






Cultural Clash: Investigating How Entrepreneurial Characteristics and Culture Diffusion affect International Interns' Competency

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Abstract

The world today is highly interconnected. To address the manpower shortage in Japan and the surplus in Indonesia 30 years ago, both countries developed an internship program, "Ginou Jisshu." During the internship, participants with Indonesian culture-based individual characteristics are exposed to Japanese work culture. **This study aimed** to investigate how interns' individual characteristics and their assimilation of Japanese work culture improve their competency and competitiveness, considering self-efficacy as a moderating factor. Using a quantitative research method, data from 400 internship alumni across 38 provinces in Indonesia were collected through Google Form questionnaires and analyzed using PLS-SEM. Out of 10 proposed hypotheses, all direct effect hypotheses were accepted, and 3 of the moderation hypotheses were accepted, while 2 were rejected. **This study introduces** a novel paradigm where any positive effect, regardless of statistical significance, is considered beneficial. It suggests that resolving issues, even minor ones, can amplify positive effects and mitigate negative effects. **The findings reveal** that individual characteristics and Japanese work culture positively affect competency and competitiveness, and competency further enhances competitiveness. Self-efficacy strengthens the impact of individual characteristics and Japanese work culture on competency, as well as the impact of Japanese work culture and competency on individual competitiveness. However, it weakens the effect of individual characteristics and competency on individual competitiveness.

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1. INTRODUCTION

Japan is currently facing a significant population challenge. On one hand, the Japan Institute for Labor Policy and Training [1] predicts that by 2030, one-third of Japan's population will be 65 years old. On the other hand, there is a decline in the birth rate, which means that in less than a decade, Japan will experience a significant shortage of labor. Meanwhile, Indonesia has been experiencing unemployment problems for the past few decades. If in the past, the cause of unemployment was a lack of job opportunities, then in this era of globalization, the industry requires skilled workers. The high unemployment rate is caused by slow economic growth, low-quality education, lack of competence, inability to speak foreign languages, and acts of discrimination [2].

To address these challenges, the Ginou Jisshu internship program was developed, focusing on leveraging web intelligence through soft computing and data mining. Web intelligence utilizes data mining techniques to analyze large sets of web data, enabling better decision-making and problem-solving capabilities. This approach is crucial in the digital era for optimizing processes, enhancing productivity, and improving workforce management. By utilizing web intelligence, organizations can effectively tackle both Japan's labor shortage and Indonesia's unemployment issues.

To deal with labor limitations, Japan recruits workers from abroad. They have two programs to bring in blue-collar workers: an internship program called Ginou Jisshuu (技能) and a time-limited migrant worker program called Tokutei Ginou (特定). These programs are designed to keep the wheels of industry turning. In 1994, Ginou Jisshuu was initiated as a joint agreement between the Ministry of Manpower of the Republic of Indonesia and the Government of Japan through IMM Japan's MoU. On the other hand, Tokutei Ginou was only started in 2001. The goal of Ginou Jisshu was to advance the skills of the Indonesian workforce to benefit the industries in Indonesia. The Indonesian government views the apprenticeship participants as valuable assets for production. This idea aligns with Becker's (1964) Human Capital Theory (HCT), which suggests that individuals can enhance their productivity and income by investing in education, training, and other methods of developing human resources. Thus, the apprenticeship program aims to develop participants' knowledge, skills, and behavior.

In broad terms, this strategy aligns with the Global Value Chain theory proposed by [3]. This theory was later refined by [4], who studied Indonesian paramedics participating in a Japanese migrant worker program. Iskandar shifted the focus from global product lines to viewing humans as resources that can be developed through a chain of global education and job training [5].

Ginou Jisshuu has been running for 30 years, from 1993 to 2023, and is always the preferred choice of vocational and high school graduates from all across Indonesia. Indonesia is a vast country with thousands of tribes, cultures, and languages. This has led to a unique non-physical condition where Indonesians are unified into one national culture and one national language (lingua franca), but there is more to it than meets the eye. If we look closely, we can see that each of the major islands (Sumatra, Java, Borneo, Sulawesi, Bali, The Southeast Islands, and Papua) has its own culture and language. Furthermore, upon further observation, we can see that each region has its micro-culture and dialects. Indonesians are born with mixed multicultural layers; each Indonesian shares national cultural characteristics while possessing distinct regional cultural traits.

During an internship in Japan, it's expected that Indonesia's multiculturalism might come into conflict with Japanese culture. The intern may face a difficult decision between preserving their Indonesian culture and rejecting Japanese culture, or adopting Japanese culture and abandoning their own. However, instead of choosing one over the other, a process of cultural diffusion may occur. In this process, inadequate aspects of Indonesian culture will be replaced by more effective Japanese practices, while unsuitable aspects of Japanese culture will not be assimilated. This will result in better competence and a more diverse cultural experience.

This study aims to determine if both Indonesian and Japanese work cultures can improve the abilities and competitiveness of Ginou Jisshu participants. The study will examine the participants' perceived problem-solving skills as a moderating factor to evaluate the influence of the Indonesian and Japanese work cultures on their competence and competitiveness.

