequent, more and more Chinese students choose to study abroad, hoping to enhance their knowledge level and international perspective through overseas learning. According to data released by the Ministry of Education in 2020, the number of Chinese returnees from overseas studies has shown a continuous growth trend in recent years. These returnees, often referred to as "sea turtles," will bring back advanced knowledge, skills, and different cultural concepts, having a profound impact on China, especially on the IT industry in first-tier cities like Guangzhou.

In economically developed areas such as Guangzhou, the IT industry, being one of the important drivers of economic development, will see a growing demand for innovation and international talent. Returnees, with their unique international education background and cross-cultural capabilities, will be seen as an important force in promoting corporate digital transformation and innovative development. However, the integration and innovative performance of returnee employees will not be natural; they will be influenced by various factors, including personal characteristics, organizational culture, and work environment.

In recent years, some studies have begun to focus on the work performance and organizational adaptability of returnee employees. For example, in the study of Zhang et al. (2020) established that the returnee employees' cross-cultural adaptability in Chinese

enterprises considerably contributes to their job satisfaction and performance. Moreover, Li (2021) elucidated that it is the returnee employees returning from abroad who are more likely to influence innovation in the organization than the local employees. Furthermore, the impact will still depend on the openness of the corporate culture. While this study can be a valuable tool to understand the digital innovation performance of returnees in the field of IT, and how to improve organizational culture and involve them in role-playing, it will still be relatively limited.

Pointedly, in a large city such as Guangzhou, with the rapid improvement of the economy and technology, there has been a growing urgency for such a study. The students of returnee talent have been treated as vital resources for enterprises to pursue the digitization process and increase market competition. Such approaches can usually translate into numerous aspects, including idea manufacturing, issue resolution, and cross-cultural communication (Zhao et al., 2019). The study aimed to reveal how these capacities can not only contribute to the development of new products and services but also offers the opportunity to internally integrate the knowledge and apply games with the technologies inside enterprises (Wang et al., 2020). Nevertheless, this may be largely, if not fundamentally, determined by the corporate culture, which also limits the value that can come from these returnee employees. In other words, the engineers in the research team should consider the cultural factor of the organization that encourages openness, inclusion, and innovation as an important requisite for converting these creative abilities into performance Outputs.

Despite these positive research findings, the challenges faced by returnee employees in actual work should not be overlooked. These challenges may include cultural conflicts, uncertainty in career development paths, and communication and collaboration barriers with local employees (Liu et al., 2022). These issues can affect the job satisfaction and retention rate of returnee employees and limit the realization of their innovative potential.

In a city like Guangzhou, which is rapidly developing economically and has a strong demand for high-tech talent, may focus on identifying how to solve these problems, enhance the digital innovation performance of returnee employees, and promote their better integration through improving organizational culture by the enterprises and researchers. However, this current research was mainly focused on the individual characteristics and direct work performance of returnee employees, and there would still be a lack of in-depth discussion on how to optimize the innovative contribution and cultural integration of returnee employees through organizational-level intervention measures.

Although existing researches provided a preliminary understanding of the role and challenges of returnee employees in the IT industry, these studies are often fragmented and lack an integrative perspective to comprehensively consider the complex relationships between individual capabilities, organizational culture, and digital innovation performance. Especially in a first-tier city like Guangzhou, where the IT industry is rapidly developing, more in-depth and specific research will be required to guide practice. Currently, there is a lack of systematic research on how to optimize the innovative capabilities of returnee employees to improve digital innovation performance, and the in-depth discussion on how organizational culture can act as a facilitating or hindering factor in the innovation process of returnee employees will also be relatively limited.

Furthermore, while some research has focused on the differences between returnee and local employees, distinguishing how to develop targeted management strategies and cultural integration measures based on these differences to promote the effective integration and innovative contribution of returnee employees will remain an open question. This suggested that further research would be needed to help fill this gap.

Therefore, this study aimed to investigate the digital innovation performance of selected returnee employees in selected IT companies in Guangzhou and the factors influencing it, especially the role of individual innovation capabilities and organizational culture. By conducting an in-depth analysis of the innovative capabilities of selected returnee employees, the challenges they face, and their performance in different organizational cultural contexts, this study provided practical strategic recommendations for enterprises to improve the integration and innovative contribution of selected returnee employees, thereby promoting the digital transformation and competitiveness enhancement of enterprises.

1.2 Statement of the Problem

Despite the increasing presence of overseas returned employees in the workforce, there was a notable gap in understanding their specific profiles and how their digital innovation capabilities influence organizational culture, particularly in the context of IT companies in Guangzhou. This research mainly aimed to examine the profile characteristics of these employees, assessing the effectiveness of their digital innovation performances, and exploring how their backgrounds and capabilities affect organizational culture.

Specifically, this study attempted to answer the following sub-questions:

1. What is the profile of selected returnee employees from IT Companies in Guangzhou:

1.1 Age;

1.2 Gender;

1.3 Level of Education;

1.4 Types of Overseas Experience;

1.5 Years of Service in Current Organization After Repatriation;

1.6 Current Position or Role;

1.7 Reasons of Engagement; and

1.8 Country of Engagement?

2. How effective are the digital innovation performance indicators of selected returnee employees in selected IT companies in Guangzhou?

2.1 Success Rate of Innovation Projects;

2.2 Speed of Innovation;

2.3 Quality of Innovation;

2.4 Market Influence; and

2.5 Internal Efficiency Improvements?

3. Are there significant differences on the assessment of the effectiveness of digital innovation performance indicators of selected returnee employees when grouped according to their profile variables?

4. What is the level of agreement of selected returnee employees' background and digital innovation performance on organizational culture, with regards to the following:

4.1 Openness and Receptiveness to New Ideas;

4.2 Collaboration and Teamwork;

4.3 Innovation Environment;

4.4 Digital Adaptability;

4.5 Diversity and Inclusion;

4.6 Learning and Growth Opportunities?

5. Are there significant relationships between the assessment of digital innovation performance and the effect of organizational culture?

6. Based on the study results, what effective strategies can be proposed to enhance the organizational culture and digital innovation performance in the selected IT companies in Guangzhou, China?

1.3 Hypotheses

This study tested the hypotheses using the Null Hypothesis (Ho):

Ho1: There are no significant differences on the assessment of the effectiveness of digital innovation performance indicators of selected returnee employees when grouped according to their profile variables.

Ho2: There are no significant relationships between the assessment of the effectiveness of digital innovation performance indicators of selected returnee employees and the effect of organizational culture.

1.4 Scope and Limitations

The present research investigated digital innovation performance by the selected returnee employees of IT companies in Guangzhou, thereby analyzing its implications for the organizational culture of those workers. This entailed assessing the attributes and skills of the workers; examining its effectiveness toward the accomplishment of digital innovation and looking deeper into what organizational dynamics lead to those changes. It aimed to demographically describe selected returnee employees, study the performances of their digital innovation and analyze their profiles, detect whether assessments show differences as affected by variables, the influence of combined backgrounds on capability as far as affecting the organizational culture, look for solutions towards improving organizational culture concerning the performance of IT organizations with digital innovations, especially the selected in Guangzhou.

This research was restricted to only one region and industry type, thereby limiting the generalization of the findings for other regions and sectors. This study made use of only the quantitative research method and did not represent individual experiences and perceptions. Thirdly, since the focus of this research was the IT companies in Guangzhou, it might not be totally generalized to other industries. This study did not take all factors influencing digital innovation performance and its impact on the organizational culture, and therefore had well taken into account and justifiably put forth.

The survey started after the ethical review, initiating the data collection process to obtain comprehensive insights from the selected respondents on their innovation experiences and perceptions. Data collection and analysis were completed promptly to enable an in-depth review of the information collected and to ensure the accuracy and reliability of the results, including synthesis of findings, development of recommendations, and overall presentation of the results.

1.5 Significance of Study

The present studies were beneficial to the following:

IT Companies. This research directly guided IT companies in Guangzhou on how to more effectively utilize the cross-cultural capabilities and international perspectives of returned overseas employees through specific strategies, such as cross-cultural training and team-building activities, to swiftly enhance the efficiency of product innovation design and development processes. It provided a long-term talent development framework, including how to build innovation teams centered around overseas returned employees, and how to promote knowledge sharing, internal innovation, and multi-culture.

Selected Returnee Employees. Immediate career development support was provided for selected returnee employees, such as personalized career planning advice and professional growth resources, to help them adapt and integrate into the work environment of IT companies in Guangzhou more quickly. It revealed how specific background characteristics, such as particular overseas study experiences, could impact career development paths and professional achievements, thereby guiding returnee employees in making decisions beneficial to their long-term career planning.

Academic Community. This research concretely demonstrated how returned overseas employees, through their unique international experiences and skills, impact IT companies' digital innovation and organizational culture, providing specific cases and data support. It enriched the research literature on cross-cultural management and organizational behavior, promoting the theoretical development of related fields.

Policy Makers and Educational Institutions. By specifically analyzing the role of returned overseas employees in promoting corporate digital innovation, this study provided a basis for policymakers and educational institutions to design more targeted policies and educational programs, such as entrepreneurship support programs for returned talent and international talent training projects, to promote the broader attraction and cultivation of international talents in Guangzhou and across China.

Society and Economy. This research concretely demonstrated how optimizing the integration and utilization of returned overseas employees would drive the diversification and openness of social culture, and how it could enhance the economic innovation and competitiveness of Guangzhou and China as a whole, providing momentum for socio-economic development.

Through more specific narration, the importance of this study and its immediate and long-term benefits to various sectors were more clearly presented, thereby providing clear guidance and reference for relevant stakeholders.

1.6 Definition of Terms

In this paper, the following terms or variables were provided for operationally defined:

Collaboration and Teamwork Culture. This term specifically refers to the value within the organizational culture that emphasizes team collaboration, shared goals, and mutual support.

Digital Adaptability. This term specifically refers to the organizational ability to adapt to digital trends and rapidly adopt and apply new technologies.

Diversity and Inclusion. This term specifically refers to the characteristics within the organizational culture that hold values in differences of background, perspectives, and individual variances.

Digital Innovation Performance. This term specifically refers to the effectiveness and results of new ideas and solutions proposed by selected returnee employees for digital projects and improvement initiatives.

Internal Efficiency Improvements. The term specifically refers to the improvements in internal operational efficiencies, such as process optimization and cost reduction, that result from the innovative activities of selected returnee employees.

Innovation Environment. This term specifically refers to an organizational environment and culture that fosters innovation, encourages testing of new ways, and tolerates failure.

Learning and Growth Opportunities. This term specifically refers to the individual and professional development opportunities provided by the organization.

Market Influence. This term specifically refers to the impact of the innovative outcomes of selected returnee employees on market trends, which includes factors like increasing brand image and extending market shares.

Selected Returnee Employees. This term specifically refers to those selected people who have pursued education overseas, worked overseas, and then returned to work in the city of Guangzhou. They would typically be experienced in cross-cultural and international perspectives and would thus form valuable forces in driving corporate innovation and cultural diversification.

Organizational Culture. This term particularly refers to the sum of values, beliefs, habits, and expected behaviors within an enterprise that influence employee behavior patterns and also the decision-making process of the enterprise.

Openness and Acceptance of New Ideas. This term specifically refers to the characteristics within the organizational culture that will open and be receptive to new ideas, innovations, and changes.

Quality of Innovation. This term specifically refers to the practicability, innovativeness, and technical level of the innovative outcomes produced by returnee employees.

Success Rate of Innovation Projects. This term describes the number of innovation projects led or contributed by returned employees that shall successfully bring about their respective outputs.

Speed of Innovation. This term specifically refers to the time it takes selected returnee employees to advance from pitching innovative new ideas to implementing solutions that demonstrate the nimbleness of the enterprise in adapting to changes in the marketplace and technological frontiers.

1.7 Related Literature

1.7.1 Role and Impact of Returnee Employees in Digital Innovation

Zhao et al. (2021) analyzed the role and impact of returnee employees on digital innovation, emphasizing the role these talents play in promoting digital transformation and innovation in enterprises through the knowledge and experience they have gained through studying and working abroad. Returnee employees have cross-cultural communication competencies and in-depth knowledge of global markets, which can be valuable sources of insight into developing new products and optimizing service processes. Moreover, Li et al. (2022), extended this argument even further; saying that returnees have strong cross-cultural communication skills to serve IT companies, and have significant advantages in understanding different market needs and translating this knowledge into innovative digital products and services. Summarily, the results indicate that there is a need to improve cross-cultural communication and cooperation in the context of global competition.

Zhou et al. (2019) considered the input of returnee employees to digital innovation as technical skills and market knowledge. Moreover, they claimed that returnees successfully incorporate the latest technological trends and solutions into the company's innovation process, and employees make use of their deep perception of the international market in order to share unique ideas with the company, developing innovative products and services for specific regional markets for promotion. Each of these studies concluded that more attention had to be placed on the cultivation and usage of returnee talents in firms.

Through a case analysis of multinational companies, Thompson (2021) pointed out that the advanced technical knowledge and experience brought by returnees are crucial for companies to adopt new technologies and improve business processes. Anderson (2022) stressed the importance of cross-cultural wisdom in promoting business development; and innovative digital solutions under the needs of multiculturalism. Companies are recommended to strengthen the cultural diversity of the team.

Wu and Guo (2022), combined with Ma and Chen (2019), focused on how returnee employees drive the force of digital organizational innovation through their unique cultural and technical backgrounds. Wu and Guo demonstrated how to strengthen innovation in terms of culture and technology, how to transform enterprises into pioneers with external technology, and how to integrate enterprises with the international market in the most effective way. Chen empirically demonstrated the positive impact of international workers' experience on the implementation of enterprise digitalization, as well as the external experience and new forms of innovation practices of Chinese enterprises.

In studying the role of returnee employees in digital innovation, Johnson and Wallace (2021) provided further insights, investigating how returnee talents through their cross-cultural perspectives and the direct introduction of new technologies and management concepts promoted the formation of an internal innovation environment within companies. They explained how a global perspective on employee feedback can help identify and promote new green manufacturing opportunities and highlight the potential of cross-cultural teams in environmental sustainability.

Finally, Roberts and Smith (2019); Miller and Brown (2020) explored the impact of cultural adaptation and network capital on digital innovation by early entrepreneurs. The former showed how teams with strong cultural capabilities can better meet the needs of users in different regions, while the latter showed how the rich experience and expertise brought by returnee employees from global networks can promote changes in company processes. Overall, these studies highlighted the unique value of using feedback to stimulate knowledge sharing and collaboration and improve innovation capabilities.

1.7.2 Role of Organizational Culture in Innovation Performance

As the digital wave sweeps across the globe, the impact of cultural values such as openness, cooperation, and tolerance of failure on corporate digital innovation capabilities has also become a hot topic in corporate research (Liu, 2020). This shows that corporate culture is, to a large extent, open. IT department collaboration and tolerance for failure can improve a company's innovation and market competitiveness through collaborative information flow. By knowledge sharing and how to test innovations, Wang (2021) then encouraged employees to try changes through a series of case studies, highlighting the positive role of a culture that tolerates failure. From the perspective of open cooperation, Chen (2022) emphasized that the environment is the key to the adoption of new technologies, verifying that the cultural characteristics of the open cooperation dimension

promote organizational innovation in IT enterprises. This highlights the importance of an open culture in attracting external resources and collaboration. Therefore, Smith and Anderson (2019) stated an open culture leads to innovation success. Especially through free information in the field of open technology and other areas that others wish for.

Brown and Miller (2020) suggested that the innovation success of IT companies in a collaborative culture may be primarily facilitated through knowledge sharing and collaboration. Subsequently, Green and Thompson (2021) explored the double-edged sword effect of tolerance for failure culture, noting the necessity of establishing project review and feedback mechanisms to control risks and enhance efficiency while encouraging innovation. Zhao (2021) analyzed the bidirectional effects of organizational culture, emphasizing the need to balance various cultural traits when fostering a culture that promotes innovation, to avoid the inefficient use of resources and decision-making delays.

Zhou and Wu (2022) research showed that cultural diversity within an organization has a significant positive impact on the innovation performance of IT companies, by promoting the creativity and knowledge synthesis of team members from different backgrounds and enhancing the innovativeness of technological solutions. Huang and Zhang (2023) focused on how an open organizational culture accelerates the IT innovation process by promoting knowledge sharing and external collaboration, underscoring the role of an open culture in improving the speed and quality of innovation. Taylor and Morgan (2019), along with Harris and Davis (2020), explored from the perspectives of leadership and cultural diversity how these factors shape a culture that supports innovation, highlighting the importance of cultural diversity in promoting technological innovation and emphasizing the significance of effective communication and management mechanisms in overcoming cultural differences. Finally, Wilson and Carter (2021) explored how effective digital transformation requires nurturing a new organizational culture of agility, flexibility, and

continuous learning, and found that the impact of digital transformation on the organizational culture and innovation performance of IT companies

1.7.3 Organizational Integration and Cultural Adaptation of Returnee Employees

This study explored relevant literature to understand the organizational integration and cultural adaptation strategies of returned employees in IT companies and their impact on corporate innovation performance. Based from a study on cross-cultural communication between Chinese and foreign partners, Chen (2020) pointed out that when foreigners are exposed to international communication, they are more likely to engage in discriminatory international communication. They need good organizational support and a company culture that is as open as possible. Following this, Wu (2021) investigated the identity conflicts and adaptation mechanisms of returnee employees in multinational corporations, finding that returnee employees alleviated identity conflicts by actively learning local culture and participating in cultural exchange activities.

Li (2022) concentrated on the positive impact of overseas returned employees' cross-cultural adaptation on organizational performance, pointing out that the adaptation process was closely related to the resources and support provided by the organization, emphasizing the necessity of cultivating returnee employees' cross-cultural competencies. Johnson (2019) revealed the role of cultural intelligence in facilitating the adaptation of returning employees to new environments, suggesting that companies support employees' adaptation processes by providing cultural intelligence training.

Thompson (2020) focused on the adaptation strategies of overseas returned employees in the field of information technology, identifying key factors such as cultural adaptation training, emphasizing their importance for the smooth transition and performance improvement of returnee employees. Through collecting stories of returnee employees' experiences, Davis (2021) highlighted the importance of effective communication and cultural sensitivity in cross-cultural teams, and cultural diversity.

Zhao and Liu (2019) explored the cultural conflicts and adjustment strategies of overseas returned employees in Chinese enterprises, pointing out that actively learning local culture and establishing two-way communication mechanisms were effective adaptation methods, suggesting that enterprises establish more inclusive organizational cultures. Following this, Ma and Song (2020) analyzed the adaptive challenges faced by returnee employees and how enterprises could help them overcome these challenges through organizational support, emphasizing the importance of developing targeted organizational support strategies.

Huang and Zhang (2021) absorbed the innovative behaviors of overseas returned employees in SMEs (small and medium-sized enterprises) and their relationship with cultural adaptability, finding that the cultural adaptability of returnee employees had a significant impact on their innovative behavior, suggesting that small and medium-sized enterprises pay attention to cultivating returnee employees' insights into local markets. In addition, Smith and Wilson (2019) focused on exploring the experiences of returning professionals in globalized companies, revealed the role of cross-cultural communication skills and diverse professional networks in promoting organizational integration, emphasizing the importance of global human resource strategies for companies.

Brown and Green (2020) engaged the adaptation issues of overseas returned employees in multicultural teams, revealing the effectiveness of adaptation strategies such as active participation in cultural exchanges, suggesting that organizations provide customized support for multicultural teams. Finally, Taylor and Lee (2021) discussed the role of cultural intelligence in the process of accepting returned workers, emphasizing that only by improving the cultural intelligence of returned workers can they successfully integrate and promote their career development. This study showed that the organizational integration and cultural adaptation of returnees are very important for enterprises, especially in the IT industry and also demonstrated the role and responsibility of enterprises.

1.7.4 Career Development and Talent Management Strategies for Returnee Employees

Research showed that returnees face challenges in career development, including cultural fit, career development, and performance management. Effective talent management strategies are essential to unlock the potential of returnees, improve organizational performance, and promote cultural integration. Based on these considerations, this literature review explored the career development and talent management strategies of returnees in IT companies, aiming to provide companies with practical insights to promote their successful integration and development.

Ma (2020) believed that the biggest obstacles to the career development of returnees in Sino-foreign joint ventures include cultural differences and language barriers. However, their international perspective and experience also bring unique advantages to career development. Following this, Li et al. (2021) found that leadership development has a significant impact on the career development of returnee employees, emphasizing that good leadership development programs can improve their satisfaction and

performance, and offering targeted talent management and leadership development recommendations. Chen (2022) focused on performance management and incentive mechanisms, discovering that personalized incentive policies can significantly improve the work performance of overseas returned employees, and highlighting the importance of support for cultural integration. Moreover, Smith (2019) analyzed the career advancement barriers for returnee employees in multinational companies, suggesting companies pay attention to cultural diversity management and provide customized career development plans.

Johnson (2020) explored the role of talent management in supporting the reintegration of overseas returned employees into the workplace, emphasizing the importance of clear career path planning and personalized development plans, as well as the role of leadership development in motivating returned overseas employees. In addition, Mille (2021) focused on the impact of performance management on retention strategies, pointing out the need for a more flexible and inclusive performance evaluation system. Moreover, Zhao and Li (2019) explored methods for companies to cultivate the innovative abilities of returned overseas employees, emphasizing the importance of an innovation culture and diverse teams. Wang and Zhou (2020) studied the impact of cross-cultural adaptability on work performance, suggesting the provision of more cross-cultural training and support.

Huang and Zheng (2021) focused on the role of overseas returned employees in knowledge transfer, proposing the establishment of an open and collaborative knowledge-sharing mechanism. Thompson and Connor (2019) discussed the challenges of integrating overseas returned employees into leadership roles and recommending customized leadership development programs. Martinez and Brown (2020) researched the impact of career support systems on job satisfaction, suggesting the design of personalized career development plans. Green and Wilson (2021) focused on the role of performance management, proposing a flexible and inclusive performance management framework to retain returnee employees. These studies indicated that talent management strategies should focus on cultural differences and the needs of individuals, which can be supported and developed among returnee employees for more effective career development and organizational performance.

1.7.5 Human Resource Challenges in Digital Transformation

With the acceleration of global digital transformation, IT companies are facing unprecedented workforce challenges from skill enhancement to changing corporate culture. Each link is key to the sustainable development of the enterprise. Recent research focuses on these challenges and their impact on returnee employees, especially in terms of appropriate skills, cultural fit, and professional development and shows how the company can meet these challenges through innovative human resources management techniques to make full use of returning employees. Experience in promoting digital innovation and cultural improvement and wish. This literature review aimed to summarize these findings, offering insights and strategies for IT companies facing human resource challenges in digital transformation.

Li (2020) delved into the challenges of skill upgrading and organizational transformation brought by digital transformation to IT companies' human resource management, particularly the difficulties in cultural adaptation and team integration faced by overseas returnees, suggesting the establishment of an open and inclusive culture and strengthened cross-cultural communication. Zhao (2021) focused on the skill gap and low

employee engagement issues, emphasizing the need for companies to update employee skills and boost motivation through incentive mechanisms, recommending collaboration with universities, and providing lifelong learning opportunities.

Zhou (2022) analyzed the impact of digital transformation on human resource management through case studies, highlighting the challenges of organizational culture adaptation and career development planning faced by repatriated employees, and proposing targeted training and flexible working models. Moreover, Smith (2019) examined the effect of organizational culture transformation on employee engagement and loyalty from the perspective of international IT companies, suggesting the adoption of humane management approaches and digital tools to enhance communication and collaboration.

Williams (2020) explored the role of employee engagement in maintaining the competitiveness of IT companies, emphasizing the importance of an open and inclusive work culture and teamwork, proposing that leadership should value employee voices and provide development opportunities. Brown (2021) highlighted the shift in employee skill demands due to emerging technologies, suggesting investment in employee education and career development programs.

Chen and Wang (2022) studied the impact of digital tools like cloud computing and big data analytics on innovative human resource management, suggesting a flexible and open working environment to facilitate knowledge sharing. Liu and Guo (2021) analyzed the adjustment of talent management strategies for attracting and retaining key talent, emphasizing the importance of personalized career planning and cultural integration.

Huang and Zhao (2023) focused on the role and challenges of repatriated employees in digital transformation, proposing career support and cultural adaptation training. In addition, Johnson and Davis (2020) discussed the role of human resources in technological industry transformation, emphasizing the need for the HR department to adopt innovative

approaches to cope with technological environmental changes.

Anderson and Thompson (2021) examined the challenges and opportunities faced by global IT enterprises in human resource management, emphasizing the importance of skill enhancement and organizational culture transformation. Baker and Wilson (2022) explored the integration issues of repatriated talent, suggesting that HR departments need to develop personalized talent management strategies. These studies jointly revealed the multiple challenges faced by human resources in digital transformation, in particular, the unique needs and contributions of repatriated employees, underscoring the importance of developing adaptive talent management strategies.

1.7.6 Interactions of Returnee Employees in the Global Innovation Ecosystem

As the globalization process accelerates, overseas talents have become an important link in connecting global innovation and ecology. With their international vision and expertise, they play a unique role in promoting cross-border knowledge exchange, technology transfer and cultural integration. However, the interactions of returnee employees within the global innovation ecosystem have not only presented opportunities but also posed challenges such as cultural adaptation and career development. This review aimed to explore how returnee employees have promoted the global flow of knowledge and technology through their international experiences and networks, and how they have overcome the challenges faced.

Zhao (2020) emphasized the importance of overseas returned talents in promoting knowledge exchange through the establishment of cross-border professional networks such as proposing optimizing policies and strengthening network connections, exploring how returned talents have promoted international technology and management experiences in local enterprises, facilitating the development of local innovation ecosystems, and suggesting that local governments should formulate targeted policies to attract returned talents. Huang (2022) further explored how returned talents have accelerated knowledge transfer through the construction of cross-cultural networks, highlighting the role of cross-cultural competencies and recommending enhanced support for social integration. Moreover, Carter (2019) studied the role of foreign professionals in promoting innovative applications in local markets, emphasizing the importance of cross-cultural cooperation and environments for exchange and collaboration.

Smith (2020) investigated how returned entrepreneurs have used their overseas experience to promote local innovation, highlighting their key role in connecting local and international markets and stressing the necessity of developing cross-cultural management and network-building skills. On the other hand, Johnson (2021) analyzed the dual role of returned scientists in the biotechnology sector, proposing that supporting transnational cooperation projects could strengthen the connection between global innovation networks and local ecosystems. Wu and Yang (2022) focused on the role of overseas returned talents in helping local governments attract international resources, emphasizing the importance of policy support. Chen and Liu (2021) explored how returned talents have improved the innovation culture of local enterprises, pointing out the significance of cultural integration.

Huang and Xu (2023) focused on the bridging role of returned talents in cross-cultural teams, suggesting that companies should value team building to promote innovation. Williams and Thompson (2022) studied the collaborative role of returned professionals in global innovation networks, emphasizing the construction of cross-cultural teams and the importance of international cooperation. Johnson and Peterson (2021) explored the role of returned talents in the field of sustainable development, emphasizing the importance of integrating the skills of returned talent with local needs. Finally, Green and Hughes (2023) investigated the impact of returned talent networks on the local innovation capacity of emerging markets, suggesting leveraging the global network resources of returned talents to accelerate the development of innovation ecosystems. These studies collectively revealed the unique role and challenges faced by returned talents in the global innovation ecosystem, emphasizing the importance of utilizing their cross-cultural and professional advantages in promoting the development of innovation.

1.8 Synthesis

After reviewing a series of literature on the role of returnee employees in digital innovation, the impact of organizational culture on innovation performance, organizational integration and cultural adaptation of returnee employees, career development and talent management strategies and the challenges of human resource management in the process of digital transformation, the following key similarities and differences were summarized.

Firstly, regarding the unique value of returnee employees, the critical role of organizational culture, and the challenges of cross-cultural adaptation of returnee employees as well as their importance in the IT industry, the literature generally agreed that Returnee Employees bring new ways of thinking and innovative momentum to enterprises with their cross-cultural backgrounds and international experience. This aligns with the perspective of the current study, which posited that the international outlook

and advanced technological knowledge of returnee employees are key to driving corporate technological innovation and market competitiveness. However, despite the extensive literature emphasizing the innovative contributions of Returnee Employees, there was a relative lack of in-depth exploration on how to quantify these contributions and how innovation capabilities specifically affect corporate performance. This point was further elaborated and analyzed in the current research.

Secondly, all studies explored the relationship between overseas returned employees and innovation but they differed in focus. Some were concentrated on the individual level such as cross-cultural adaptation and career development of overseas returned employees, while others focused on the identification of Challenges and Opportunities at the organizational level such as talent management strategies and the impact of organizational culture on innovation performance. Additionally, there were differences in research methodologies. Some studies were focused on employing qualitative methods like case studies and in-depth interviews to explore the individual experiences and feelings of overseas returned employees while others attempted to measure the specific impacts of cultural adaptation, talent management strategies, etc., on organizational innovation performance through quantitative analysis.

Lastly, through comparison and analysis, while existing literature provided valuable insights into understanding the innovation capabilities of returnee employees and the impact of organizational culture on the innovation process, there were certain limitations, especially in the specific mechanisms of innovation capabilities, organizational culture adjustment strategies, and comprehensive assessment of digital innovation performance. This study aimed to fill this gap. From the perspective of considering maximizing the potential of Returnee Employees, companies need to recognize and actively address the challenges of cultural adaptation and career development, implement effective talent management strategies, build a sound organizational culture, and provide a supportive and innovative environment for their development.

1.9 Theoretical Framework

1.9.1 Cross-Cultural Adaptation Theory

The origins of cross-cultural adaptation theory can be traced back to the 1960s and 1970s when social scientists began to focus on how individuals adapt to different cultural environments. American communication scholar Young Yun Kim conducted in-depth studies on cross-cultural adaptation in the 1970s and proposed a systematic framework for cross-cultural adaptation theory. Young Yun Kim's theory highlights that cross-cultural adaptation is a dynamic communication process involving individuals' stress, learning, and adaptation to a new cultural environment. With the deepening of globalization and the increase in international talent mobility, cross-cultural adaptation theory has been further developed and applied in the 21st century. Researchers have started to pay more attention to individuals' subjective experiences, the construction of cross-cultural competence, and in-depth discussions on the impact of cross-cultural adaptation at both individual and organizational levels. Especially in the fields of international business and global human resource management, cross-cultural adaptation theory has provided significant theoretical support for understanding and cooperation in cross-cultural teams.

Cross-cultural Adaptation Theory delves into how individuals can effectively communicate and behave in new cultural environments through learning and adaptation. For employees returning from overseas, this theory helps understand how they integrate the knowledge and experience gained abroad into the local culture and apply it at work. According to this theory, the cross-cultural adaptation abilities of overseas returned employees mainly include cultural knowledge, cultural skills, and cultural awareness. Cultural Knowledge involves understanding cultural norms and expectations in the work environment. Cultural Skills refer to the ability to communicate effectively in cross-cultural interactions. Cultural Awareness means being aware of one's own cultural biases and standpoints and being able to understand cultural differences from a macro perspective.

These three aspects were closely related to the innovation capabilities of Returnee Employees and their performance in organizational innovation. As mentioned before, a deep understanding of both domestic and foreign cultures by Returnee Employees could facilitate the generation of new ideas, while effective cross-cultural communication skills helped these ideas to be understood and accepted within the organization. Cultural awareness could enhance collaboration with local colleagues, reduce cultural conflicts and thus improve the overall team's innovation performance.

In the context of IT companies in Guangzhou, cross-cultural adaptation theory is particularly important for understanding and enhancing the digital innovation performance of Returnee Employees, helping the researcher understand how Returnee Employees promote digital innovation in IT companies through their unique cross-cultural experiences and how to enhance innovation performance by improving organizational culture.

1.9.2 Social Identity Theory

Social Identity Theory was initially proposed by psychologists Henri Tajfel and John Turner in the 1970s. The theory aimed to explain how individuals define their identities based on the groups they belong to such as race, religion, occupation, etc., and how this social identity affects their behaviors and attitudes. The core idea of this theory is that an individual's self-concept is derived in part from his identification with a social group, which affects interactions with social group members and their attitudes and behaviors.

Social Identity Theory has been developed and expanded. Turner later developed the self-categorization theory which applied the concepts of social identity theory to a wider range of social psychological phenomena and emphasized how individuals organize their identities through the function of different group norms of others in different contexts. Entering the 21st century, social identity theory continues to be applied to different fields such as organizational behavior and cross-cultural research, exploring topics such as inter-

group conflict, social cooperation, and individual change in a multicultural environment.

The theory explains how individuals form identities based on groups such as government, business, professional practice, etc. This study uses social identity theory to understand how the digital skills of returned employees are formed, how their identities differ from their local counterparts, and how this identity affects their new behaviors and integration into the organizational culture.

Individual and Team Identity: returnee employees might seek a balance between individual identity and team identity, which will affect their collaboration and innovation at work. Organizational identity: The sense of identity that returning employees experience within the organization will affect their commitment to corporate goals, thereby affecting the initiation and success of innovation activities. Professional identity: at the professional level, the sense of identity of returnee employees can lead to closer communication with colleagues, thereby promoting knowledge sharing and improving the success rate of innovation.

Social Identity Theory provides a solid theoretical framework to help us understand how returnee employees interact with organizational culture through their group identity and how this affects their innovative behavior in the digital innovation process. Meanwhile, organizational culture as an environmental factor that shapes identity, can further strengthen or weaken these relationships. A good organizational culture can provide a positive environment to promote employees' positive identity construction, ensure that returning employees have a sense of belonging and identification with the organization, and enable them to return to work. On the contrary, if the organizational culture is hostile to diversity and change, it will weaken the sense of belonging of returning employees, thereby hindering the expression of new behaviors. This study will explore how organizational culture affects the social identity construction of returned employees and how this process further affects innovation performance, providing strategic suggestions for IT companies to improve their innovation performance and organizational culture.

1.10 Conceptual Framework

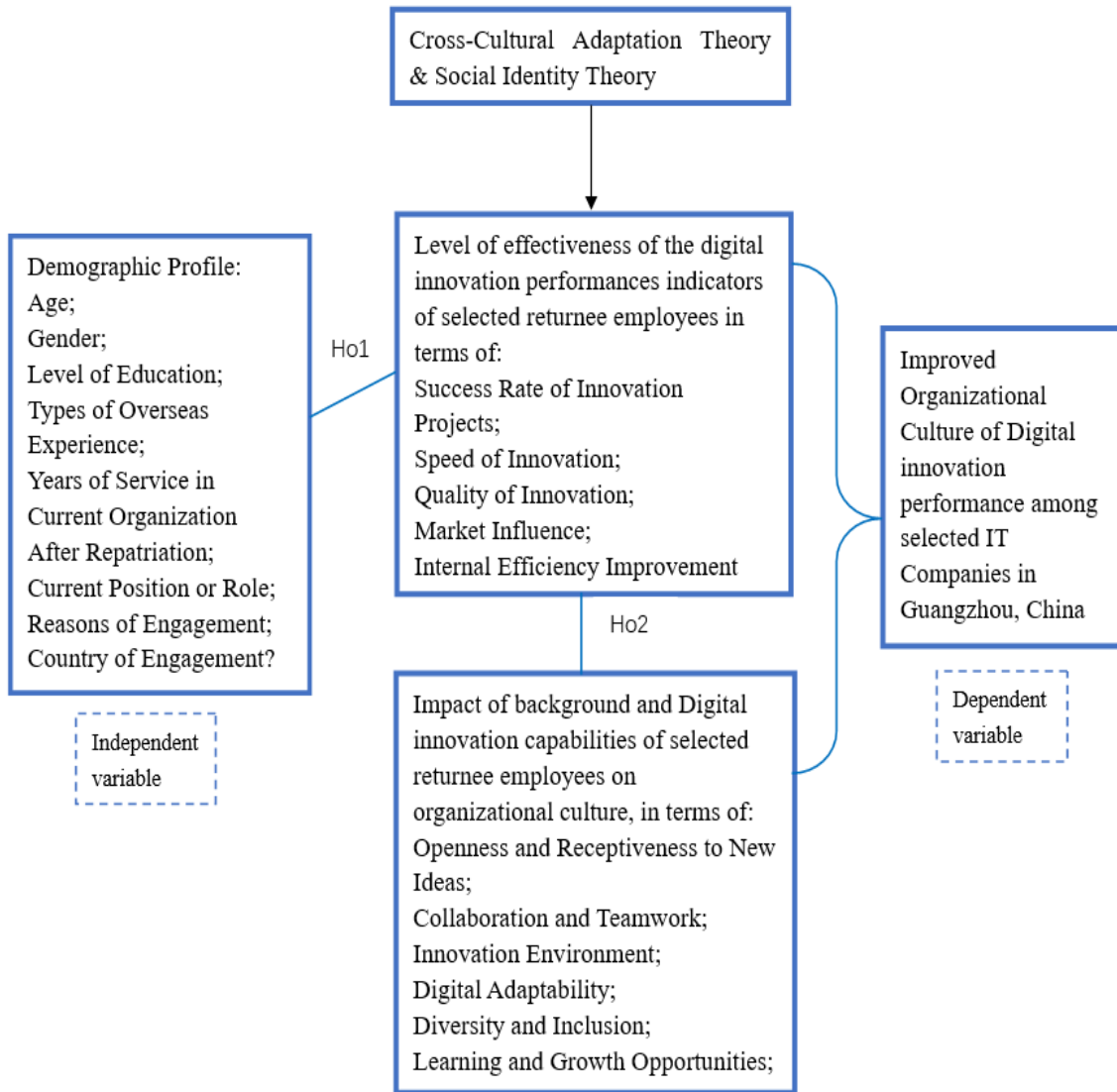
The conceptual framework of this study combined the two main theories which are cross-cultural adaptation theory and social identity theory that served as the basis for analyzing the impact of culture and identity on the power of organizational context innovation.