2. LITERATURE REVIEW

Gary Gereffi developed the Global Value Chain (GVC) concept in 1994, which highlighted the collaboration between East Asian garment manufacturers and multinational retailers to dominate supplier networks in emerging countries. According to [6], GVC is similar to Supply Chain and Value Chain but operates on

a global scale. [7] explain that GVC encompasses different economic activities, from pre-production to post-production, such as product design, marketing, and distribution. [8] describe GVC as a spider-web structure and a "snake-like" order in which value is created through a sequence of steps. Generally, the evolution of the GVC concept reveals two main approaches: a focus on manufacturing and distribution that involves a global network of suppliers and distributors [9]. The GVC idea illustrates the intricate interaction among companies, suppliers, distributors, and customers in the production and delivery of goods and services. Therefore, GVC represents the complexities of global value chain dynamics that involve multiple actors in the manufacturing and distribution of products to global markets.

Several studies have shown that the concept of Global Value Chain (GVC) can be applied in different scientific fields such as management, sociology, and genealogy. Research considers individuals as "products" with unique skills and traits, whose labor can be globally traded and trained, especially when referring to migrant workers. In [10] "natural" learning environment, the interactions between Indonesian interns and both countries as stakeholders display complex GVC dynamics. Although Japan benefits from the product (labor), they also act as a production line, improving the interns' abilities, while Indonesia profits from the finished product. This perspective highlights the role of human resources in driving and reinforcing linkages, emphasizing that the human workforce is one of the many production resources that can be enhanced to earn higher or better returns.



Figure 1. Research Framework

The Sustainable Development Goals (SDGs), established by the United Nations, emphasize the importance of decent work and economic growth (Goal 8) and quality education (Goal 4). The Ginou Jisshu internship program aligns with these goals by enhancing the skills and competencies of Indonesian workers through exposure to Japanese work culture. This cross-cultural training not only improves individual competitiveness but also contributes to broader economic development and social inclusion, thereby supporting the achievement of the SDGs. By fostering a skilled workforce, the program addresses both local and global labor market needs, promoting sustainable economic growth and development [11].

In this context, the consistent use of the term "web intelligence" throughout this document is crucial for maintaining clarity and coherence. Web intelligence leverages data mining techniques to analyze large sets of data from the web, enabling better decision-making and problem-solving capabilities. This approach is highly relevant in the current digital era, where data-driven insights are crucial for addressing complex challenges such as unemployment and labor shortages. By utilizing web intelligence, organizations can optimize their processes, enhance productivity, and improve workforce management, thereby addressing both Japan's labor shortage and Indonesia's unemployment issues more effectively.

Interactions between various regions in the Global Value Chain (GVC) can lead to cultural exchange. Cultural exchange occurs when cultural aspects such as beliefs, technology, language, or traditions are assimilated from one cultural group to another through migration or trade. The term "transcultural" was first used by [12] to describe how characteristics from one culture can be transferred to another through intercultural interactions. Cultural diffusion refers to the spread of cultural attributes, goods, concepts, inventions, innovations, or behavioral patterns from one social or geographical context to another. It plays a vital role in globalization, which involves stronger connections between nations, primarily through trade, aided by advances in communication and information technologies [13].

The diffusion theory originated in anthropology and is now used in various fields such as archaeology, cultural geography, business studies, and marketing. [14] emphasized that dispersion can result in a concept being applied beyond its original domain and into other areas. The transmission of ideas or innovations can be contagious and spread through person-to-person interaction in specific communities. Stimulus diffusion occurs when an invention or idea from one source inspires new ideas that are better suited elsewhere, allowing subsequent ideas to flourish and gain acceptance even if the original notion is rejected. Cultural diffusion studies focus on how culture spreads and the various factors that influence it, such as migration, communication, trade, and commerce. Culture often spreads from one location to another, but it may change after dissemination, ensuring the preservation of culture. Physical barriers, such as oceans, mountains, deserts, woods, and extreme climates, and social barriers such as language, religion, race, and ethnicity can impede interaction and diffusion.

2.1. Individual Characteristics

Individual characteristics refer to the interests, attitudes, needs, abilities, competencies, knowledge of work, emotions, moods, feelings, beliefs and values of an individual. According to [15], these traits distinguish an individual's motivation, initiative, and adaptivity perspectives, which in turn impact their performance. [16] supports this definition of individual characteristics. There are four key factors that influence how individuals can achieve success in their careers [17]. These factors are as follows:

- **Interests:** Individuals often select careers that align with their passions. This connection between personal preferences and professional paths is pivotal, as it determines the enthusiasm and dedication one exhibits towards their occupation. Engaging in work that resonates with personal interests typically leads to job satisfaction, heightened motivation, and superior performance.
- **Identity:** A career can reflect one's values, aspirations, and the elements that shape their sense of self. This relationship between professional choices and personal identity influences decisions, as people generally seek roles that reinforce their self-image and contribute to their life narrative. The harmony between career and identity not only promotes personal growth but also increases professional engagement.
- **Personality:** The orientation of employees significantly impacts their career trajectories and behavior in the workplace. Attributes such as being realistic, fun-loving, or artistic influence suitability for various roles. Additionally, desires for training, authority, or recognition are important. Recognizing these personality-driven preferences is key for effective career development and job placement, ensuring roles match individual motivations and abilities.
- **Social backgrounds:** The familial and socioeconomic backgrounds of individuals play a critical role in career development. These factors often dictate the resources and opportunities accessible, influencing educational paths and future employment prospects. Addressing the effects of social background is essential for fostering equitable workplaces and designing career development programs that recognize and mitigate disparities in access and opportunities.

[18] concluded that certain individual characteristics such as formal education, training, social capital, motivation, business capital, and land area have a significant impact on entrepreneurial competence, which in turn affects farmers' production and income positively. Similar findings were reported by [19], who found that higher individual characteristics in students lead to better career development competencies. In another study, [20] also stated that there is a significant relationship between individual characteristics and the development of student leadership competencies. [21] conducted research on 115 teachers of 9 Muhammadiyah Public/Islamic Elementary Schools in Lumajang Regency and found that individual characteristics have an impact on competence. However, [22] studied 45 employees of the Batu City Regional Disaster Management Agency (BPBD) and concluded that individual characteristics do not significantly affect competence.

[23] identified five factors that shape individual characteristics: Extraversion, Agreeableness, Openness, Conscientiousness, and Neuroticism.

2.2. Japanese Work Culture

Work culture refers to the attitudes, habits, and behaviors that employees exhibit while performing their duties [24]. According to [25], work culture is defined as "the way we are doing here." As [26] explains, work culture is formed from the understanding that norms are traits, habits, and strengths that are believed to become the culture of a group. This cultural reflection arises from beliefs, attitudes, opinions, ideals, and

actions related to work and the workplace. Work culture consists of a collection of assumptions or systems of beliefs, values, and standards built within the company to direct employee behavior in dealing with problems of internal integration and external adaptation problems, as explained by [27]. Organizations that support this work culture will make their employees more skilled and productive, but these gains must be weighed against the time spent learning them. By supporting the work culture, organizations can achieve organizational goals and the goals of individual employees.

When analyzing work culture, it is important to take into account the normative frameworks that govern behavior within specific organizational contexts and broader regional spheres. A comparison of Indonesian and Japanese work cultures highlights several notable differences, particularly in attitudes towards relaxation, punctuality, and adherence to established norms. Indonesian work culture is often characterized by a more relaxed and flexible approach, which can foster a sense of ease but may lead to difficulties with time management and a lack of emphasis on structured discipline.

In contrast, Japanese work culture is rooted in disciplined diligence, informed by a history of modernization and societal values that emphasize punctuality, hierarchical respect, and meticulous attention to detail. The concept of discipline (*Shitsuke*) is deeply ingrained in Japanese society, with early educational paradigms emphasizing self-discipline and apprenticeship systems fostering voluntary compliance with established norms. The Japanese work culture is known for its strong values and principles that emphasize hard work, attention to detail, mutual collaboration, and respect for hierarchical structures. The concept of perseverance, or *Gaman* (我慢), highlights the importance of completing tasks despite obstacles, while *Kichoumen* (きちょうめん, 几帳面) emphasizes the significance of adhering to meticulous procedures and quality standards. Additionally, respect, or *Keigo*, (けいご, 敬語), is a central tenet of Japanese work culture, reflected in the deference shown to those in higher positions and polite interactions. Loyalty and obedience, or *Chuugi* (忠義), are also highly valued and foster a sense of dedication to organizational objectives and stability within employment frameworks. The principle of teamwork, or *Wa* (和), is another essential aspect of Japanese work culture, emphasizing mutual collaboration and collective responsibility. At the same time, the concept of shame, or *Haji* (はじ, 恥), serves as a regulatory mechanism, reinforcing adherence to social norms and organizational policies. Continuous improvement, or *Kaizen* (改善), is a fundamental philosophy in Japanese work culture that embodies a systematic approach to productivity optimization and quality refinement. However, the reality of contemporary organizational demands may require individuals to work beyond standard limits, known as "Service Overtime" or *Sabisu Zangyo* (未払い残業代), to meet performance metrics.

[28] describes various forms of cultural transformation, including diffusion, which refers to the change in culture resulting from adopting practices from another culture. Acculturation, on the other hand, refers to the change in culture resulting from adopting features of another culture through firsthand experience. Finally, the process of assimilation describes the merging of indigenous and non-indigenous ways of life. [29] has demonstrated that culture is shaped by a variety of circumstances.

- Employee's organizational skills reflected how well they keep track of everyone's rights, responsibilities, freedoms, authorities, and responsibilities in the company. Habits are hard to break because of who we are, but having guidelines helps make the process go more smoothly.
- Attitude demonstrates behavior change, while strength is required for establishment.
- Regulations are essential to ensuring employees maintain discipline and comply with company or educational institution policies.
- Values show what we consider to be valuable, desirable, and appropriate. A values-based culture must be unified, well-balanced, and harmonious. Quantitative and qualitative evaluations of employee performance are crucial.