This study examined various demographic variables including age, gender, education level, type of overseas experience, years of work after repatriation, and current job or role. These demographic factors were expected to affect innovation performance. Digital performance was evaluated through several key parameters such as the success rate, speed, quality, market impact, and internal efficiency of improvement of innovation projects. In addition, this study also emphasized the impact of some factors on organizational culture, such as opening and accepting new ideas for innovation projects, collaborative teams, innovative environments, digital adaptability, diversity, and learning and growth opportunities.

The ultimate goal expressed in this context was to form a culture of organizational innovation activities and create an environment conducive to innovation, collaboration and coordination, thereby promoting the continuous development of technological innovation competitiveness in the IT industry and adapting to the rapidly changing organizational environment. This study aimed to provide useful information for the development of digital innovation performance and organizational culture in the IT industry in Guangzhou, China. The applied theory helped to better analyze the relationship between the personal characteristics of returnee employees, innovation capabilities, and organizational culture.

Figure 1

Author's Conceptual Framework



CHAPTER 2

METHODS

2.1 Research Design

This research utilized a quantitative descriptive research design to gain a deeper understanding of the digital innovation performance of returnee employees from the selected 25 IT companies and their impact on organizational culture. It involves collecting and analyzing numerical data, describing and explaining specific conditions or phenomena in accordance with the objectives of this study, quantifying the innovation performance indicators of returned employees and organizational culture effectiveness and studying the relationship between them.

Firstly, a questionnaire was prepared to collect basic and professional information about the selected returned employees, including age, gender, education level, type of foreign experience, years of service and position in the current organization, reason and country of engagement, etc. Descriptive statistical analysis, including frequency distribution and percentages, was utilized to present this data.

Secondly, a scale with a 4-point Likert scale was utilized to assess the innovation capabilities and performances. Indicators such as the success rate of innovation projects, speed of innovation, quality of innovation, market impact, and internal efficiency improvements were assessed. Descriptive statistical analyses including weighted mean and standard deviation were utilized to evaluate digital innovation performances.

The third was to examine potential differences in digital innovation performance based on background and capabilities ("Assessing differences in digital innovation performance indicators of selected returnee employees when grouped according to their profile variables"), using ANOVA. This statistical method helped in identifying significant variations in performance across different profile variables.

The fourth was to evaluate the effectiveness of selected returnee employees' digital innovation performance affecting the organizational culture of factors such as openness and acceptance, Collaboration, Digital Adaptability, etc. A 4-point Likert scale was utilized to assess these factors.

Multiple regression analysis was employed to examine significant relationships between digital innovation performance assessments and the effect of organizational culture to reveal the significant relationships between variables.

Throughout the research process, measures ensured rigor and consistency in data collection and analysis to uphold reliability and validity. Ethical standards and guidelines were followed to safeguard participant anonymity and data confidentiality. Through this research design, the study aimed to offer quantitative evidence on the role and impact of selected returnee employees in IT companies, providing data-driven insights for management to enhance human resource management and foster positive organizational culture development.

2.2 Data Management

2.2.1 Data according to Source

In this study, the data were mainly be sourced from the original data collection among selected returnee employees in IT companies in Guangzhou through meticulously designed questionnaire survey. The design of the questionnaire included a series of questions aimed at collecting participants' basic information, professional backgrounds, digital innovation capabilities and their views and experiences on organizational culture. The questionnaire was distributed through the online platform 'Questionnaire Star', which was convenient for increasing the response rate and ensuring the efficiency and breadth of data collection.

Participants were selected returnee employees through a targeted sampling method. The target group was IT companies workers who studied or worked abroad and now working in Guangzhou after returning to China. Designing selection criteria to ensure that participants could provide unique insights and rich experience in cross-cultural adaptation, innovative behavior, and interaction with organizational culture, and ensuring the diversity and representativeness of the sample, this study covered IT companies of small and medium sizes from start-ups to large and medium-sized companies, and positions of different levels and functions from ordinary employees to senior managers.

A pre-test was conducted to evaluate the comprehensibility and relevance during the questionnaire design stage. Time efficiency of the questionnaire to ensure that the final draft questionnaire can accurately and efficiently obtain the required data. Feedback from the pilot helped the study optimize the questionnaire's structure and content, ensuring the clarity and pertinence of the questions and improving the reliability and quality of the data.

The collected data included the participants' educational backgrounds, types and durations of overseas experiences, years of work in the current IT company after returning to the country and their current positions or roles within the company. This information not only provided a basis for analyzing the innovation capabilities and organizational culture adaptation of the selected returnee employees but also provided important background information for understanding how they transform their overseas experience into innovative contributions to the organization. In this way, the study obtained detailed and accurate data on the digital innovation performance of returnees in IT companies and their impact on organizational culture, thus provided a solid foundation for the analysis and interpretation of subsequent research results.

2.2.2 Data according to Methods

This study adopted quantitative research to collect data. Data were collected through surveys. This method helped in collecting standardized information effectively from a large number of participants which is conducive to subsequent statistical analysis. This allows for a quantitative assessment of the digital innovation performance of selected returnees and their impact on corporate culture. The survey design included three parts which aimed to collect comprehensive data such as participants' background information, professional background, digital innovation practices, and company culture perceptions. To ensure the validity and reliability of the survey, the researcher conducted a pilot test before officially distributing the survey and adjusted it to optimize the content based on feedback.

This study utilized Questionnaire Star as the online survey platform. Questionnaire Star is a widely popular online survey tool that provides an easy-to-use survey design interface, a variety of question type options, robust data collection capabilities, and convenient data export functions. With Questionnaire Star, the researcher was able to quickly create online surveys and distribute the survey links to target participants via email or social media links.

Once participants had completed the surveys, the data provided was automatically collected into the backend database of Questionnaire Star, facilitating subsequent data extraction and analysis in my research. The use of an online survey platform not only increased the efficiency of data collection but also ensured the integrity and accuracy of the data. Furthermore, conducting surveys via an online platform helped reduce research costs, expand the coverage of the survey, and make the data collection process more environmentally friendly.

2.2.3 Data according to Form

In this study, the collected data were primarily presented in the form of quantitative numerical data, which were obtained through carefully designed questionnaire surveys. Each question in the questionnaire aimed to quantify specific attributes or perceptions of selected returnee employees, such as their professional background information, digital innovation capabilities and perceptions of organizational culture among others. Most questions in the questionnaire adopted a closed format, for example, using Likert scales to assess participants' degree of agreement with a statement, ranging from "strongly disagree" to "strongly agree." This format facilitated the conversion of participants' responses into numerical data, for instance, coding "strongly disagree" as 1 and "strongly agree" as 4, thereby quantifying participants' opinions.

The questionnaire data were automatically recorded and summarized through an online survey platform. Each completed questionnaire was assigned to a unique identifier

to ensure the anonymity and privacy of the data. The Questionnaire Star online platform offers a data export function for the researcher's subsequent data analysis, allowing to export the collected data into spreadsheet formats, such as CSV or Excel files.

In the exported data file, each row represented the survey participant's response, and each column corresponds to a survey question. The exported data were cleaned and preprocessed, including checking for missing values, outliers, and consistency errors, and performing appropriate data transformations when necessary. In addition, the data were aggregated and summarized for descriptive and inferential statistical analysis.

Through these steps, quantitative numerical data were systematically recorded, coded, and stored, providing an accurate and reliable database for the study. Subsequent processing and analysis of these data revealed key insights into the innovation capabilities and organizational cultural adaptation of the returnee employees, thus providing strong support for understanding their role in digital innovation.

2.2.4 Data Processing and Protection

This study adopted a series of strict measures in data processing and protection, ensuring the privacy and data security of participants. First, all data collected in the survey were anonymous to ensure that the privacy of the participants was protected. This meant that no information directly identifying participants was recorded during data collection and analysis.

Regarding data storage, all electronic data were stored on encrypted and password-protected electronic devices that only the researcher could access. In addition, all sensitive data were stored on secure servers or cloud storage services that meet data protection standards to prevent unauthorized access and data leakage. For data analysis, this study selected widely recognized statistical software tools SPSS for data processing and analysis. SPSS is not only simple and easy to use but also powerful, supporting a variety of statistical analysis methods and is suitable for handling the complex data analysis tasks required for this study.

To ensure the efficiency and reliability of data analysis, the data underwent a lot of preprocessing before analysis, appropriate statistical tests that match the research hypothesis and design for statistical analysis, and the analysis method based on the data distribution characteristics and sample size. Additionally, further sensitivity analyses were conducted as necessary.

2.3 Sampling Design

2.3.1 Sample Population

This study aimed to explore the performance of selected returnee employees in digital innovation and their impact on organizational culture. The Guangzhou Huadu District Small and Medium Enterprises Culture Promotion Association had more than 1,500 member companies, including 408 IT SMEs (small and medium-sized enterprises). This study selected 25 representative small and medium-sized enterprises in the IT industry. The target samples consisted of 235 selected returnee employees from the 25 selected IT companies. By pre-identifying their returnee status and confirming that they were currently working in the IT company of Guangzhou, as research subjects. These selected IT SMEs were of a wide range of types and sizes, from start-ups to small and medium-sized multinational companies, providing comprehensive and representative data. The target sample included returnees with international experience from selected IT companies who are considered to play a key role in driving digital innovation and cultural integration due to their unique experience and transformation skills.

To avoid bias in the sample size definition and ensure the wide applicability and correctness of the research results, 235 returnee employees were selected as target respondents in this study. The purposeful sampling research method helped to reduce sampling errors and improve the reliability of research results. In addition, in-depth research on this group helped to understand the specific characteristics, needs and contributions of the selected returnees, thereby affecting the transformation and development of organizational culture in IT companies.

With the help of a carefully designed questionnaire, the innovation capabilities of the selected returnees, their views on organizational culture and how to integrate the experience gained abroad into innovation practices were understood. The overall reliability of the survey provided valuable insights and data support for understanding the impact of digital innovation and cultural development on the digital innovation of selected returnees.

2.3.2 Respondents

The selection of the analysis object was relatively important. This study selected 235 returnee employees from 25 IT companies' representatives, who had experience and potential in digital innovation and cultural organization in the field of IT companies. These returnees made full use of cross-cultural knowledge and experience in daily life to continuously promote the development of culture and education.

Several key factors were considered when selecting participants to ensure the diversity and completeness of the sample. First, the IT companies involved companies of different sizes and types, allowing the study to cover a wide range of organizational environments and cultural backgrounds. Secondly, the participants covered different levels of returnee employees from simple technicians to middle and senior managers, providing insights into organizational culture and innovation processes from different perspectives and levels. In addition, the participant's education level, professional field, and foreign experience were also taken into account. The purpose was to create a sample that fully reflects the diversity of the selected returnees.

This research participant selection strategy not only helped to gain a deeper understanding of how returnees influence and contribute to digital transformation and organizational culture development but also provided a solid foundation for studying the

role and contribution of returnees in the transformation activities of various IT companies. IT companies also obtained comprehensive information on the role of returnees in promoting change and organizational culture development, as well as practical insights and strategic recommendations for management.

2.3.3 Research Instrument

To measure the digital innovation performance level of the selected returnee employees in this study and their impact on organizational culture, the researcher used this own questionnaire as the main research tool. A questionnaire was designed according to the needs of the research questions to collect relevant information such as the background of the returnee employees, innovation effectiveness and impact on organizational culture.

The questionnaire was divided into three parts. The first part collects general information about the respondents, including age, gender, education level, type of overseas experience, years of service in the current organization after returning, current position or role in the organization, reason and country of engagement. The second part examined the digital innovation performance of returned employees in Guangzhou IT companies. This chapter focused on the success rate of innovation, the speed of change, the quality of change, market impact, and internal efficiency improvement. The third part examined the performance of the digital performance of returnees in the organization and examined how they integrated their overseas experience into their work to contribute to and influence organizational culture change. This section aimed to outline the actual impact of digital innovation in the IT field on organizational culture.

The questionnaire was carefully designed to ensure that the language used is clear and easy to understand and that its format is respondent-friendly and easy to complete online. To ensure the validity and reliability of the questionnaire, preliminary analysis and validation were conducted including the use of Cronbach's α to evaluate the internal consistency of different questionnaire items. The prediction results showed that the questionnaire had good reliability and convergent validity in measuring the expected variables, providing a solid foundation for the final analysis and survey results.

2.3.4 Control Procedure

To ensure the validity of the questionnaire in terms of content, logical flow, sequence, and grammar, this study introduced strict control procedures, especially the validation of the questionnaire instrument through pre-testing. Prior test is an important step in research design, which not only helps to identify and solve potential problems but also improves the overall quality and reliability of the questionnaire.

During the pre-testing process, at least 30 respondents were selected who were similar to the actual research audience and had similar background characteristics to the target sample population, such as professional experience in the Guangzhou IT industry and academic or professional background abroad. Such selection criteria ensured that the pre-testing can be conducted in a context similar to the actual survey environment, thereby improving the practicality and relevance of the prior test. During this period, respondents were invited to complete the questionnaire and provide feedback, including clarity of question-wording, structure, and rationale of the questionnaire, likelihood of grammatical errors in responses, and time required to complete the questionnaire.

Based on the results of prior testing, adjustments were made to the questionnaire as necessary. This included simplifying the wording of complex or unclear questions, adjusting the order of questions to improve arguments, and correcting grammatical and spelling errors. In addition, the length of the questionnaire was adjusted based on the feedback from respondents to ensure that the necessary information was adequately collected without being too long to tire respondents. It should be noted that respondents participating in the pre-test were not included in the actual survey sample to avoid the influence of the prediction on their answers. Through this control method, the validity and reliability of the questionnaire in actual application were guaranteed, laying the foundation for high-quality data collection.

2.4 Statistical Treatment

When discussing the research issues involved in this study, a series of carefully selected statistical methods were used to analyze the collected data. These statistical procedures not only aided in gaining a deeper understanding of the performance of selected returnee employees in digital innovation and organizational culture integration but also revealed how various factors influence this process. Below is an overview of the statistical methods employed for each research question.

Collection of basic and professional background information of selected returnee employees, descriptive statistical analysis specifically frequency distribution and percentages were primarily used to process the data, including the age and years of work experience of the surveyed selected returnee employees. This method helped to reveal the basic characteristics of the selected

returnee employee group, providing background information for further analysis of their innovation capabilities and organizational culture adaptability.

For the research question "The digital innovation capabilities of selected returnee employees and their performance," the mean and standard deviation were used to calculate the performance of surveyed selected returnee employees in terms of digital innovation capabilities such as the success rate of innovation projects, speed of innovation, etc. Through descriptive statistical analysis, an understanding of the overall abilities and performance levels of selected returnee employees in digital innovation were gained.

To address whether significant differences exist in the assessment of digital innovation performances among selected returnee employees, an analysis of variance (ANOVA) was conducted. This statistical method enabled the comparison of mean performance scores across different profile variables, such as age, education level, and types of overseas experience.

To determine the level of agreement of selected returnee employees on organizational culture, the average and standard deviation were used to evaluate their views on various aspects of organizational culture (such as openness to new ideas, collaborative teamwork, innovation orientation, etc.). This helped to quantify the extent of selected returnee employees' identification with and impact on various dimensions of organizational culture.

The exploration of significant relationships between the assessment of digital innovation performances among selected returnee employees and the effect of organizational culture involved Multiple Regression analysis. This statistical technique analyzed the strength and direction of relationships between Independent and dependent variables, elucidating how innovation effectiveness indicators (success rate, speed, quality of innovation, market influence, and internal efficiency) correlate with the effect of Organizational Culture.

Through the application of the aforementioned statistical methods, this study was able to comprehensively analyzed the digital innovation performance of selected returnee employees in IT companies and their impact on organizational culture. These analyses provided quantified evidence for understanding the role of selected returnee employees and offer data support for IT company management and HR talent development strategies.

2.5 Ethical Considerations

2.5.1 Conflict of Interest

This study conducted a comprehensive assessment of conflicts of interest before starting the study and developed appropriate management measures to ensure the fairness of the research process and the objectivity of the research results. To increase transparency, all potential conflicts of interest in research reports and published articles were publicly disclosed. This measure was not only conducive to increasing public trust in research results but also conducive to ensuring the fairness of decision-making during the research process and the reliability of research results. Further, it ensured that the research results can bring real value and progress to society.

2.5.2 Privacy and Confidentiality

In conducting this study, the researcher attached great importance to the confidentiality of the participant's data to ensure that all information collected was kept strictly confidential. All information obtained through the questionnaire were maintained anonymous, and all electronic data were stored on a password-protected computer system. At the same time, appropriate security measures were taken to protect confidential document information and stored it in a locked cabinet that only the researcher can access. In addition, the researcher provided participants with complete information and consent forms to ensure that participants understand how their data will be collected, used, and protected, as well as their right to withdraw participation and data at any time. These terms contained specific confidentiality mechanisms designed to minimize the risk of intrusion into participants' privacy while ensuring the security of research data and the integrity of the research process.

2.5.3 Informed Consent Process

The informed consent process was essential to ensure that all respondents understood the purpose, procedures, risks, and rights before participating in this study. To this end, a detailed consent form was prepared that includes all information related to the study to ensure that participants understand its contents. Participants were given ample time to read the informed consent form and have the opportunity to ask questions or express concerns about the study before completing the questionnaire. Data were only collected after participants had clearly expressed their understanding of the study and voluntarily expressed their

willingness to participate. Moreover, the informed consent form clearly stated that participants had the right to withdraw from participation at any time without giving any reason and without suffering any negative consequences.

2.5.4 Vulnerability and Possible Risk

The clause of vulnerabilities and risks was considered to ensure that the implementation of the study would not harm the participants. As the subjects were returnee employees who might face specific psychological and social challenges when repatriating to the local culture work environment, the study was designed to minimize any potential discomfort or stress deficits that might be triggered. Sensitive questions that might evoke unpleasant memories were avoided in the design and communication of the questionnaire, ensuring that all surveys were conducted under the premise of respect. In addition, participants were informed that they had the right to refuse to answer any questions they felt uncomfortable with and that such refusal would not have any consequences for them. All data collection and processing activities during the study strictly followed the principles of data protection. Through responsible research practices, the ethical framework of the research was strengthened, providing a solid foundation for obtaining valid research results.

2.5.5 Recruitment

In this study, the process of recruiting participants adhered to the principles of pre-identified, without any form of discrimination. The recruitment strategy endeavored to cover returnee employees who had returned from abroad and were working in IT companies of all sizes and types in Guangzhou, thus ensuring the diversity and representativeness of the research sample. To achieve this goal, the selected IT companies contacted and confirmed the recruitment information of participants through the Guangzhou Huadu Small and Medium Enterprises Association. The purpose of this study, the rights of participants, the expected participation methods, and confidentiality terms were explained during the recruitment process so that participants could fully understand the study before deciding to participate.

To ensure the willingness of the participants, it was emphasized that participation in the study was completely voluntary and participants could withdraw from the study at any time without any reason. In addition, special attention was paid to identify and avoid undue pressure or influence during the recruitment process to ensure that participants' decisions were based on appropriate information and free choice. Through a responsible and respectful recruitment process, the research created a solid ethical foundation, increased trust between participants and researchers, and created a positive environment for high-quality research and data collection.

2.5.6 Assent

In case the research participants included people with limited intellectual abilities, a special consent procedure was used, even though this research was primarily for returning adults. The researcher also prepared a simplified informed consent document that explains the purpose, methods, risks, and possible benefits of the research in language appropriate to their age and level of understanding.

2.5.7 Benefits

During the research process, the researcher carefully considered the interests of the participants and the wider community to ensure that the research was not only ethical but also provided value to the participants. This study aimed to explore the digital innovation performance of returnees in the IT industry and its impact on organizational culture. Expected outcomes included a deeper understanding of the innovation capabilities of returnees, the promotion of cultural integration, and innovation development.

For returnee employees, participating in this research process was an opportunity to reflect on their return experience, innovation practices, and the promotion of organizational culture. This not only helped them realize their true value but also inspired them to further develop their innovation skills and career development.

For IT companies, this research provided valuable insights to help them better understand the innovation needs of potential returnees, develop more effective talent management and recruitment strategies and promote a successful organizational culture. By understanding the contribution of returnees to digital innovation and its impact on organizational culture, IT companies could better improve their teams, develop employee training programs, and innovation incentive systems to encourage organizational innovation and development and improve innovation effectiveness.

In addition, the results of this study had an impact on academia and practice. By sharing the research findings, this study promoted the selected respondents' understanding of the ability to change and improve organizational culture, provided practical

innovation performance management information and suggestions for a wider range of researchers and practitioners, and thus promoted more inclusive and open organizational culture practice management. In short, this study aimed to ensure that all participants gain real benefits from the research process.

2.5.8 Compensation, Incentives, or Reimbursements

In this study, fair compensation and incentives were provided for participants' time and participation to ensure that participants' cooperation was based on their acceptance of the value of the research, not just a desire to be paid, and that it does not cause problems. Compensation included small monetary rewards, gift cards, or other forms of non-monetary rewards designed to thank participants for their valuable time completing the survey. In addition, direct compensation and incentives such as the opportunity to enter a draw to win a more valuable prize after completing the questionnaire, were also considered. This form of incentive not only added an element of fun to participation but also attracted participants, thereby improving the study response rate and the quality of data.

2.5.9 Community Consideration

In conducting this research, consideration for the community was an indispensable ethical element, aimed at ensuring that the implementation of the research not only respected the rights of individual participants but also took into account the welfare and needs of the involved communities. Given that this study focused on selected returnee employees in IT companies in Guangzhou, community considerations were specifically referred to the professional communities formed by these enterprises and their wide range of stakeholders. Throughout the design and implementation of the research, efforts were made to establish open and transparent channels of communication with these communities, to ensure that community members had a full understanding of the research objectives, processes, and potential impacts.

The research strived to promote positive interaction with the community, respecting and maintaining the overall interests of the community. For example, arranging for questionnaires to be conducted at times convenient for the participants, to avoid disrupting their normal work and life schedules. Meanwhile, it highlighted the potential benefits of the research, such as providing new perspectives on innovative skills and embedding the organizational culture of selected returnee employees, which facilitated knowledge sharing and the promotion of innovative practices within the community. This involved ensuring that the presentation of research findings did not mislead or create harmful stereotypes about community members and that sensitive information related to the publication of research findings was handled appropriately to avoid harm or undue disruption to individuals or communities.

2.5.10 Expected Output

This study took full account of ethical standards when setting expectations to ensure that the results of the study had a positive impact on the participants, the communities involved, and the wider education and practice fields. The main results of the study included an in-depth analysis of the role of returnees in the digital innovation process and a comprehensive analysis of the impact of their integration into the organizational culture.

These insights were shared through academic articles, conference presentations and practical guides to enhance the understanding and application of cross-cultural communication and innovation performance.

Expectations focused on the transparency and accessibility of the research results so that all relevant stakeholders can understand and use them. This study not only provided new research insights into the innovation performance of returnees and the integration of organizational culture but also provided management inspiration for organizations to more effectively tap the innovation potential of returnees, promote innovation development and improve organizational culture. At the same time, by sharing the research results with academia and practice, this study aimed to stimulate more discussion and research and provide new theoretical and practical knowledge. These efforts ensured the ethical responsibility of the research and maximized the social value and impact of the research results.

2.5.11 Collaborative Research Terms of Reference

Collaborative research terms primarily outlined the basic parameters and conditions for collaboration between entities involved in the research project. Firstly, determining the goals and scope of cooperative research to ensure a clear understanding of the research purpose and expected results. Secondly, respecting the cultural backgrounds and perspectives of all participants and ensuring diversity and inclusion in the research process. Last, ensuring that all collaborators have equal rights and

responsibilities in the research process to protect participant privacy and ensure the security and confidentiality of research data while ensuring the integrity of the research process.

This research received institutional support from the Guangzhou Huadu District Small and Medium Enterprises Culture Promotion Association, which provided policy guidance, industry information, and research promotion support. These terms further defined the roles and responsibilities of each participating company, clarifying their respective contributions, including data collection and reporting, ensuring that all parties understand their responsibilities and can work towards common goals.

CHAPTER 3 RESULTS

Chapter 3 presented an overview of the data collected through the survey questionnaire conducted for this study. The presentation of the results in this chapter followed the same order as stated in the research statement of the problem.

3.1 Demographic Profile of the Respondents

Table 1

Profile of the Respondents

Age	Frequency	Percentage
30-35 years old	71	30.2
36-40 years old	77	32.8
41-45 years old	62	26.4
46-50 years old	17	7.2
Above 50 years old	8	3.4
Gender		
Male	135	57.4
Female	100	42.6
Level of Education		
College Degree graduate	112	47.7
Bachelor's Degree graduate	90	38.3
Vocational Education	22	9.4
Master's graduate and above	11	4.7
Type of Experience Overseas		
Corporate Management/Executive Roles	111	47.2
Research and Development/Technical Positions	44	18.7
Sales and Marketing/Business Development	69	29.4
Teaching/Education	9	3.8
Healthcare/Medical Profession	2	.9
Years of Service in Current Organization After Repatriation		
1-5 years	184	78.3

6-10 years	51	21.7
Current Position or Role		
Software Engineer	18	7.7
Project Manager	44	18.7
Data Scientist	23	9.8
UX/UI Designer	30	12.8
IT Consultant	116	49.4
Cybersecurity Analyst	4	1.7
Reasons of Engagement		
Application of Skills and Knowledge	134	57.0
Professional Growth	46	19.6
Cultural and Personal Connections	39	16.6
Impact on Local Industry	16	6.8
Country of Engagement		
United States	9	3.8
Canada	67	28.5
Australia	23	9.8
Singapore	73	31.1
Japan	63	26.8

Table 1 presented an overview of the demographic characteristics of the respondents. The majority, 77 respondents (32.8%), were between 36-40 years old, indicating that mid-career professionals were most prevalent in the dataset. This age group typically combined significant experience with a high potential for leadership roles, contributing actively to innovation and strategic decision-making (Smith, 2021). Additionally, 57.4% of respondents were male, and a large portion (47.7%) had a college degree. This educational background suggested a diverse range of professional experiences that enrich organizational culture and innovation processes.

In other aspects, the smallest groups were those aged above 50 years (3.4%) and individuals engaged in healthcare/medical professions (0.9%). These smaller groups reflected niche areas of expertise that influenced specific innovation capabilities but were less represented in the overall population. The limited number of older respondents and no respondents who had been in their current positions for more than 10 years indicated early retirement trends in the IT industry or career shifts, impacting organizational knowledge continuity.

3.2 Effectiveness of Digital Innovation Performances Indicators of Selected Returnee Employees in Selected IT Companies in Guangzhou

3.2.1 Success Rate of Innovation Projects

Table 2.1 showed the effectiveness of digital innovation performance indicators of selected returnee employees in terms of the success rate of innovation projects. This analysis highlighted the areas where employees consistently delivered successful projects, and actively contributed to increasing success rates.

Table 2.1

Effectiveness of Digital Innovation Performances indicators of selected Returnee Employees in terms of Success Rate of Innovation Projects

Success Rate of Innovation Projects	WM	Verbal Interpretation
I consistently deliver successful innovation projects that meet or exceed expectations.	3.64	Strongly Agree
My track record in innovation projects demonstrates a high success rate.	3.63	Strongly Agree
I actively contribute to increasing the success rate of innovation projects within the company.	3.73	Strongly Agree
My innovative contributions have positively impacted the success rate of projects.	3.66	Strongly Agree
I am instrumental in ensuring the success of innovation projects through my expertise and dedication.	3.66	Strongly Agree
Composite Mean	3.66	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The top three highest means indicated strong agreement that respondents contributed to the success rate of innovation projects: "I actively contribute to increasing the success rate of innovation projects within the company" (3.73), "My innovative contributions have positively impacted the success rate of projects" (3.66), and "I am instrumental in ensuring the success of innovation projects through my expertise and dedication" (3.66). These high scores suggested that returnees played critical roles in driving successful outcomes, supported by theories emphasizing the impact of individual expertise and dedication on project success (Kanter, 2023).

The lowest means, although still high, point to slightly less emphasis on specific project outcomes: "My track record in innovation projects demonstrates a high success rate" (3.63) and "I consistently deliver successful innovation projects that meet or exceed expectations" (3.64). This indicated that while returnees were confident in their contributions, there might be variability in perceived outcomes, highlighting the need for continuous performance tracking and improvement (Gersick, 2021).

Overall, the composite means of 3.66 strongly agreed with the effectiveness of returnee employees in contributing to successful innovation projects, emphasizing the importance of leveraging their expertise for sustained organizational growth.

3.2.2 Speed of Innovation

Table 2.2 showed the effectiveness of digital innovation performance indicators of selected returnee employees in terms of the speed of innovation. This analysis highlighted the areas where employees excelled in rapidly innovating and bringing ideas, staying ahead, and meeting tight deadlines.

Table 2.2

Effectiveness of Digital Innovation Performances indicators of selected Returnee Employees in terms of Speed of Innovation

Speed of Innovation	WM	Verbal Interpretation
I am adept at rapidly innovating and bringing ideas to fruition.	3.46	Strongly Agree
My ability to innovate quickly enables me to stay ahead of competitors and market trends.	3.66	Strongly Agree
I actively participate in accelerating the pace of innovation within the company.	3.62	Strongly Agree

I consistently meet tight deadlines and deliver innovative solutions promptly.	3.66	Strongly Agree
My commitment to fast-paced innovation drives the company's agility and adaptability.	3.71	Strongly Agree
Composite Mean	3.62	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest mean scores highlighted the importance of agility in innovation: "My commitment to fast-paced innovation drives the company's agility and adaptability" (3.71), "I consistently meet tight deadlines and deliver innovative solutions promptly" (3.66), and "My ability to innovate quickly enables me to stay ahead of competitors and market trends" (3.66). These findings aligned with the concept that speed in innovation is crucial for maintaining competitive advantage and responding to market changes (Eisenhardt, 2021).

The lowest mean scores remained positive but suggested room for improvement: "I am able to innovate quickly and put ideas into action" (3.46) and "I actively contribute to accelerating the pace of innovation in the company" (3.62). These results suggested a strong foundation for rapid innovation but also indicated that potential barriers can be overcome through better resource allocation and optimized processes (Brown & Eisenhardt, 2021).

The overall composite means of 3.62 indicated a strong agreement on the returnees' effectiveness in accelerating innovation, highlighting the need for continuous improvement to sustain high performance in a rapidly changing environment.

3.2.3 Quality of Innovation

Table 2.3 showed the effectiveness of digital innovation performance indicators of selected returnee employees in terms of the quality of innovation. This analysis highlighted the areas where employees prioritized high standards in innovation and continuously improved the quality of their work.

Table 2.3

Effectiveness of Digital Innovation Performances indicators of selected Returnee Employees in terms of Quality of Innovation

Quality of Innovation	WM	Verbal Interpretation
I prioritize quality in all aspects of innovation, ensuring that solutions meet high standards.	3.58	Strongly Agree
My innovative ideas are characterized by their high quality and effectiveness.	3.43	Strongly Agree
I continuously strive to improve the quality of innovation in my work and projects.	3.80	Strongly Agree
My contributions consistently enhance the overall quality of innovation within the company.	3.74	Strongly Agree
I am dedicated to producing innovative solutions that are of the highest quality and value.	3.96	Strongly Agree
Composite Mean	3.70	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest mean scores reflected a strong focus on quality: "I am dedicated to producing innovative solutions that are of the highest quality and value" (3.96), "I continuously strive to improve the quality of innovation in my work and projects" (3.80),

and "My contributions consistently enhance the overall quality of innovation within the company" (3.74). These results were consistent with theories that emphasized the role of high-quality innovation in achieving long-term success and customer satisfaction (Garvin, 2020).

The lowest means, though still favorable, indicated areas for enhancement: "My innovative ideas are characterized by their high quality and effectiveness" (3.43) and "I prioritize quality in all aspects of innovation ensuring that solutions meet high standards" (3.58). These scores suggested that while quality is a priority, there might be variability in the perceived effectiveness and prioritization of high-quality outcomes (Deming, 2022).

The composite means of 3.70 reflected a strong overall commitment to quality in innovation, reinforcing the importance of continuous improvement and adherence to high standards in achieving organizational excellence.

3.2.4 Market Influence

Table 2.4 showed the effectiveness of digital innovation performance indicators of selected returnee employees in terms of market influence. This analysis highlighted the areas where employees' innovative initiatives significantly impacted market trends.

Table 2.4

Effectiveness of Digital Innovation Performances indicators of selected Returnee Employees in terms of Market Influence

Market Influence	WM	Verbal Interpretation
My innovative initiatives have a significant impact on shaping market trends and customer preferences.	3.52	Strongly Agree
I actively contribute to increasing the company's market influence through innovative products and services.	3.46	Strongly Agree
My innovative contributions have helped the company gain a competitive edge in the market.	3.43	Strongly Agree
I am influential in driving market perception and adoption of innovative solutions.	3.48	Strongly Agree
My innovative endeavors play a key role in expanding the company's market presence and influence.	3.39	Strongly Agree
Composite Mean	3.46	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest mean scores indicated significant market impact: "My innovative initiatives have a significant impact on shaping market trends and customer preferences" (3.52) and "I am influential in driving market perception and adoption of innovative solutions" (3.48). These findings aligned with the view that innovation leaders played critical roles in shaping market dynamics and influencing consumer behavior (Christensen, 2022).

Lower means highlighted areas of additional influence: "My innovation contributions have helped the company gain a competitive advantage in the market" (3.43) and "I have actively contributed to increasing the company's influence on the market through an increase in innovative products and services" (3.46). These results suggested that while there was a positive impact on the market, there might be opportunities to increase competitive advantage through more strategic innovation efforts (Porter, 2023).

Overall, the lowest mean score was "My innovation efforts have played an important role in expanding the company's influence in the market" (3.39), with a cumulative mean of 3.46, indicating a high degree of consistency in market influence. However, the composite means of Market influence was less than 3.50, which was lower than the composite means of other variable indicators, suggesting a solid foundation with room for strategic enhancements to further elevate market presence.

3.2.5 Internal Efficiency Improvement

Table 2.5 showed the effectiveness of digital innovation performance indicators of selected returnee employees in terms of internal efficiency improvement. This analysis highlighted the areas where employees identified opportunities for efficiency improvement, streamlined internal processes, and drove internal efficiency.

Table 2.5

Effectiveness of Digital Innovation Performances indicators of selected Returnee Employees in terms of Internal Efficiency Improvement

Internal Efficiency Improvement	WM	Verbal Interpretation
I am proactive in identifying opportunities for improving internal efficiency through innovation.	3.44	Strongly Agree
My innovative solutions have streamlined internal processes and workflows.	3.33	Strongly Agree
I actively collaborate with teams to implement innovative strategies for efficiency improvement.	3.63	Strongly Agree
My contributions have resulted in tangible improvements in internal efficiency metrics.	3.64	Strongly Agree
I am committed to continuously driving internal efficiency improvement through innovative approaches.	3.74	Strongly Agree
Composite Mean	3.56	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest mean scores reflected strong internal contributions: “I am committed to continually driving improvements in internal efficiency through innovation strategies” (3.74) and “My contributions have resulted in significant improvements in internal efficiency metrics” (3.64). These results indicated strong consistency with the notion that innovation significantly improved organizational efficiency and effectiveness (Hammer & Champy, 2023).