2.3. Competency

There are some authors like [30], [31], [32], [33], [34], [35], [36] who use the terms 'competence' and 'competency' interchangeably. However, this is a mistake as these two terms are not the same [37]. Over the years, there has been a debate about the difference between these two terms. This study will use the terms "competence" and "competency" as defined by [30] and [31]. Competence is a personal quality that employees need to possess to thrive and reach a particular position. On the other hand, competency refers to the skills and

knowledge that employees must have to carry out their duties effectively in a specific job. In simpler terms, someone can carry out the tasks associated with their position if they have the required competencies.

In the American approach, competencies are described as inputs and individual traits, while in Britain, competency is defined as a product needed in a particular workplace [30]. According to [38], competence is the "ability or capacity of a person to perform various tasks in a job," where the "ability" is based on intellectual and physical elements. [39] defined competence as an individual's mastery of the necessary information, abilities, and attitudes to perform a task to the highest standard possible. [40] defined it as a human attribute connected to performance efficacy, which can be observed in one's actions, thought processes, and overall demeanor.

Human resource professionals worldwide, including those in Indonesia, generally agree that competence is a fundamental characteristic of an individual that influences their way of thinking and acting, making generalizations to all situations encountered, and surviving long enough. According to [41], competence can be broken down into five different types, namely intellectual, physical, personal, social, and spiritual. [42] states that there are five dimensions of competence that each individual must possess, namely task skills, capacity for task management, skills in handling unexpected events, skills related to the workplace environment, and adaptability in a new work setting. [43] argue that knowledge, skills, and attitudes are the best indicators of an individual's level of competence.

Shared competencies, where competencies are accessed and transferred from one party to another, encouraging the formation of sharing and creation of knowledge and learning, may form individual competitive advantages [44], [45].

2.4. Individual Competitive Advantage

[46] suggests that building a competitive edge is crucial in today's job market. A competitive edge means having an advantage over current or potential competitors. One can achieve this by improving existing skills, acquiring new ones, building better relationships, and more. According to [47], career-related education at the university level should aim to develop a competitive, specialized individual with high cultural and social intelligence [48]. Ibid also proposed an individual training-based pedagogical model at the university level to effectively form the personality of a specialist with a competitive advantage in the labor market. [49] stated that employees' competitive advantages can change and develop throughout their careers, and some new advantages may never be known. [50] cited values, culture, roles, and behavior as indicators of an individual's competitive advantage.

2.5. Self-Efficacy

Bandura proposed the Social Cognition Theory in 1963, which emphasizes the importance of social interaction, determinism, and observational learning in shaping an individual's character. In 1986, he developed SCT, a more nuanced version of his theory that incorporated self-efficacy into the framework [51]. Self-efficacy is the belief in one's ability to manage one's actions and outcomes in situations. Having confidence in one's abilities and the likelihood of successful outcomes is what we mean when we talk about self-efficacy. It is a crucial factor in getting people to complete complex tasks. This influences their decisions, priorities, and problem-solving strategies.

Those lacking confidence are more likely to give up when facing problems, whereas those who have faith in themselves are more likely to rise to the occasion [52]. Self-efficacy also impacts how a person reacts to setbacks and moves past them. According to [53], self-efficacy is the confidence in one's ability to perform activities successfully and achieve goals. [54] defines self-efficacy as a person's opinion of how well they can handle and complete work situations [55].

Efficacy can be altered in four ways: through performance achievement, through vicarious experiences, through social persuasion, and emotional/physiological states. [56] define self-efficacy as the conviction that one can achieve their goals. Self-efficacy refers to an individual's belief in their ability to achieve a desired outcome [57]. The General Self-Efficacy Scale created by [58] assesses confidence in one's skills to plan, initiate, and complete a task successfully.

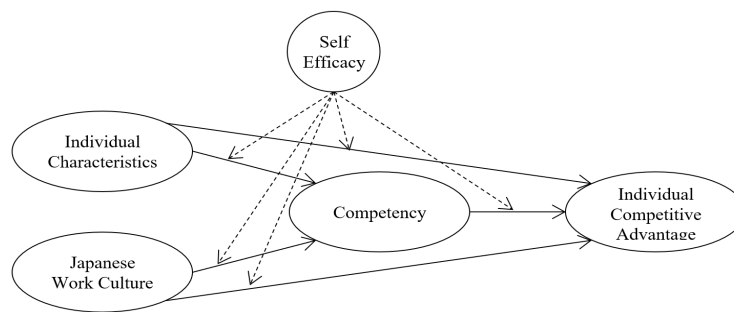


Figure 2. Research Framework

Figure 2 illustrates the various topics related to Web Intelligence (WI), including data mining, machine learning, and semantic web technologies [59]. This schematic diagram is significant in the study as it provides a visual representation of how these interconnected topics contribute to the overall field of WI. The diagram highlights the central role of data mining in extracting meaningful patterns from web data, which is essential for enhancing decision-making processes and developing intelligent web applications. By understanding the relationships between these topics, readers can better grasp the comprehensive nature of WI and its application in addressing complex problems in various domains, such as healthcare, finance, and e-commerce.