The lowest means, while still positive, indicated areas that require further focus: “My innovative solutions streamline internal processes and workflows” (3.33) and “I proactively seek opportunities to improve internal efficiency through innovation” (3.44). These results highlighted the need for continued efforts to identify and implement efficiency improvements through innovation (Repenning & Sterman, 2021).

The composite means of 3.56 reflected strong agreement on the effectiveness of innovation in improving internal efficiency, underscoring the importance of continuous process improvement for sustaining competitive advantage.

3.2.6 Summary

Table 2.6 summarized the effectiveness of digital innovation performance indicators of selected returnee employees across various metrics, including success rate, speed, quality, market influence, and internal efficiency improvement.

Table 2.6

Summary of the Effectiveness of Digital Innovation Performances indicators of selected Returnee Employees

Indicators	Composite Mean	Verbal Interpretation
Success Rate of Innovation Projects	3.62	Strongly Agree

Speed of Innovation	3.66	Strongly Agree	The highest composite mean scores showed strong areas: "Quality of Innovation" (3.70) and "Speed of Innovation" (3.66). The findings
Quality of Innovation	3.70	Strongly Agree	
Market Influence	3.46	Strongly Agree	
Internal Efficiency Improvement	3.56	Strongly Agree	
Over-all Mean	3.60	Strongly Agree	

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

indicated the importance of maintaining high-quality standards and rapid innovation capabilities in achieving competitive advantage (Garvin, 2020; Eisenhardt, 2021).

The lowest composite mean, though still strong, was "Market Influence" (3.46), suggesting that while the returnees' innovations impacted the market, there was potential for greater influence through strategic efforts (Porter, 2023).

The overall composite means of 3.60 indicated strong agreement on the overall effectiveness of digital innovation performances among returnee employees, highlighting their critical role in driving organizational success and emphasizing the need for ongoing strategic enhancements (Nonaka, 2022).

3.3 Differences in the Effectiveness of Digital Innovation Performances Indicators of Selected Returnee Employees

Table 3 showed the differences in the assessment of the effectiveness of digital innovation performance indicators of selected returnee employees when grouped according to their profile variables.

Table 3

Differences in the Assessment of the Effectiveness of Digital Innovation Performances Indicators of Selected Returnee Employees when grouped according to their profile variables

Success Rate of Innovation Projects	F-value	p-value	Interpretation	Decision
Age	1.727	.145	NS	Accepted
Gender	.346	.557	NS	Accepted
Level of Education	.336	.008	S	Rejected
Types of Overseas Experience	.390	.816	NS	Accepted
Years of Service in Current Org.	.844	.035	S	Rejected
Current Position or Role	.258	.936	NS	Accepted
Reasons of Engagement	3.533	.610	NS	Accepted
Country of Engagement	.842	.500	NS	Accepted
Speed of Innovation				
Age	.950	.043	S	Rejected
Gender	.394	.531	NS	Accepted
Level of Education	.669	.572	NS	Accepted
Types of Overseas Experience	.203	.936	NS	Accepted
Years of Service in Current Org.	.795	.037	S	Rejected

Digital Innovation Performance of Selected Returnee Employees Among Selected It Companies in Guangzhou Towards An Improved Organizational Culture

Current Position or Role	.686	.635	NS	Accepted
Reasons of Engagement	2.069	.105	NS	Accepted
Country of Engagement	1.018	.399	NS	Accepted
Quality of Innovation				
Age	2.079	.084	NS	Accepted
Gender	.624	.430	NS	Accepted
Level of Education	.244	.866	NS	Accepted
Types of Overseas Experience	.341	.850	NS	Accepted
Years of Service in Current Org.	1.037	.031	S	Rejected
Current Position or Role	.932	.461	NS	Accepted
Reasons of Engagement	2.168	.093	NS	Accepted
Country of Engagement	.695	.596	NS	Accepted
Market Influence				
Age	.384	.820	NS	Accepted
Gender	.156	.693	NS	Accepted
Level of Education	.787	.502	NS	Accepted
Types of Overseas Experience	.466	.760	NS	Accepted
Years of Service in Current Org.	.009	.924	NS	Accepted
Current Position or Role	.427	.829	NS	Accepted
Reasons of Engagement	1.253	.291	NS	Accepted
Country of Engagement	.814	.517	NS	Accepted
Internal Efficiency Improvement				
Age	2.131	.078	NS	Accepted
Gender	.002	.963	NS	Accepted
Level of Education	.777	.508	NS	Accepted
Types of Overseas Experience	.304	.875	NS	Accepted
Years of Service in Current Org.	.157	.026	S	Rejected
Current Position or Role	1.207	.307	NS	Accepted
Reasons of Engagement	.749	.524	NS	Accepted
Country of Engagement	.798	.528	NS	Accepted

Legend: Significant at p -value < 0.05; S – Significant; NS – Not Significant

Success Rate of Innovation Projects: The success rate of innovation projects was significantly influenced by the level of education ($p = .008$) and years of service in the

current organization ($p = .035$). Employees with higher educational qualifications tended to have more successful innovation projects, aligning with human capital theory, which posited that education enhances individuals' skills and productivity (Schultz, 2021). Additionally, longer tenure within the organization correlated with a higher success rate, supporting the organizational commitment theory that emphasized the positive impact of employee loyalty and experience on performance (Meyer & Allen, 2021).

Speed of Innovation: The speed of innovation was significantly impacted by age ($p = .043$) and years of service in the current organization ($p = .037$). Younger employees might bring fresh perspectives and adaptability, which were crucial for rapid innovation (Rogers, 2023). On the other hand, longer tenure could provide employees with a deeper understanding of the organization's processes, leading to quicker implementation of innovations (Nonaka, 2022).

Quality of Innovation: The quality of innovation was significantly influenced by years of service in the current organization ($p = .031$). Longer tenure allowed employees to develop a comprehensive understanding of organizational needs and processes, which was essential for producing high-quality innovations (Schein, 2022). This supported the experiential learning theory, which suggested that continuous learning and experience within a specific context enhance the quality of outputs.

Market Influence: Market influence showed no significant impact from any of the profile variables, suggesting that the external market impact of innovation efforts was uniformly distributed across different demographic and experiential profiles. This could be explained by the diffusion of innovations theory, which stated that external market factors, such as market readiness and consumer acceptance, played a more dominant role in determining the impact of innovations (Rogers, 2023). The uniformity in market influence across different profiles indicated that external factors might overshadow internal demographic differences in affecting market success.

Internal Efficiency Improvement: Internal efficiency improvement was significantly influenced by years of service in the current organization ($p = .026$). This finding aligned with the resource-based view (RBV) of the firm, which posited that internal resources, including experienced employees, were critical for achieving competitive advantage through improved efficiency. Longer tenure provided employees with the necessary knowledge and skills to enhance internal processes effectively. The lack of significant impact from other profile variables suggested that internal efficiencies were primarily driven by the depth of experiential knowledge accumulated over time within the organization, supporting the theory of organizational learning (Argote, 2021).

3.4 Level of Agreement of Selected Returnee Employees' Background and Digital Innovation Capabilities on Organizational Culture

3.4.1 Openness and Receptiveness to New Ideas

Table 4.1 showed the level of agreement of selected returnee employees' background and digital innovation capabilities on organizational culture in terms of openness and receptiveness to new ideas and innovations.

Table 4.1

Level of Agreement of Selected Returnee Employees' Background and Digital Innovation Capabilities on Organizational Culture in terms of Openness and Receptiveness to New Ideas

Openness and Receptiveness to New Ideas	WM	Verbal Interpretation
I find the company culture to be highly open and receptive to new ideas and innovations.	3.66	Strongly Agree
My experience as an overseas returnee has been met with openness and enthusiasm towards my ideas.	3.64	Strongly Agree
I perceive a culture that encourages the exploration and implementation of new concepts and technologies.	3.66	Strongly Agree
There is a noticeable willingness among colleagues to embrace fresh perspectives and innovative approaches.	3.66	Strongly Agree

The organizational culture fosters an environment where new ideas are welcomed and valued.	3.60	Strongly Agree
Composite Mean	3.64	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The statements "I find the company culture to be highly open and receptive to new ideas and innovations" (3.66), "I perceive a culture that encourages the exploration and implementation of new concepts and technologies" (3.66), and "There is a noticeable willingness among colleagues to embrace fresh perspectives and innovative approaches" (3.66) all received the highest mean scores. This indicated a strong agreement among respondents that their organizational culture is highly receptive to new ideas and encourages innovation. This aligned with the theory that an open culture was crucial for fostering creativity and innovation (Schein, 2020).

The statements "The organizational culture fosters an environment where new ideas are welcomed and valued" (3.60) and "My experience as an overseas returnee has been met with openness and enthusiasm towards my ideas" (3.64) received slightly lower scores. Although these scores were still high, they suggested that there might be occasional barriers to the full acceptance and implementation of new ideas, which could be addressed by strengthening a culture of openness and support for diverse perspectives (Rogers, 2023).

The composite means was 3.64, which was very consistent with the positive impact of returnee employees in promoting a culture that was open and receptive to new ideas. This overall positive perception supported the view that organizations benefited from the diverse experiences and innovative skills of returnees, leading to greater creativity and innovation.

3.4.2 Collaboration and Teamwork

Table 4.2 showed the level of agreement of selected returnee employees' background and digital innovation capabilities on organizational culture in terms of collaboration and teamwork. This analysis highlighted the areas where employees actively engaged in collaborative efforts.

Table 4.2

Level of Agreement of Selected Returnee Employees' Background and Digital Innovation Capabilities on Organizational Culture in terms of Collaboration and Teamwork

Collaboration and Teamwork	WM	Verbal Interpretation
Collaboration and teamwork are integral to the company culture, enabling effective execution of innovative projects.	3.64	Strongly Agree
I actively engage in collaborative efforts with colleagues, leveraging diverse perspectives for innovative outcomes.	3.70	Strongly Agree
The culture emphasizes teamwork and fosters an environment where collaboration thrives.	3.54	Strongly Agree
I consistently experience effective teamwork and collaboration in achieving innovation goals.	3.57	Strongly Agree
Collaboration is deeply ingrained in the organizational culture, enhancing the impact of our collective efforts.	3.65	Strongly Agree
Composite Mean	3.62	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest mean scores were for "I actively engage in collaborative efforts with colleagues leveraging diverse perspectives for innovative outcomes" (3.70), "Collaboration is deeply ingrained in the organizational culture enhancing the impact of our collective efforts" (3.65), and "Collaboration and teamwork are integral to the company culture enabling effective execution of innovative projects" (3.64). These high scores indicated that respondents felt that collaboration and teamwork were strongly supported and valued within their organizations, which was essential for fostering innovation and achieving complex goals (Wheelan, 2022).

The statements "The culture emphasizes teamwork and fosters an environment where collaboration thrives" (3.54) and "I consistently experience effective teamwork and collaboration in achieving innovation goals" (3.57) received the lowest scores. These slightly lower scores suggested that while collaboration was generally effective, there might be occasional challenges in fostering a consistently collaborative environment (Katzenbach & Smith, 2023).

The composite means of 3.62 reflected a strong agreement on the positive impact of returnee employees on promoting collaboration and teamwork within the organization. This highlighted the importance of leveraging diverse perspectives and fostering a collaborative culture to drive innovation and achieve strategic objectives (Hackman, 2022).

3.4.3 Innovation Environment

Table 4.3 showed the level of agreement of selected returnee employees' background and digital innovation capabilities on organizational culture in terms of the innovation environment. This analysis highlighted the areas where employees felt empowered to explore innovative ideas, experimentation and risk-taking.

Table 4.3

Level of Agreement of Selected Returnee Employees' Background and Digital Innovation Capabilities on Organizational Culture in terms of Innovation Environment

Innovation Environment	WM	Verbal Interpretation
The company provides a conducive environment for fostering innovation and creativity.	3.71	Strongly Agree
I feel empowered to explore innovative ideas and concepts within the organizational environment.	3.62	Strongly Agree
The culture nurtures innovation by providing resources and support for experimentation and risk-taking.	3.43	Strongly Agree
Innovation is a core value within the organization, driving continuous improvement and evolution.	3.53	Strongly Agree
The organizational environment cultivates a culture of innovation, inspiring creativity and breakthrough thinking.	3.55	Strongly Agree
Composite Mean	3.57	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The statements "The company provides a conducive environment for fostering innovation and creativity" (3.71), "I feel empowered to explore innovative ideas and concepts within the organizational environment" (3.62), and "The organizational environment cultivated a culture of innovation inspiring creativity and breakthrough thinking" (3.55) received the highest mean scores. These scores indicated strong agreement that the organizational environment supported innovation and provides resources and empowerment for employees to explore new ideas (Amabile, 2022).

The lowest scores were for "The culture nurtures innovation by providing resources and support for experimentation and risk-taking" (3.43) and "Innovation is a core value within the organization driving continuous improvement and evolution" (3.53). These scores, while still positive, suggested that there might be room for improvement in providing consistent support for risk-taking and embedding innovation as a core value (Drucker, 2020).

The composite means of 3.57 indicated a strong agreement on the presence of a supportive innovation environment within the organization. This overall positive perception underscored the importance of creating a conducive environment for innovation to thrive, which was critical for long-term organizational success.

3.4.4 Digital Adaptability

Table 4.4 showed the level of agreement of selected returnee employees’ background and digital innovation capabilities on organizational culture in terms of digital adaptability. This analysis highlighted the areas where employees perceived the company as adaptable to digital advancements and emerging technologies.

Table 4.4

Level of Agreement of Selected Returnee Employees’ Background and Digital Innovation Capabilities on Organizational Culture in terms of Digital Adaptability

Digital Adaptability	WM	Verbal Interpretation
The company demonstrates a high level of adaptability to digital advancements and emerging technologies.	3.54	Strongly Agree
My experience as an overseas returnee has been characterized by the company's agility in adopting digital innovations.	3.56	Strongly Agree
The organization readily embraces digital transformation initiatives, reflecting a culture of adaptability.	3.53	Strongly Agree
Digital adaptability is evident in the organization's ability to swiftly integrate new technologies into workflows.	3.33	Strongly Agree
I perceive a culture that values digital adaptability, enabling smooth transitions and optimization of digital tools and processes.	3.54	Strongly Agree
Composite Mean	3.50	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest mean scores were for "My experience as an overseas returnee has been characterized by the company's agility in adopting digital innovations" (3.56), "The company demonstrates a high level of adaptability to digital advancements and emerging technologies" (3.54), and "I perceive a culture that values digital adaptability enabling smooth transitions and optimization of digital tools and processes" (3.54). These scores indicated that the organization was highly adaptable and values digital innovation, which was critical in remaining competitive to a rapidly changing technological landscape (Teo & Pian, 2023).

The lowest scores were for "Digital adaptability is evident in the organization's ability to swiftly integrate new technologies into workflows" (3.33) and "The organization readily embraces digital transformation initiatives reflecting a culture of adaptability" (3.53). These scores suggested that while there was a strong foundation for digital adaptability, the rapid integration of new technologies into existing work processes could occasionally be challenging (Westerman et al., 2022).

The composite mean was 3.50, showing a strong consensus on the positive impact of employee return to work on improving digital adaptability within the organization. This overall positive outlook supported the view that digital adaptability was critical to organizational resilience and long-term success.

3.4.5 Diversity and Inclusion

Table 4.5 showed the level of agreement of selected returnee employees’ background and digital innovation capabilities on organizational culture in terms of diversity and inclusion. This analysis highlighted the areas where employees experienced the company actively promoting diversity and an inclusive environment.

Table 4.5

Level of Agreement of Selected Returnee Employees' Background and Digital Innovation Capabilities on Organizational Culture in terms of Diversity and Inclusion

Diversity and Inclusion	WM	Verbal Interpretation
The company actively promotes diversity and inclusion, fostering a rich tapestry of perspectives and experiences.	3.53	Strongly Agree
My experience as an overseas returnee has been marked by the company's commitment to diversity and inclusion.	3.56	Strongly Agree
The organizational culture celebrates diversity and promotes an inclusive environment where everyone feels valued.	3.54	Strongly Agree
Diversity and inclusion are core principles that drive collaboration and innovation within the company.	3.50	Strongly Agree
I am proud to be part of an organization that prioritizes diversity and inclusion, creating a welcoming and empowering workplace for all.	3.54	Strongly Agree
Composite Mean	3.53	Strongly Agree

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest mean scores were for "My experience as an overseas returnee has been marked by the company's commitment to diversity and inclusion" (3.56), "The organizational culture celebrates diversity and promotes an inclusive environment where everyone feels valued" (3.54), and "I am proud to be part of an organization that prioritizes diversity and inclusion creating a welcoming and empowering workplace for all" (3.54). These scores reflected strong agreement that the organization values diversity and inclusion, which was essential for fostering a supportive and innovative work environment (Thomas, 2020).

The lowest scores were for "Diversity and inclusion are core principles that drive collaboration and innovation within the company" (3.50) and "The company actively promotes diversity and inclusion fostering a rich tapestry of perspectives and experiences" (3.53). While these scores were still positive, there might be room for further promoting diversity and inclusion as central principles in driving collaboration and innovation (Cox, 2023).

The composite means of 3.53 indicated a strong agreement on the positive impact of returnee employees on promoting diversity and inclusion within the organization. This overall positive perception underscored the importance of creating an inclusive environment that leveraged diverse perspectives for innovation and organizational success.

3.4.6 Learning and Growth Opportunities

Table 4.6 revealed the level of agreement of selected returnee employees' background and digital innovation capabilities on organizational culture in terms of learning and growth opportunities. This analysis highlighted the areas where employees perceived abundant opportunities for professional development and skill enhancement.

Table 4.6

Level of Agreement of Selected Returnee Employees' Background and Digital Innovation Capabilities on Organizational Culture in terms of Learning and Growth Opportunities

<i>Legend:</i> 4.00 –	Learning and Growth Opportunities	WM	Verbal Interpretation	3.26 –
	The company provides ample learning and growth opportunities, supporting professional development and skill enhancement.	3.57	Strongly Agree	
	My journey as an overseas returnee has been enriched by the abundance of learning and growth opportunities offered by the organization.	3.58	Strongly Agree	
	The organizational culture encourages continuous learning and personal development, fostering a growth mindset.	3.54	Strongly Agree	
	Learning and growth opportunities are readily available, enabling me to expand my capabilities and expertise.	3.57	Strongly Agree	
	I appreciate the emphasis placed on learning and growth within the company, which fuels my personal and professional advancement.	3.46	Strongly Agree	
	Composite Mean	3.54	Strongly Agree	

Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest mean scores were for "My journey as an overseas returnee has been enriched by the abundance of learning and growth opportunities offered by the organization" (3.58), "The company provides ample learning and growth opportunities supporting professional development and skill enhancement" (3.57), and "Learning and growth opportunities are readily available enabling me to expand my capabilities and expertise" (3.57). These scores indicated strong agreement that the organization supported learning and growth, which was essential for continuous professional development and innovation (Senge, 2021).