2.6. Hypotheses Development

Individual characteristics refer to the attributes that differentiate a person from others in terms of their motivation, initiative, ability to solve problems, and adaptability to the environment that affects their performance. For a person to face and solve problems effectively, they need to have sufficient competence. Research papers on the relationship between individual characteristic variables and competency variables show that individual characteristics significantly influence the development of respondents' competence. Several studies, including [60], [61], [62], [63], all concluded that individual characteristics play a critical role in developing competency. Based on the major and minor propositions and empirical study, the first hypothesis can be stated as follows:

H₁: There is a positive effect of Individual Characteristics on Competency.

Individual characteristics are traits that make a person unique, such as motivation, problem-solving skills, and adaptability. These attributes can affect an individual's performance and ability to stay ahead of competitors, known as their individual competitive advantage. To gain a competitive advantage, one must assess their competitors' strengths and weaknesses and find ways to improve their own performance. In the context of the Ginou Jisshu program, participants may have similar characteristics but different ways of problem-solving, or they may have different characteristics but similar problem-solving techniques. A person's ability to optimize their characteristics is crucial in assessing their strengths and weaknesses relative to competitors. Developing strategies based on a deep understanding of personal characteristics and the work environment can help individuals improve their performance, leading to significant profits and a superior position in the marketplace. However, there has been no empirical study on the causal relationship between individual characteristics and competitive advantage. Therefore, the second hypothesis is based on the major and minor propositions explained earlier.

H₂: There is a positive effect of Individual Characteristics on Individual Competitive Advantage.

Work culture refers to the values that characterize a society or company's way of thinking about the world. It reflects the beliefs, opinions, ideals, attitudes, and actions related to work or the workplace. Competence is the ability to do a task or job well. The KBBI defines it as an authority or power to determine or decide, and the nature of competence as knowing. On the other hand, the Cambridge Dictionary defines competency as an important skill needed to do a job. Although no research has specifically examined how work culture in Japan influence competency, two studies have looked at the relationship between work culture variables and competence. Both studies concluded that work culture influences respondents' competence. Therefore, the third hypothesis is that work culture variables have a significant impact on respondents' competence.

H₃: There is a positive effect of Japanese Work Culture on Competency.

Work culture refers to the values that are characteristic of a society or company, as perceived through the beliefs, opinions, ideals, attitudes, and actions related to work or the workplace. Individual competitive advantage is the ability to stay ahead of competitors, which is usually achieved by assessing competitors' strengths and weaknesses and finding ways to improve performance. Although there is no research that studies the causal relationship between work culture in Japan and Individual Competitive Advantage, some studies have examined the relationship between work culture and organizational culture. Three studies [64, 65] found that company culture influences competitive advantage. Based on this, the fourth hypothesis can be stated as follows:

H₄: There is a positive effect of Japanese Work Culture on Individual Competitive Advantage.

According to research papers, there hasn't been any study exploring the causal relationship between the Education-Training variable and the competency variable. This is not unusual since academics and practitioners in human resource management are familiar with the concept of Competency-based Training (CBT), meaning that training is aimed at enhancing competence. The evaluation of training results is conducted internally and is not typically published in scientific articles. This research aims to assess how the Technical Internship Training Program (TITP) in the Ginou Jisshu program, which only focuses on Japanese language and culture training, can improve the skills, knowledge, and attitudes of participants, which are the indicators of their competency. Thus, the fifth hypothesis is formulated as follows:

H₅: There is a positive effect of Competency on Individual Competitive Advantage.

From searching research papers, no research was found that tested the moderating influence of Self-Efficacy on the relationship between Individual Characteristics variables, or Work Culture in Japan on Commitment variables or Individual Competitive Advantage variables. So the eighth to fourteenth moderation hypotheses emerge as follows:

H₆: Self-Efficacy strengthens the Individual Characteristics impact on Competency.

H₇: Self-Efficacy strengthens the Individual Characteristics impact on Individual Competitive Advantage.

H₈: Self-Efficacy strengthens the Japanese Work Culture impact on Competence.

H₉: Self-Efficacy strengthens the Japanese Work Culture impact on Individual Competitive Advantage.

H₁₀: Self-Efficacy strengthens the Competency impact on Individual Competitive Advantage.

The development of hypotheses in this study highlights the significant relationships between individual characteristics, work culture, competency, and competitive advantage. It also underscores the moderating role of self-efficacy in enhancing these relationships. By understanding these dynamics, organizations can better design and implement training programs that leverage individual traits and cultural integration to boost overall performance and competitiveness.

3. METHODOLOGY

This study integrated quantitative and qualitative methods to achieve a better understanding and stronger support for the findings. Quantitative analysis describes distinct groups and their trends in data, whereas qualitative analysis employs interviews and narratives to understand the informant's experiences. By combining these approaches, the study hopes to provide useful insights into theory and practice in related domains.