The lowest scores were for "I appreciate the emphasis placed on learning and growth within the company which fuels my personal and professional advancement" (3.46) and "The organizational culture encourages continuous learning and personal development fostering a growth mindset" (3.54). These scores, while still positive, showed strong agreement among the returnee employees, suggesting that there might be room for further improvement in emphasizing the importance of continuous learning and growth (Kolb, 2021).

The composite means of 3.54 reflected a strong agreement on the positive impact of returnee employees on promoting learning and growth opportunities within the organization. This overall positive perception highlighted the importance of fostering a culture of continuous learning and development to support innovation and professional advancement.

3.4.7 Summary

Table 4.7 summarized the level of agreement of selected returnee employees' background and digital innovation capabilities on organizational culture across various metrics, including openness to new ideas, collaboration, innovation environment, digital adaptability, diversity, and learning opportunities.

Table 4.7

Summary of the level of agreement of selected returnee Employees' Background and Digital Innovation Capabilities on Organizational Culture

Indicators	Composite Mean	Verbal Interpretation	Rank
Openness and Receptiveness to New Ideas	3.64	Strongly Agree	1

Collaboration and Teamwork	3.62	Strongly Agree	2
Innovation Environment	3.57	Strongly Agree	3
Digital Adaptability	3.50	Strongly Agree	6
Diversity and Inclusion	3.53	Strongly Agree	5
Learning and Growth Opportunities	3.54	Strongly Agree	4
Over-all Mean	3.57	Strongly Agree	

Legend: 3.26 – 4.00 – Strongly Agree; 2.51 – 3.25 – Agree; 1.76 – 2.50 – Disagree; 1.00 – 1.75 – Strongly Disagree

The highest composite mean scores were for "Openness and Receptiveness to New Ideas" (3.64), "Collaboration and Teamwork" (3.62), and "Innovation Environment" (3.57).

These scores showed strong agreement that returnee employees positively influenced these aspects of organizational culture, which were critical for fostering innovation and achieving strategic goals (Wheelan, 2022; Amabile, 2022).

The lowest composite means were for "Digital Adaptability" (3.50) and "Diversity and Inclusion" (3.53). These scores, while still positive, suggested that there might be opportunities to further enhance digital adaptability and promote diversity and inclusion as central tenets of organizational culture (Teo & Pian, 2023; Cox, 2023).

3.5. Correlation Analysis Between Digital Innovation Performance and Effect of Organizational Culture

In Table 5, a Multiple linear regression was conducted to forecast the Correlation Between Digital Innovation Performance and the Effect of Organizational Culture. This analysis highlighted significant correlations between the independent and dependent variables with predictive indicators such as success rate, speed, innovation quality, Market Influence, and internal efficiency improvement. (The data output of the analysis was attached in Appendix E).

Table 5

Relationship between the assessment of digital innovation performance and the effect of organizational culture

Dependent Variable	Independent Variable	Unstandardized Coefficient B	Std. Error	Beta	t	F	Sig.	Interpretation	Decision
Openness and Receptiveness to New Ideas	Success Rate of Innovation Projects	0.214	0.057	0.237	3.75	14.063	0.000	S	Rejected
	Speed of Innovation	0.17	0.053	0.207	3.222	10.379	0.001	S	Rejected
	Quality of Innovation	0.163	0.057	0.165	2.853	8.141	0.005	S	Rejected
	Market Influence	-0.017	0.053	-0.016	-0.313	0.098	0.755	NS	Accepted

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	Internal Efficiency Improvement	0.231	0.062	0.242	3.7	13.69	0.000	S	Rejected
	Success Rate of Innovation Projects	0.177	0.078	0.155	2.274	5.171	0.024	S	Rejected
	Speed of Innovation	0.187	0.072	0.179	2.593	6.722	0.010	S	Rejected
Collaboration and Teamwork	Quality of Innovation	0.17	0.078	0.136	2.183	4.765	0.030	S	Rejected
	Market Influence	0.095	0.073	0.074	1.314	1.726	0.190	NS	Accepted
	Internal Efficiency Improvement	0.295	0.085	0.244	3.474	12.063	0.001	S	Rejected
	Success Rate of Innovation Projects	0.157	0.072	0.153	2.185	4.772	0.030	S	Rejected
	Speed of Innovation	0.148	0.066	0.159	2.234	4.99	0.026	S	Rejected
Innovation Environment	Quality of Innovation	0.156	0.072	0.139	2.171	4.715	0.031	S	Rejected
	Market Influence	0.071	0.067	0.062	1.064	1.132	0.289	NS	Accepted
	Internal Efficiency Improvement	0.248	0.078	0.229	3.163	10.001	0.002	S	Rejected
Digital Adaptability	Success Rate of Innovation Projects	0.18	0.084	0.151	2.139	4.579	0.034	S	Rejected

	Speed of Innovation	0.183	0.078	0.169	2.351	5.528	0.020	S	Rejected
	Quality of Innovation	0.17	0.084	0.131	2.017	4.068	0.045	S	Rejected
	Market Influence	0.099	0.079	0.074	1.263	1.595	0.208	NS	Accepted
	Internal Efficiency Improvement	0.262	0.092	0.208	2.842	8.074	0.005	S	Rejected
	Success Rate of Innovation Projects	0.182	0.073	0.168	2.49	6.201	0.013	S	Rejected
	Speed of Innovation	0.164	0.068	0.166	2.423	5.872	0.016	S	Rejected
Diversity and Inclusion	Quality of Innovation	0.163	0.073	0.138	2.228	4.965	0.027	S	Rejected
	Market Influence	0.069	0.068	0.057	1.018	1.036	0.310	NS	Accepted
	Internal Efficiency Improvement	0.296	0.08	0.259	3.711	13.777	0.000	S	Rejected
	Success Rate of Innovation Projects	0.193	0.062	0.201	3.091	9.554	0.002	S	Rejected
Learning and Growth Opportunities	Speed of Innovation	0.163	0.058	0.185	2.809	7.894	0.005	S	Rejected
	Quality of Innovation	0.165	0.063	0.157	2.638	6.961	0.009	S	Rejected
	Market Influence	0.075	0.058	0.069	1.277	1.631	0.203	NS	Accepted

Internal Efficiency Improvement	0.241	0.068	0.237	3.523	12.417	0.001	S	Rejected
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Legend: Significant at p-value < 0.05; S – Significant; NS – Not Significant

Overall, Multiple Linear Regression results between the Dependent variables and independent variables showed that four predictor variables—"Success Rate of Innovation Projects," "Speed of Innovation," "Quality of Innovation," and "Internal Efficiency Improvement"—were significant predictors of the "Effect of Organizational Culture", among all models, Market Impact was not a significant predictor of organizational culture. The most substantial impact came from "Internal Efficiency Improvement," which had the highest standardized coefficient compared to other predictors, indicating it had the strongest positive relationship with the dependent variable. This suggested that improvements in internal efficiency significantly enhanced the effect of organizational culture within an organization (Meyer & Allen, 2021).

In multiple regression analysis, the ANOVA results of all models showed statistical significance, indicating that the independent variable set had a significant predictive effect on each dependent variable. Explanatory power: The R-squared values range from 0.316 (innovation environment) to 0.445 (openness and acceptance of new ideas), indicating differences in the explanatory power of the model for different organizational culture indicators. Although internal efficiency had a pronounced impact, successful innovation projects, rapid innovation processes, and high-quality innovations also played significant roles in shaping a positive organizational culture. This suggested that improving internal efficiency was a key driver in shaping organizational culture, and fostering a culture of continuous improvement and innovation was beneficial for enhancing the overall organizational culture (Argote, 2021).

The Significance (Sig.) value associated with the F-statistic is less than 0.001, meaning that the probability of obtaining such an F-statistic by chance was less than 0.1%. This indicated that the regression model was statistically significant and that the independent variables collectively had a significant impact on the dependent variable. The p-values of success rate, innovation speed, innovation quality, and internal efficiency of innovation projects were all < 0.05, indicating that these four predictive indicators had a statistically significant impact on organizational culture. The p-values of the impact of internal efficiency improvement on organizational culture were all close to < 0.001, highlighting its significant influence on organizational culture, making it the most important factor in this analysis.

Research on the influence of Openness and Receptiveness to New Ideas, the positive coefficients for "Success Rate of Innovation Projects" (B = 0.237), "Speed of Innovation" (B = 0.207), and "Quality of Innovation" (B = 0.165) indicated that these factors contributed moderately positive to the effect of organizational culture, albeit to a lesser extent compared to "Internal Efficiency Improvement." This positive correlation suggested that as the organizational culture becomes more supportive and conducive to innovation, the success rate of innovation projects increases. This was aligned with the theoretical perspective that a strong, innovation-oriented culture could enhance the effectiveness and success of innovation projects by providing a supportive environment for idea generation and implementation (Kanter, 2023).

The regression model showed positive coefficients of "innovation project success rate" (B=0.151), "innovation speed" (B>0.169), "innovation quality" (B=0.131), and "internal efficiency improvement" (B=0.131) on the influence of Digital Adaptability. This positive correlation highlighted that an adaptive and responsive organizational culture accelerated the pace of innovation. Theoretical frameworks suggested that organizations with cultures that value agility and flexibility were better equipped to innovate quickly and respond to market changes (Eisenhardt, 2021). In addition, the stronger impact of internal

efficiency improvement on organizational culture indicated that a culture promoting efficiency and process optimization significantly enhanced internal operational performance. Theoretical perspectives on organizational efficiency emphasized cultures that foster continuous improvement, employee empowerment and process innovation leading to substantial gains in internal efficiency (Hammer & Champy, 2023). Such cultures enable organizations to streamline operations, reduce waste and improve holistic productivity. In contrast, the relationship between market influence and organizational culture was not significant. This non-significant relationship suggested that while organizational culture impacted internal innovation processes, it might not have directly translated into market influence.

CHAPTER 4

DISCUSSIONS

This chapter provided a comprehensive overview of the insights derived from the collected data. It also encompassed the conclusions derived from these findings, as well as the corresponding recommendations put forth by the researcher.

4.1 Conclusions

On the basis of the results, the following were concluded:

4.1.1 Selected Returnees Employees as a key driver of Organizational Culture and Innovation Potential

The presentation of the results indicated that most respondents were aged 36-40 years (32.8%), predominantly male, and had a college degree. This age group typically combined significant experience with a high potential for leadership roles, contributing actively to innovation and strategic decision-making (Smith, 2021). The smallest groups included those over 50 years old and healthcare professionals, reflecting niche expertise might influence specific innovation capabilities but were less represented in the overall population, possibly due to early retirement trends in the IT industry or career shifts.

The digital innovation performance indicators for selected returnee employees in Guangzhou's IT companies were highly effective, with strong agreement on the success rate (3.62), speed (3.66), quality (3.70) of innovation, and internal efficiency improvements (3.56). Market influence, although interpreted as strongly agree, was slightly lower at 3.46, but overall, the composite means of 3.60 indicated strong effectiveness in the assessment of the innovation performance. These high scores suggested that returnees played critical roles in driving successful outcomes supported by theories emphasizing the impact of individual expertise and dedication on project success (Kanter, 2023).

4.1.2 The Critical Role of Returnee Employees' background in driving Innovation Performance

The analysis results showed the differences in the assessment of the effectiveness of digital innovation performance indicators of selected returnee employees when grouped according to their profile variables. Specifically, the success rate of innovation projects was significantly influenced by the level of education ($p = .008$) and years of service in the current organization ($p = .035$). Employees with higher educational qualifications tended to have more successful innovation projects, aligning with human capital theory, which posited that education enhances individuals' skills and productivity (Schultz, 2021). Additionally, longer tenure within the organization correlated with a higher success rate, supporting the organizational commitment theory that emphasized the positive impact of employee loyalty and experience on performance (Meyer & Allen, 2021). On the other hand, the speed of innovation was significantly impacted by age ($p = .043$) and years of service in the current organization ($p = .037$). Younger employees might bring fresh perspectives and adaptability, which were crucial for rapid innovation (Rogers, 2023).

Market influence showed no significant impact from any of the profile variables, suggesting that the external market impact of innovation efforts was uniformly distributed across different demographic and experiential profiles. This could be explained by the diffusion of innovations theory, which stated that external market factors, such as market readiness and consumer acceptance, played a more dominant role in determining the impact of innovations (Rogers, 2023). The above comprehensive part further showed the Critical Role of Returnee employees' backgrounds in driving innovation performance.

4.1.3 Level of Agreement of Selected Returnee Employees' Background and Digital Innovation Capabilities on Organizational Culture

Research analysis showed the level of agreement of selected returnee employees' background and digital innovation capabilities on organizational culture across various metrics, including openness to new ideas, collaboration, innovation environment, digital adaptability, diversity, and learning opportunities. The highest composite mean scores were for "Openness and Receptiveness to New Ideas" (3.64), "Collaboration and Teamwork" (3.62), and "Innovation Environment" (3.57). These scores indicated strong agreement that returnee employees positively influence organizational culture, which were critical for fostering innovation and achieving strategic goals (Wheelan, 2022). The lowest composite means were for "Digital Adaptability" (3.50) and "Diversity and Inclusion" (3.53). These scores, while still positive, suggested that there might be opportunities to enhance digital adaptability further and promote diversity and inclusion as central tenets of organizational culture (Teo & Pian, 2023).

4.1.4 Contributions to the correlation between innovation performance and organization culture

Multiple linear regression was conducted to forecast the Correlation Between Digital Innovation Performance and the Effect of Organizational Culture. In general, Multiple Linear Regression results between the Dependent variables and independent

variables showed that four predictor variables—"Success Rate of Innovation Projects," "Speed of Innovation," "Quality of Innovation," and "Internal Efficiency Improvement"—were positive significant predictors of the "Effect of Organizational Culture" among these models, however, Market Impact was not a significant predictor of organizational culture. The most substantial impact comes from "Internal Efficiency Improvement," which had the highest standardized coefficient compared to other predictors, indicating it had the strongest positive relationship with the dependent variable. This suggested that improvements in internal efficiency significantly enhanced the effect of organizational culture within an organization (Meyer & Allen, 2021).

Specifically, the p-values of the impact of internal efficiency improvement on organizational culture were all close to <0.001, highlighting it was a key driver in shaping organizational culture and fostering a culture of continuous growth and innovation was beneficial for enhancing the overall organizational culture (Argote, 2021). In contrast, the relationship between market influence and organizational culture was not significant. This non-significant relationship suggested that while organizational culture impacted internal innovation processes, it might not have directly translated into market influence, meaning that market influence contributed to the effect of organizational culture, but there was room for further improvement.

4.2 Recommendations

Chapter 3 provided valuable insights for stakeholders involved in better unleashing the potential of returnee employees' innovative performance and influencing organizational culture innovation and development. Based on these insights, targeted strategies were developed to better meet the in-depth research needs of human resources professionals, IT companies, and returnees, as well as future researchers in this field, providing recommendation guidance for all stakeholders from the significance of this study.

4.2.1 Human Resources Professionals

HR Departments should develop targeted recruitment strategies to attract and retain returnee employees with diverse international experiences and high education levels to enhance organizational innovation capabilities. For HR professionals, continuous learning is essential to keep up with IT technology and its application in recruitment (Johnson, 2019). This ongoing training also plays an important role in the recruitment and selection process and provides potential benefits for performance management and career development. In addition, working with IT experts to recruit innovative talent is important to maximize the benefits of IT technology in the procurement process while minimizing potential risks (Zhao, 2021).

4.2.2 Returnee Employees

IT Companies could address the identified issues and challenges through innovative human resource management strategies, making full use of the international experience and perspectives brought by returnee employees to foster digital innovation and cultural improvement (Wu & Guo, 2022). The Training and Development Department must implement continuous learning and IT professional development programs tailored to returnee employees to maintain high-quality innovation and adaptability to digital technologies. Improving employee engagement and satisfaction to foster a positive organizational culture, skill upgrading, establishing an open and inclusive culture, and strengthened cross-culture communication, concentrating on clear career development of Returnee Employees (Li, 2020).

4.2.3 IT Companies

IT companies should foster an organizational culture that values openness to new ideas and collaboration by integrating returnee employees into key innovation roles and decision-making processes, enhancing the capacity for digital innovation through continuous technology adoption and upskilling of employees (Smith, 2021). Continuous training programs for the HR department are crucial in boosting employees in utilizing IT technologies effectively (Li, 2020). Strengthen leadership and management practices to support a culture of continuous improvement and innovation. The specific strategy of technology adoption and management for optimization was shown in the back of Table 6.

4.2.4 Policy Makers and Society and Economy

Policymakers must formulate policies that support the repatriation and integration of employees with overseas experience, recognizing their potential to drive innovation and enhance organizational culture, providing policy preferences and relevant guidance for the IT industry and enterprises to promote the development of a social innovation economy.

4.2.5 Academic Researcher

It is necessary to propose a flexible and inclusive performance management framework to retain returnee employees from an academic perspective (Green & Wilson, 2021). Conducting further studies on the long-term impacts of returnee employees on organizational culture and performance across different industries to gain deeper insights, and the academic research on this topic can be deepened by broadening the scope of research objects and increasing the number of relevant research variables to explore the results of relevant innovation performance and organizational culture development.

Based on the recommendation guidance, the below placements were proposed to enhance organizational culture and digital innovation. The strategy integrates employee engagement, technology adoption strategy, and continuous improvement initiatives.