Ethical considerations were a crucial part of this research, particularly in the context of data mining and web intelligence. Ensuring data privacy and security was paramount. All participants' data were anonymized to protect their identities. Data were stored securely with access limited to authorized personnel only. The research adhered to the principles of informed consent, where participants were fully informed about the purpose of the study, the use of their data, and their right to withdraw at any time without any consequences. Additionally, the study complied with all relevant legal and ethical guidelines to ensure that data collection, storage, and analysis were conducted responsibly and ethically.

This study collaborates with the Indonesian Kenshusei Entrepreneurs Association (IKAPEKSI) to collect data from their members, which also Ginou Jisshu alumni all across 38 provinces in Indonesia via Google Forms. IKAPEKSI estimates that the number of members to date is 3000 people from all classes

(1993-2023). To ensure accurate results from a vast population, a representative sample of 353 respondents was selected using the Slovin method. 400 responses from Google Forms were gathered, with stratified random sampling ensuring a fair representation. A snowball sampling strategy was used in qualitative research, yielding 18 informants in the end. The quantitative analysis used Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach.

4. RESULTS

4.1. Respondent's Characteristics

All respondents were male, reflecting the historical exclusion of women from the Ginou Jisshu program until 2017, as explained by informant 9. The educational background of respondents varied, with 72% having vocational or high school education, 18% holding bachelor's degrees, and 9% with diplomas. Surprisingly, five respondents reported junior high school education, highlighting a discrepancy with program registration requirements. Informant 8 suggested that this might be due to a compromise by the registration committee, considering their work experience, or possibly because they completed "Kejar Paket C" a semi-formal high school education. While data were collected from all 38 provinces of Indonesia with the help of IKAPEKSI, there was uneven representation from each province due to province expansions between 1993 and 2018.

4.2. Descriptive Statistics

Individual Characteristics are formed from five indicators. Respondents perceived "Conscientiousness" as the highest; while "Neuroticism" was perceived by respondents as the lowest. This means that respondents feel that caution in behaving or speaking plays an important role in shaping their personal characteristics, while even though there is emotional instability, it is not an Individual Characteristic that respondents are trying to maintain, so it is not considered as forming their personal characteristics.

Japanese Work Culture is formed from four indicators. "Position" is perceived by respondents as the highest; and "Rules" were perceived by respondents as the lowest. This means that respondents felt that firmness in attitude and stance was the best Japanese culture in their experience of absorbing work culture in Japan, while the culture of compliance with regulations was felt to be the most difficult Japanese culture to absorb and apply.

The Competency Variable is formed from three indicators. Respondents perceived "Attitude" the highest; and "Skill" is perceived by respondents as the lowest. This means that respondents have the perception that their competencies are limited to attitudes, not relevant to job skills.

Individual Competitive Advantage is formed from four indicators. Respondents perceived "Culture" the highest; and "Value" is perceived by respondents as the lowest. This means that respondents feel that their competitive advantage is more likely to be cultural factors compared to their "value" for the companies that use their services.

Self-Efficacy is formed from four indicators. Respondents perceived "Readiness" as the highest; and "Implementation of intentions" was perceived by respondents as the lowest. This means that respondents feel that internally they have a sense of Self-Efficacy and are ready to demonstrate their confidence to complete the work assigned to them, but in reality they experience obstacles when demonstrating their Self-Efficacy.

4.3. Qualitative Data Analysis

The qualitative analysis provided deeper insights into the impact of soft computing techniques on web intelligence. Participants highlighted that soft computing techniques, such as fuzzy logic and neural networks, significantly enhanced their ability to process and analyze vast amounts of web data efficiently. For instance, one participant mentioned, "The integration of neural networks allowed us to predict user behavior more accurately, which improved our decision-making process." Another participant noted, "Fuzzy logic helped in dealing with the uncertainty and imprecision of web data, making our analysis more robust." These insights underscore the importance of soft computing in managing the complexities of web data, leading to more intelligent and informed decisions. Additionally, the qualitative findings revealed that these techniques not only improved technical efficiency but also contributed to a better understanding of user needs and preferences, ultimately enhancing the user experience.

4.4. Hypothesis Testing

From testing the Structural Equation Model using the bootstrap resampling technique in SmartPLS, the following results were obtained:

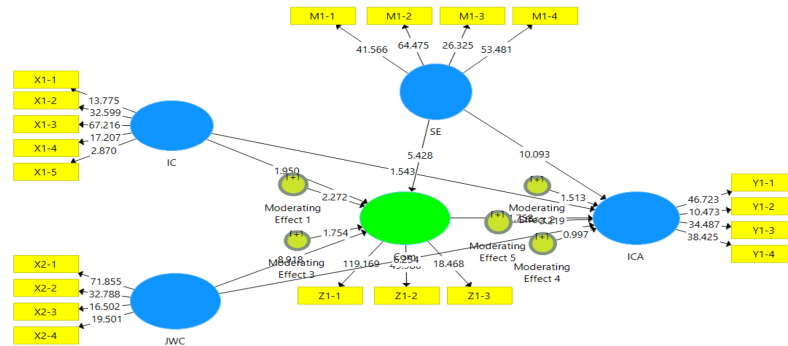


Figure 3. Initial PLS Inner Model

We used a different approach to interpret the results. We use the positivism paradigm, which means that we focus more on the direction of an influence rather than how significant it is. SmartPLS can show the direction of the influence by looking at the Original Sample (OS). A positive OS value shows that an increase in a variable's value causes an increase in another variable's value, and vice versa. Meanwhile, the p-value, which represents the significance of an influence, indicates the magnitude of the influence. In this paradigm, a significant negative influence finding in the current research, with improvements following research suggestions, will be at least an insignificant negative influence result in subsequent research. With more improvements, it would be an insignificant positive influence, which in the end becomes a significant positive influence. So the essence of this paradigm is that even a negative outcome can be improved, making implicative research suggestions crucial.

Table 1. Direct Effect Results

Hypotheses	Path	Original Sample	Sample Mean (M)	Std. Dev	T statistics	p-value	Decision
H ₁	IC → Com	0.107	0.113	0.055	1.950	0.052	Supported
H ₂	IC → ICA	0.076	0.078	0.049	1.543	0.124	Supported
H ₃	JWC → Com	0.406	0.402	0.046	8.918	0.000	Supported
H ₄	JWC → ICA	0.308	0.308	0.049	6.254	0.000	Supported
H ₅	Com → ICA	0.079	0.078	0.045	1.758	0.079	Supported

Note: p-value: > 0.05 ()

Table 1 shows the results of the direct effect hypotheses: Individual Characteristics (IC) do not significantly increase interns' competency and competitive advantage, whereas Japanese Work Culture (JWC) does; while Competency (Com) insignificantly increasing Individual Competitive Advantage (ICA).

Table 2. Moderating Effect Results

Hypotheses	Path	Original Sample	Sample Mean (M)	Std. Dev	T statistics	p-value	Decision
H ₆	IC*SE → Com	0.103	0.103	0.045	2.272	0.024	Supported
H ₇	IC*SE → ICA	-0.049	-0.046	0.033	1.513	0.131	Not Supported
H ₈	JWC*SE → Com	0.084	-0.078	0.048	1.754	0.080	Supported
H ₉	JWC*SE → ICA	-0.054	-0.059	0.054	0.997	0.319	Supported
H ₁₀	Com*SE → ICA	-0.182	-0.172	0.057	3.219	0.001	Not Supported

Note: p-value: > 0.05 ()

This study utilizes Self Efficacy (SE) as a moderator variable to examine five indirect relationships

between the independent and dependent variables. Table 2 presents those moderation effect hypotheses results: self efficacy weakens every effect of Individual Characteristics (IC) and Japanese Work Culture (JWC) on Individual Competitive Advantage (ICA), but improved effect of Individual Characteristics (IC) and Japanese Work Culture (JWC) on Competency (Com).

5. DISCUSSION

Individual characteristics of interns have insignificantly increase their competency in the context of Ginou Jisshu's Technical Intern Training Program (TITP). The interns' generally cautious and pleasant demeanor, and their competence mostly on knowledge and attitudes. TITP emphasizes on Japanese language and culture instruction rather than individual traits, resulting in competence in non-work areas such as positive behavioral attitudes. The Indonesian Ministry of Manpower is more concerned with sending as many workers as possible to Japan rather than producing high-quality labor. According to Human Capital Theory, investment in individual qualities should increase productivity and performance [66]. Although TITP successfully increases non-working competence, it does not increase work competence, which could hinder interns' performance in the workplace. This result supports previous research [67] which concludes that individual characteristics influence the development of respondents' competence.

The next finding implies that interns have favorable characteristics such as conscientiousness and extraversion, but their impact on individual competitive advantage is minor. Such characteristics help to highlight cultural values and personal positions within the firm, providing them a modest advantage over native Japanese employees. Furthermore, some participants live in Japan because they are married to their boss's daughter and are even trusted to manage the business, demonstrating the potential impact of individual traits. Interviews revealed that attributes such as friendliness and trustworthiness were positively regarded by their Japanese coworkers, encouraging favorable relationships. However, the Ginou Jisshu does not focus on developing these characteristics, limiting its impact. Overall, the program primarily concentrates on qualitative aspects of human resources, failing to improve the quantitative aspects such as education and work achievements, which may influence participants' competitiveness in the workforce.

The impact of Japanese work culture on interns' competency is significantly positive. This shows that learning Japanese work culture improve intern's competency. During their three-year internship in Japan, Ginou Jisshu program participants inevitably absorbed the Japanese work culture, a process known as trans-cultural diffusion, which entails the absorption of new cultural aspects through diffusion, acculturation, or assimilation. Respondents identified the attitudes and habits of Japanese work culture as the most important, showing their flexibility and behavior in both work and social settings. Interviews revealed that participants frequently found that Japanese cultural attributes such as discipline and integrity improved their job performance. The integration of Indonesian and Japanese work cultures can improve communication, collaboration, and overall performance, resulting in increased competence.