Table 6

Proposed Strategies for an Enhanced Organizational Culture and Digital Innovation Performance in the Selected IT Companies in Guangzhou

Key Result Area	Objectives	Strategies / Approaches	Success Indicator (%)	Persons Involved
Employee Engagement and Satisfaction	Improve employee engagement and satisfaction to foster a positive organizational culture.	Implement Regular Feedback Mechanisms: Conduct quarterly employee surveys and feedback sessions to understand their needs and concerns. Recognition and Rewards Programs: Develop a structured program to recognize and reward high-performing employees.	- Increase in employee engagement and satisfaction scores by 15% *See below for details	HR Department, Management, Employee Representatives
Innovation and Technology Adoption	Enhance the capacity for digital innovation through continuous technology adoption and upskilling of employees.	Continuous Training Programs: Implement regular training sessions on emerging technologies and digital tools. Collaborative Innovation Hubs: Establish innovation hubs where employees can collaborate on new ideas and projects. Technology Investment: Allocate a specific budget for the adoption and implementation of advanced technologies such as ML, AI, and IoT.	- Improvement in digital innovation performance scores by 15% *See below for details	IT Department, Innovation Team, External Trainers

Communication and Collaboration	Improve internal communication and collaboration to enhance overall productivity and innovation.	<p>Open Communication Channels: Establish open communication channels such as internal forums, chat groups, and regular team meetings.</p> <p>Cross-functional Teams: Create cross-functional teams to work on specific projects, promoting diversity of thought and expertise.</p> <p>Collaborative Tools: Invest in and implement collaborative tools and platforms to facilitate easier communication and project management.</p>	- Increase in employee collaboration scores by 15% *See below for details	All Departments, Project Managers, Team Leads
Leadership and Management Practices	Strengthen leadership and management practices to support a culture of continuous improvement and innovation.	<p>Leadership Development Programs: Offer continuous leadership training and development programs for managers and potential leaders.</p> <p>Mentorship Programs: Implement mentorship programs in which senior leaders mentor junior employees.</p> <p>Performance Management: Enhance performance management systems to ensure clear goal setting, regular reviews, and constructive feedback.</p>	- Increase in leadership Management effectiveness scores by 15% *See below for details	Senior Management, HR Department, External Consultants

The proposed placements Success Indicator aims to guide the enhancement of the organizational culture and digital innovation performance by addressing identified issues and challenges. Integrating detailed strategies in employee engagement and technology adoption strategies and continuous management improvement, seeking to build upon the strengths of the IT companies while addressing areas for improvement. Specially as below:

1. Increase in employee engagement and satisfaction

- a) Create peer-to-peer recognition platforms. Reduce workplace stress through better workload management. Launch a weekly "Employee Spotlight" feature, enhancing employee engagement and team cohesion.
- b) Conduct quarterly employee surveys, Combining the Implementation of personalized career planning and cultural integration (Liu & Guo, 2021). Introduce wellness incentive programs. Provide quarterly team-building retreats. Promote employee engagement, vitality, and creativity.

c) Provide career progression training and retention strategies. Establish leadership development and peer mentorship programs (Williams, 2020). Conduct staying interviews to understand retention drivers. Offer returnee employees competitive benefits packages. Create internal mobility programs to retain talent.

d) Set up employee support groups for challenges outside of work. Organize exit surveys to identify trends in resignations. Create personalized work plans to improve role satisfaction.

e) Foster a strong company culture through employee involvement (Smith, 2019). Implement regular check-ins with management. Set up peer recognition for ongoing achievements. Offer long-term employment benefits (e.g., retirement planning). Promote employee autonomy and ownership in decision-making.

2. Innovation and Technology Adoption

a) Create a continuous learning program on digital skills. Partner with external experts for regular tech training. (e.g., AI, cloud computing). Set up tech-focused internal forums for knowledge sharing (Li, 2020).

b) Create cross-functional idea-generation groups. Launch a company-wide innovation challenge. Offer financial rewards for successful innovations. Encourage inter-departmental collaboration on new ideas.

c) Host quarterly "Innovation Day" showcases. Foster partnerships with tech startups. Allocate R&D time in employee schedules. Conduct technology boot camps for employees. Provide innovation grants for departments. Reward breakthrough innovations through company awards.

d) Technology Investment (Chen and Wang, 2022): Allocate a specific budget for the adoption and implementation of advanced technologies such as ML, AI, and IoT.

e) Conduct a digital skills assessment across the organization. Organize quarterly digital upskilling workshops. Implement digital dashboards for performance tracking. Regularly evaluate tech adoption levels in different departments.

3. Increase in Employee Communication and Collaboration

a) Establish company-wide chat platforms (e.g., Microsoft Teams). Set up cross-functional task forces for key initiatives. Introduce "collaboration champions" in each department. Organize quarterly cross-functional team-building exercises.

b) Create project management hubs for collaborative work. Offer training on communication tools and techniques (Davis, 2021). Implement peer review processes across teams.

c) Introduce weekly project status meetings. Implement shared goal-setting across departments. Conduct collaboration feedback surveys. Create digital dashboards for tracking project progress and collaboration.

d) Establish collaboration KPIs for all team leads. Host quarterly innovation days where teams collaborate on new ideas. Organize knowledge-sharing workshops. Create reward systems for outstanding collaboration (Miller, 2021).

e) Set up accountability frameworks for project owners. Conduct lessons learned sessions after each project. Reduce task handover times between teams. Invest in cloud-based collaboration tools. Set up escalation processes for delayed tasks.

4. Increase in Leadership and Management Effectiveness

a) Conduct 360-degree leadership feedback assessments. Implement executive coaching for leadership teams. Offer personalized leadership development plans. Organize mentorship programs between senior and junior leaders (Li et al., 2021).

b) Organize leadership roundtable discussions. Implement decision-making training programs. Use a flexible and inclusive performance evaluation system for continuous learning (Miller, 2021). Create a "leadership journal" for reflection and growth.

c) Encourage participation in external leadership conferences. Conduct leadership role-play simulations. Establish leadership peer review processes. Develop crisis management training modules. Evaluate team success based on leadership impact.

d) Provide regular and transparent communication from management. Host monthly management listening sessions. Implement open-door policies for employees. Provide timely and constructive feedback to employees. Conduct quarterly employee satisfaction surveys. Organize team-building events led by management.

e). Offer clear leadership career progression paths (Johnson, 2020). Implement employee recognition programs from senior management. Conduct regular one-on-one meetings with staff. Set up feedback loops for employee innovation suggestions. Provide financial and environment support for IT companies' continuing growth.

4.3 Implications of the Study

The results of the research demonstrate the important contributions mid-career professionals—particularly those between the ages of 36 and 40—make to innovation and decision-making in IT organizations. This means that companies should concentrate on keeping and growing workers in this group because of their varied professional experiences and backgrounds, which are beneficial for encouraging innovation and long-term strategic development (Zhou and Wu, 2022). Maintaining the momentum of digital innovation may also require recognizing the potential of younger workers to spur innovation and improving retention tactics for staff who are getting close to retirement.

Returnee employees are quite adept at fostering digital innovation (Carter, 2019), as seen by their high success rates, speed, and quality of projects. This shows the value of investing in human capital with global exposure. The marginally diminished effect on market influence, however, indicates that businesses can improve their market strategy and better match their digital innovation initiatives to consumer needs. To ensure that innovation is targeted and has a greater impact, it may be necessary to improve collaboration between market research departments and innovation teams.

Research showed that an open, collaborative, and innovation-driven culture was significantly strengthened by the presence of returnees. This supports the view that fostering an inclusive and diverse workplace that values continuous learning and digital adaptation can improve performance across the organization. To support continuous innovation and employee satisfaction, IT organizations must continue to cultivate these cultural characteristics by encouraging teamwork, embracing diversity, and providing skills development opportunities (Taylor & Morgan, 2019).

Improvements in internal efficiency and innovation success can have a significant positive impact on organizational culture (Zhao, 2021), as evidenced by the significant link between organizational culture and digital performance. Therefore, IT companies need to carry out targeted employee engagement programs and technology adoption activities. The identified issues and challenges can be addressed through continuous improvement activities to maintain IT company growth and flexibility in a competitive market.

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APPENDIX A

SURVEY QUESTIONNAIRE

Dear SIR/MADAM:

I am writing to you as a Doctor in Philosophy of management at Adamson University, Manila, who is currently engaged in a research project titled "Digital Innovation Performance of Selected Returnee Employees among Selected IT Companies in Guangzhou towards an improved Organizational Culture". The core research theme of this paper is the digital innovation performance of overseas returned employees in Guangzhou IT companies and its impact on organizational culture.

The primary objective of this survey is to gather insights on the innovation performance of selected returnee Employees and the impact on the organizational culture of selected IT companies in Guangzhou. Your valuable feedback will help us understand the current challenges and opportunities facing these enterprises, as well as identify potential innovation performance for improvement. Your participation is crucial in shaping our understanding of the innovation landscape and in developing a practical framework that can enhance the growth organization culture of relevant companies.

I would like to express my sincere gratitude for your participation in this survey, and I assure you that your responses will be treated with utmost confidentiality and used solely for this research. Thank you for contributing to this important study and for supporting our efforts to understand and improve enterprise innovation performance and organization culture in IT companies in Guangzhou.

Best regards,

ZHUOJUN LIN

Doctor of Philosophy in Management

Adamson University, Manila

Survey Questionnaire

Name (Optional): _____

Part I. Demographic Profile

Age

- 30-35 years old
- 36-40 years old
- 41-45 years old

- 46-50 years old
- Above 50 years old

Gender

- Male
- Female

Level of Education

- College Degree graduate
- Bachelor's Degree graduate
- Vocational Education
- Master's graduate and above

Types of Overseas Experience

- Corporate Management/Executive Roles
- Research and Development/Technical Positions
- Sales and Marketing/Business Development
- Teaching/Education
- Healthcare/Medical Profession

Years of Service in Current Organization After Repatriation

- 1-5 years
- 6-10 years
- 11-15 years
- 16 years and above

Current Position or Role

- Software Engineer
- Project Manager
- Data Scientist
- UX/UI Designer
- IT Consultant
- Cybersecurity Analyst

Reasons of Engagement

- Application of Skills and Knowledge
- Professional Growth
- Cultural and Personal Connections
- Impact on Local Industry

Country of Engagement

- United States
- United Kingdom
- Germany
- Canada
- Australia
- Singapore
- Japan
- Other (Please specify: __)

Part II. Effectiveness of Digital Innovation Performances indicators of selected Returnee Employees

Directions: Please check the numerical scale which indicates your level of agreement in each statement as regards your perception.

Strongly Agree (4)

Agree (3)

Disagree (2)

Strongly Disagree (1)

Indicators	4	3	2	1
Success Rate of Innovation Projects				
1. I consistently deliver successful innovation projects that meet or exceed expectations.				
2. My track record in innovation projects demonstrates a high success rate.				
3. I actively contribute to increasing the success rate of innovation projects within the company.				
4. My innovative contributions have positively impacted the success rate of projects.				
5. I am instrumental in ensuring the success of innovation projects through my expertise and dedication.				
Speed of Innovation				
1. I am adept at rapidly innovating and bringing ideas to fruition.				
2. My ability to innovate quickly enables me to stay ahead of competitors and market trends.				
3. I actively participate in accelerating the pace of innovation within the company.				

4. I consistently meet tight deadlines and deliver innovative solutions promptly.				
5. My commitment to fast-paced innovation drives the company's agility and adaptability.				
Quality of Innovation				
1. I prioritize quality in all aspects of innovation, ensuring that solutions meet high standards.				
2. My innovative ideas are characterized by their high quality and effectiveness.				
3. I continuously strive to improve the quality of innovation in my work and projects.				
4. My contributions consistently enhance the overall quality of innovation within the company.				
5. I am dedicated to producing innovative solutions that are of the highest quality and value.				
Market Influence				
1. My innovative initiatives have a significant impact on shaping market trends and customer preferences.				
2. I actively contribute to increasing the company's market influence through innovative products and services.				
3. My innovative contributions have helped the company gain a competitive edge in the market.				
4. I am influential in driving market perception and adoption of innovative solutions.				
5. My innovative endeavors play a key role in expanding the company's market presence and influence.				
Internal Efficiency Improvement				
1. I am proactive in identifying opportunities for improving internal efficiency through innovation.				
2. My innovative solutions have streamlined internal processes and workflows.				
3. I actively collaborate with teams to implement innovative strategies for efficiency improvement.				
4. My contributions have resulted in tangible improvements in internal efficiency metrics.				
5. I am committed to continuously driving internal efficiency improvement through innovative approaches.				

Part III. Influence of selected returnee Employees’ Background and Digital Innovation Capabilities on Organizational Culture

Directions: Please check the numerical scale which indicates your level of agreement in each statement as regards your perception.

Strongly Agree (4)

Agree (3)

Disagree (2)

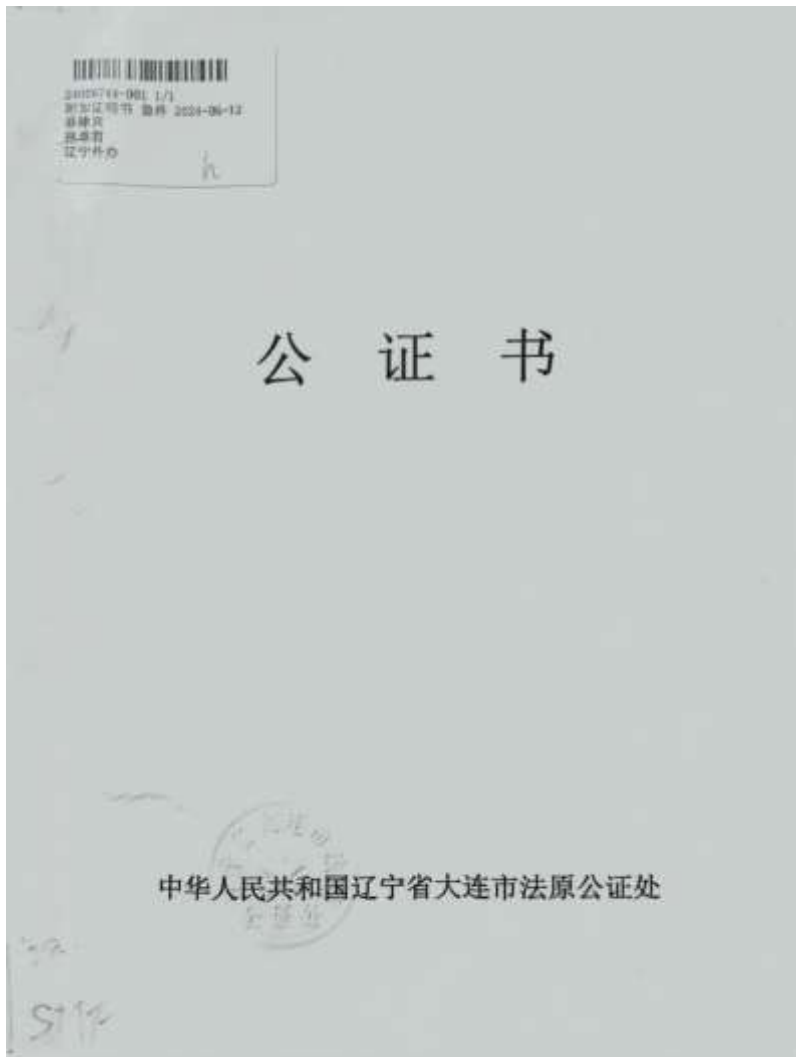
Strongly Disagree (1)

Indicators	4	3	2	1
Openness and Receptiveness to New Ideas				

1. I find the company culture to be highly open and receptive to new ideas and innovations.				
2. My experience as an overseas returnee has been met with openness and enthusiasm towards my ideas.				
3. I perceive a culture that encourages the exploration and implementation of new concepts and technologies.				
4. There is a noticeable willingness among colleagues to embrace fresh perspectives and innovative approaches.				
5. The organizational culture fosters an environment where new ideas are welcomed and valued.				
Collaboration and Teamwork				
1. Collaboration and teamwork are integral to the company culture, enabling the effective execution of innovative projects.				
2. I actively engage in collaborative efforts with colleagues, leveraging diverse perspectives for innovative outcomes.				
3. The culture emphasizes teamwork and fosters an environment where collaboration thrives.				
4. I consistently experience effective teamwork and collaboration in achieving innovation goals.				
5. Collaboration is deeply ingrained in the organizational culture, enhancing the impact of our collective efforts.				
Innovation Environment				
1. The company provides a conducive environment for fostering innovation and creativity.				
2. I feel empowered to explore innovative ideas and concepts within the organizational environment.				
3. The culture nurtures innovation by providing resources and support for experimentation and risk-taking.				
4. Innovation is a core value within the organization, driving continuous improvement and evolution.				
5. The organizational environment cultivates a culture of innovation, inspiring creativity and breakthrough thinking.				
Digital Adaptability				
1. The company demonstrates a high level of adaptability to digital advancements and emerging technologies.				
2. My experience as an overseas returnee has been characterized by the company's agility in adopting digital innovations.				
3. The organization readily embraces digital transformation initiatives, reflecting a culture of adaptability.				
4. Digital adaptability is evident in the organization's ability to swiftly integrate new technologies into workflows.				
5. I perceive a culture that values digital adaptability, enabling smooth transitions and optimization of digital tools and processes.				
Diversity and Inclusion				
1. The company actively promotes diversity and inclusion, fostering a rich tapestry of perspectives and experiences.				
2. My experience as an overseas returnee has been marked by the company's commitment to diversity and inclusion.				
3. The organizational culture celebrates diversity and promotes an inclusive environment where everyone feels valued.				
4. Diversity and inclusion are core principles that drive collaboration and innovation within the company.				
5. I am proud to be part of an organization that prioritizes diversity and inclusion, creating a welcoming and empowering workplace for all.				
Learning and Growth Opportunities				

1. The company provides ample learning and growth opportunities, supporting professional development and skill enhancement.				
2. My journey as an overseas returnee has been enriched by the abundance of learning and growth opportunities offered by the organization.				
3. The organizational culture encourages continuous learning and personal development, fostering a growth mindset.				
4. Learning and growth opportunities are readily available, enabling me to expand my capabilities and expertise.				
5. I appreciate the emphasis placed on learning and growth within the company, which fuels my personal and professional advancement.				

**APPENDIX B
CERTIFICATION OF UERC**



伦理审查证明

林卓君女士的博士论文《广州所选 IT 企业海归员工的数字化创新绩效对改善组织文化的影响》，已经通过了广州科技职业技术大学经济与管理学院学术委员会的评估和审核，学术委员会全体成员认为林卓君论文问卷符合博士论文写作标准和伦理审查要求，遵守国际公认的科学伦理规范和伦理准则，同意林卓君女士进行数据采集及后续论文写作。

ETHICAL REVIEW CERTIFICATE

Ms. ZHUOJUN LIN's doctoral dissertation, titled "DIGITAL INNOVATION PERFORMANCE OF SELECTED RETURNEE EMPLOYEES AMONG IT COMPANIES IN GUANGZHOU TOWARDS AN IMPROVED ORGANIZATIONAL CULTURE", has been evaluated and reviewed by the Academic Committee of the College of Economics and Management of Guangzhou Vocational and Technical University of Science and Technology. All members of the Academic Committee think that the questionnaire have met the standards and ethical requirements for doctoral dissertation writing, abides by internationally recognized scientific ethics and bioethics standards, and agree on ZHUOJUN LIN's request for data collection and subsequent thesis writing.

学术委员会成员 (The Academic Committee Member)
 办公室电话 Office Tel: 020-87410788

主席: 于明霞 教授 (签名) 
 Chairperson: MINGXIA YU Professor (Signature)
 E-mail: 472155201@qq.com

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 Member: YONG TANG Professor (Signature)
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成员: 侯瑞萍 副院长 (签名) 
 Member: RUIPING HOU Vice-Dean (Signature)
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成员: 刘常宝 教授 (签名) 
 Member: CHANGBAO LIU Professor (Signature)
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广州科技职业技术大学经济与管理学院
 College of Economics and Management of Guangzhou Vocational
 and Technical University of Science and Technology (Seal)



Date: June 3, 2024

公 证 书

(2024)辽大法证外字第 5053 号

申请人：林卓君，女，1980 年 8 月 9 日出生，公民身份号码：440682198008094386。

公证事项：影印本与原本相符

兹证明前面的影印本与林卓君出示给本公证员的《伦理审查证明》的原本相符。

中华人民共和国辽宁省大连市法原公证处

公证员

孙 波



[V6408284]

NOTARIAL CERTIFICATE

(Translation)

(2024) L.D.F.Z.W. Zi No. 5053

Applicant: Lin Zhuojun, female, was born on Aug. 9, 1980, ID card No.:440682198008094386.

Issue under notarization: True and exact photocopy

This is to certify that the above photocopy is in conformity with the original of ETHICAL REVIEW CERTIFICATE provided to this notary public by Lin Zhuojun.

Dalian Fayuan Notary Public Office, Liaoning Province

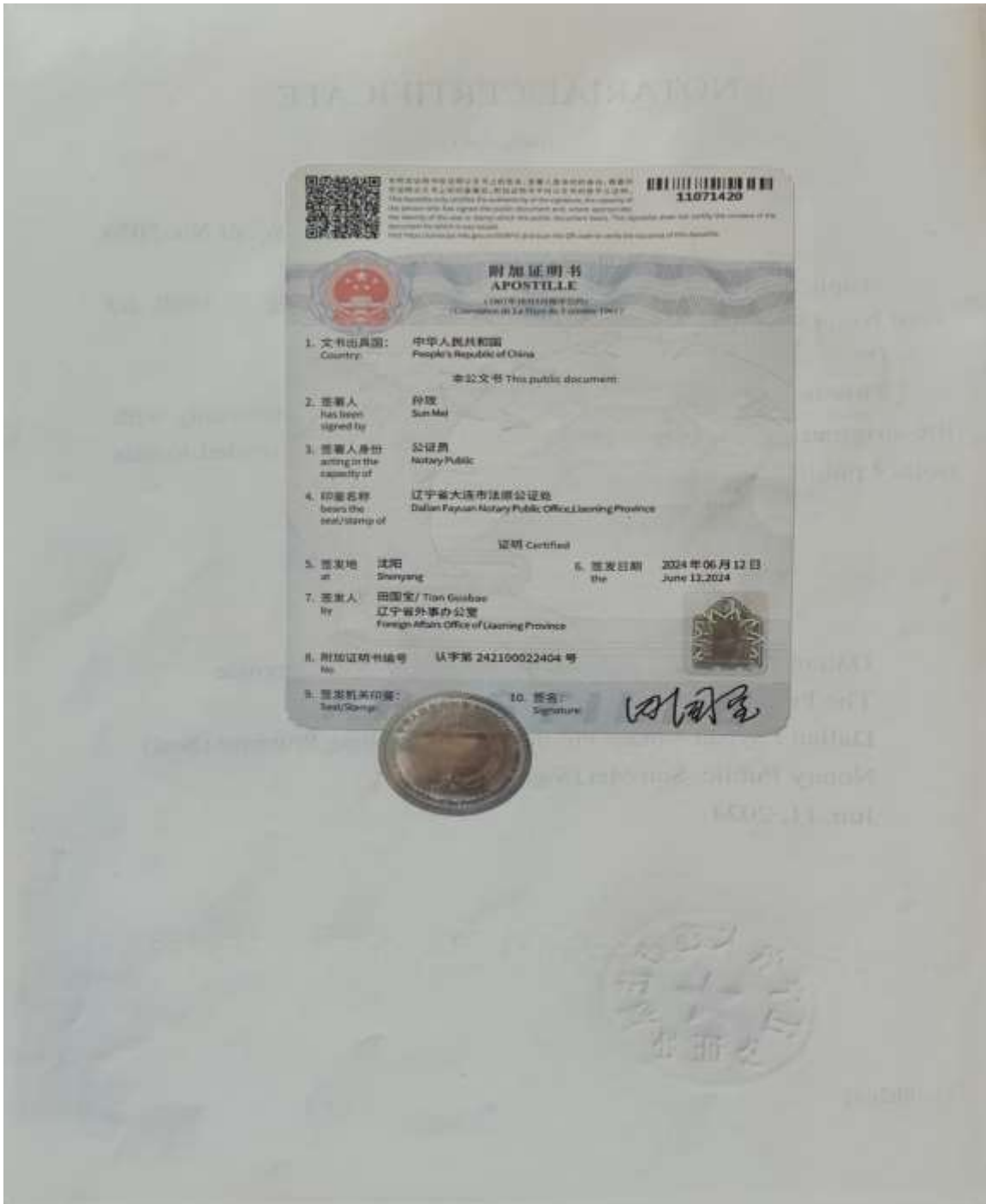
The People's Republic of China

Dalian Fayuan Notary Public Office, Liaoning Province (Seal)

Notary Public: Sun Mei (Signature)

Jun. 11, 2024

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APPENDIX C

CERTIFICATION OF VALIDATION

CERTIFICATE OF VALIDATION

Direction: This tool asks for your evaluation of the instrument to be used in the data for the study title “**DIGITAL INNOVATION PERFORMANCE OF SELECTED RETURNEE EMPLOYEES AMONG SELECTED IT COMPANIES IN GUANGZHOU TOWARDS AN IMPROVED ORGANIZATIONAL CULTURE**”, to establish its validity. You are requested to give your honest assessment using the criteria stated below; please check (✓) only from the selection.


Scale	Interpretation	Description
5	Very high valid	The questions are valid and can provide unbiased data for the study, allowing 0-5% error
4	High valid	The questions are valid and can provide unbiased data for the study, allowing 8-10% error
3	Valid	The questions are valid and can provide unbiased data for the study, allowing 11-15% error
2	Less Valid	The questions are valid and can provide unbiased data for the study, allowing 16-20% error
1	Not valid at all	The questions are valid and can provide unbiased data for the investigation, allowing 21-25% error

VALIDATOR’S QUESTIONNAIRE ASSESSMENT

Indicators	5	4	3	2	1
The questions consistently and accurately measure each variable of the study		✓			
The questions fit the variables under study, thus measuring what it intends to measure		✓			
The questions have the capability to measure items of variables within a given same frame		✓			
The questions have the ability to distinguish the characteristics of differing attributes of the subjects under study		✓			
The questions have the ability to gather factual data, eliminating biases and subjectivity		✓			
Quick and complete data can be generated by the questions within the time frame allowed to obtain the data	✓				
The questions have no influence on the variables being measured		✓			
The questions are framed in a clear, simple, in order to avoid risk of error		✓			
The questions are capable of generating data that will be of value and practical use to the sectors concerned in the study	✓				

Comments and Suggestions

Please consider the comments and suggestions I reflected in the instrument.

Validated By: 

KRISTINE JOY B. BAUTISTA, RPm

Statistician

Lic. No. 0001148

Date Signed: Aug 9, 2024

CERTIFICATE OF VALIDATION

Direction: This tool asks for your evaluation of the instrument to be used in the data for the study title "DIGITAL INNOVATION PERFORMANCE OF SELECTED RETURNEE EMPLOYEES AMONG SELECTED IT COMPANIES IN GUANGZHOU TOWARDS AN IMPROVED ORGANIZATIONAL CULTURE", to establish its validity. You are requested to give your honest assessment using the criteria stated below; please check (√) only from the selection.

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2	Less Valid	The questions are valid and can provide unbiased data for the study, allowing 16-20% error
1	Not valid at all	The questions are valid and can provide unbiased data for the investigation, allowing 21-25% error

VALIDATOR'S QUESTIONNAIRE ASSESSMENT

Indicators	5	4	3	2	1
The indicators in the instrument consistently and accurately measure each variable of the study		√			
The instrument fits the variables under study, thus measuring what it intends to measure		√			
The instrument has the capability to measure items of variables within a given same frame		√			
The instrument can distinguish the characteristics of differing attributes of the subjects under study		√			
The instrument can gather factual data, eliminating biases and subjectivity	√				
Quick and complete data can be generated by the instrument within the time frame allowed to obtain the data		√			
The instrument has no influence on the variables being measured	√				
The instrument is framed in a clear, simple, to avoid risk of error		√			
The instrument can generate data that will be of value and practical use to the sectors concerned in the study	√				

Comments and Suggestions

Please consider the comments and suggestions I reflected in the instrument.

Validated By: 

APRIL ANNE P. ROBIN, CPA
Registered Certified Public Accountant

Date Signed: Aug 9, 2024

CERTIFICATE OF VALIDATION

Direction: This tool asks for your evaluation of the instrument to be used in the data for the study title "**DIGITAL INNOVATION PERFORMANCE OF SELECTED RETURNEE EMPLOYEES AMONG SELECTED IT COMPANIES IN GUANGZHOU TOWARDS AN IMPROVED ORGANIZATIONAL CULTURE**", to establish its validity. You are requested to give your honest assessment using the criteria stated below; please check (✓) only from the selection.

Scale	Interpretation	Description
5	Very high valid	The instrument is valid and can provide unbiased data for the study, allowing 0-5% error
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3	Valid	The instrument is valid and can provide unbiased data for the study, allowing 11-15% error
2	Less Valid	The instrument is valid and can provide unbiased data for the study, allowing 16-20% error
1	Not valid at all	The instrument is valid and can provide unbiased data for the investigation, allowing 21-25% error

VALIDATOR'S QUESTIONNAIRE ASSESSMENT

Indicators	5	4	3	2	1
The indicators in the instrument consistently and accurately measure each variable of the study		✓			
The instrument fits the variables under study, thus measuring what it intends to measure		✓			
The instrument has the capability to measure items of variables within a given same frame		✓			
The instrument can distinguish the characteristics of differing attributes of the subjects under study		✓			
The instrument can gather factual data, eliminating biases and subjectivity		✓			
Quick and complete data can be generated by the instrument within the time frame allowed to obtain the data		✓			
The instrument has no influence on the variables being measured		✓			
The instrument is framed in a clear, simple, to avoid risk of error	✓				
The instrument can generate data that will be of value and practical use to the sectors concerned in the study	✓				

Comments and Suggestions

Please consider the comments and suggestions I reflected in the instrument.

Validated by:



ABIGAIL SAPICO

English Instructor

License no. 1721574

Date Signed: Aug 10, 2024

APPENDIX D

CERTIFICATION OF STATISTICAL TREATMENT

I hereby certify that I have conducted a comprehensive statistical analysis of the data presented in the dissertation titled "DIGITAL INNOVATION PERFORMANCE OF SELECTED RETURNEE EMPLOYEES AMONG SELECTED IT COMPANIES IN GUANGZHOU TOWARDS AN IMPROVED ORGANIZATIONAL CULTURE".

The analysis adheres to established statistical methods, providing a reliable foundation for the research outcomes.

After careful examination of the data and application of appropriate statistical methods, I can confirm that the statistical analysis conducted is accurate, reliable, and relevant to the research objectives outlined in the thesis. This certification is based on data provided to me and the analysis conducted up to this date.



KRISTINE JOY B. BAUTISTA, Rpm

Statistician

Lic. No. 0001148

APPENDIX E

RESULTS OF MULTIPLE REGRESSION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667 ^a	.445	.432	.4787

a. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	41.997	5	8.399	36.657	.000 ^b
Residual	52.472	229	.229		
Total	94.469	234			

a. Dependent Variable: Openness and Receptiveness to New Ideas

b. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	.838	.200			4.196	.000
	SR	.214	.057	.237		3.750	.000
	SI	.170	.053	.207		3.222	.001
	QI	.163	.057	.165		2.853	.005
	MI	-.017	.053	-.016		-.313	.755
	IE	.231	.062	.242		3.700	.000

a. Dependent Variable: Openness and Receptiveness to New Ideas

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.596 ^a	.355		.341

a. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.658	5	10.732	25.220	.000 ^b
	Residual	97.445	229	.426		
	Total	151.103	234			

a. Dependent Variable: Collaboration and Teamwork

b. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	.282	.272			1.037	.301
	SR	.177	.078	.155		2.274	.024

Digital Innovation Performance of Selected Returnee Employees Among Selected It Companies in Guangzhou Towards An Improved Organizational Culture

SI	.187	.072	.179	2.593	.010
QI	.170	.078	.136	2.183	.030
MI	.095	.073	.074	1.314	.190
IE	.295	.085	.244	3.474	.001

a. Dependent Variable: Collaboration and Teamwork

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.562 ^a	.316	.301	.6015

a. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.331	5	7.666	21.188	.000 ^b
	Residual	82.856	229	.362		
	Total	121.187	234			

a. Dependent Variable: Innovation Environment

b. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.947	.251		3.774	.000
	SR	.157	.072	.153	2.185	.030
	SI	.148	.066	.159	2.234	.026
	QI	.156	.072	.139	2.171	.031
	MI	.071	.067	.062	1.064	.289
	IE	.248	.078	.229	3.163	.002

a. Dependent Variable: Innovation Environment

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.550 ^a	.303	.288	.7066

a. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.689	5	9.938	19.904	.000 ^b
	Residual	114.335	229	.499		
	Total	164.025	234			

a. Dependent Variable: Digital Adaptability

b. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.550	.295			1.865 .063
	SR	.180	.084	.151		2.139 .034
	SI	.183	.078	.169		2.351 .020
	QI	.170	.084	.131		2.017 .045
	MI	.099	.079	.074		1.263 .208
	IE	.262	.092	.208		2.842 .005

a. Dependent Variable: Digital Adaptability

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.603 ^a	.364	.350	.6125

a. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.106	5	9.821	26.179	.000 ^b

Digital Innovation Performance of Selected Returnee Employees Among Selected It Companies in Guangzhou Towards An Improved Organizational Culture

Residual	85.911	229	.375
Total	135.017	234	

a. Dependent Variable: Diversity and Inclusion

b. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	.643	.256		2.515	.013
SR	.182	.073	.168	2.490	.013
SI	.164	.068	.166	2.423	.016
QI	.163	.073	.138	2.228	.027
MI	.069	.068	.057	1.018	.310
IE	.296	.080	.259	3.711	.000

a. Dependent Variable: Diversity and Inclusion

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.642 ^a	.412	.400	.5243

a. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.194	5	8.839	32.153	.000 ^b
	Residual	62.952	229	.275		
	Total	107.146	234			

a. Dependent Variable: Learning and Growth Opportunities

b. Predictors: (Constant), Success Rate of Innovation Projects, Speed of Innovation, Quality of Innovation, Market Influence, Internal Efficiency Improvement

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.490	.219		2.240	.026
	SR	.193	.062	.201	3.091	.002
	SI	.163	.058	.185	2.809	.005
	QI	.165	.063	.157	2.638	.009
	MI	.075	.058	.069	1.277	.203
	IE	.241	.068	.237	3.523	.001

a. Dependent Variable: Learning and Growth Opportunities

APPENDIX F

CERTIFICATION OF LANGUAGE EDITING



This is to certify that the dissertation entitled **"DIGITAL INNOVATION PERFORMANCE OF SELECTED RETURNEE EMPLOYEES AMONG SELECTED IT COMPANIES IN GUANGZHOU TOWARDS AN IMPROVED ORGANIZATIONAL CULTURE"** by Zhuojun Lin has undergone language editing.

Mr. Anjo G. Leynes

Professor, Languages Department

APPENDIX G
CURRICULUM VITAE

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Education

1. Jan 2022-Present Doctor of philosophy in Management, Adamson University, San Marcelino St. Manila.
2. Sep 2018- June 2021 Guangdong University of Technology MBA
3. Sep 2000-June 2004 Shanxi University of Finance and Economics Law (Major)
International trade (Minor) Bachelor

Academic Appointment

June 2017-Present Guangzhou Vocational University of Science and Technology Teacher

Research Project

1. May 2024-Present, Research on the cultural management reform of Guangdong small and medium-sized enterprises in Chinese modernization, Guangzhou Vocational University of Science and Technology
2. Oct 2022 -Mar 2023, Exploration on the change and development trend of corporate culture management in the new era, Management school of Guangzhou Vocational University of Science and Technology
3. Oct 2020-Nov 2021, Research on the Inheritance and Innovation of Regional Characteristic Culture: Taking Lingnan Tea Culture as an Example, Education Department of Guangdong Province
4. Dec 2022-Dec 2023, Research on the digital transformation and development of enterprises in Guangdong, Guangdong Provincial Vocational College Business Major Teaching Steering Committee
5. Oct 2019-Nov 2019, Exploration on "Tea Ceremony Culture Development Project ", Zhengjue Cultural Development Center of Shenzhen, Guangdong Province

Scholarship

Peer-reviewed publication

1. New Thinking Exploration of Enterprise Human Resource Management under the New Normal of Economy, Modern Management Forum, 2022.10 (ISSN: 2424-8444)
2. Wang Yongming's Psychology and Inamori Kazuo's Mind Management Philosophy, Enterprise Reform and Management, 2017.08 (ISSN 1007-1210)
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Books & Chapters

1. "Exploration and Practice of Human Resources Management", Deputy Editor, 2020.08 (ISBN 978-7-5541-4827-3)