This study demonstrates that Japanese work culture has a high impact on individual competitive advantage, suggesting that the better absorption of Japanese work culture, the better their competitive advantage. Respondents highly perceived the attitudes, stances, and practices in Japanese work culture. These behaviors, attitudes, and habits influence how interns act, both in terms of keeping Indonesian culture and adapting to Japanese work culture. Another high perception was observed for cultural indicators in decision-making, demonstrating that cultural diffusion aids them in making decisions in their job and social lives in Japan. To summarize, integrating traditional Indonesian values with the modern Japanese work ethic might boost an individual's competitive advantage, opening up more job prospects. The results of this study support the findings of [68] who concluded that work culture has an influence on competitive advantage.

Competence has insignificant possitive effect on individual competitive advantage, which suggests that the more competent the interns are, their competitive advantage may slightly improved. The highest evaluation of competence was noted in attitude, demonstrating that interns' attitudes might impact their behavior in both work and social settings in Japan. However, despite receiving basic Japanese language and cultural instruction, the interns' work skills did not increase considerably, as needed by their bosses. As a result, more training is required to strengthen specific abilities relevant to the job area. Furthermore, because proficiency in the Japanese language and culture is not a primary prerequisite for industry in Indonesia, it has no major impact on program participants' competitive advantage. This finding is consistent with previous studies conducted by [69], who discovered that respondents' degree of competency had a direct impact on their capacity to compete

successfully.

The present study found that self-efficacy played a crucial role in enhancing the positive impact of individual characteristics on individual competency. These findings suggest that by promoting the development of character qualities and instilling confidence in interns to accomplish tasks, there is a significant potential to further enhance their competency [70]. Interns value "conscientiousness" and "friendliness" highly, while "knowledge" and "attitude" also rated high. Interns were prepared to endure whatever constraints existed throughout their internship in Japan. The current curriculum of TITP does not explicitly incorporate the development of cultural values or personal attributes that are considered valuable in the Indonesian context. However, despite this omission, interns have been successful in nurturing communication competence.

Self-efficacy actually diminishes the impact of individual traits in efforts to improve intern competence. They are often cautious, trustworthy, and friendly. However, when it comes to their notions of individual competitive advantage, they prioritize culture and role within the organization. Respondents rated self-efficacy markers like intention and attitude implementation as weak. This shows that demonstrating traits such as caution, trustworthiness, and friendliness can limit efforts to showcase the company's culture and personal roles, which may be unwanted to the supervising organization and Japanese coworkers.

Self-efficacy slightly improves interns' competence as they adapt to Japanese work culture. The interns' responses show that they admire Japanese work culture, particularly attitudes, behavior, and habits, therefore they felt prepared to handle problems during their internship in Japan. However, when they attempted to stand out with their self-efficacy, the rigorous Japanese work culture held them back. The Japanese work culture values rule compliance. In essence, when interns can internalize the disciplined Japanese work ethic and have the self-confidence to execute their tasks properly, they will be able to work efficiently and disciplinedly like Japanese people.

Self-efficacy also slightly improves the impact of assimilating Japanese work culture in efforts to improve intern competitive advantage. Interns valued the Japanese work culture's attitudes and positions, as well as its practices, implying that the Japanese work culture is considered beneficial in performing job tasks. Aside from that, they thought that the cultural diversity they encountered aided them in their job. The self-efficacy indicators pertaining to "readiness" and "problem-solving ability" have been found to be robust among the interns, implying that they possess the necessary skills and competencies to effectively confront and resolve any challenges that might arise in the workplace, while effectively adhering to the cultural nuances of Indonesia.

Self-efficacy moderately diminishes the role of competence in boosting interns' competitive advantage. Interns have a positive attitude towards their work. They rated self-efficacy markers such as executing intentions and attitudes as weak, which demonstrates that their efforts to highlight their competencies did not result in a competitive advantage. The interviews reveal that, while interns are confident in their abilities, Japan's extremely procedural work environment prohibits them from displaying their self-efficacy in real-world scenarios. There is no opportunity to apply their ability in a routine work setting. As a result of this work system's limits, they are unable to gain a competitive advantage.

6. MANAGERIAL IMPLICATIONS

The findings of this study have several important managerial implications for organizations involved in cross-cultural internship programs like Ginou Jisshu. Firstly, managers should recognize the value of individual characteristics and cultural assimilation in enhancing interns' competencies and competitiveness. By understanding the unique traits and cultural backgrounds of interns, managers can tailor training programs that effectively integrate Japanese work culture with the interns' native cultural characteristics, thereby maximizing their potential.

Secondly, the study highlights the crucial role of self-efficacy in moderating the relationship between individual characteristics, cultural assimilation, and competency. Managers should focus on building interns' self-efficacy through mentorship and support systems that encourage confidence and resilience. This can be achieved by providing clear goals, constructive feedback, and opportunities for interns to demonstrate and develop their skills in a supportive environment.

Moreover, the use of web intelligence and data mining techniques can significantly enhance the decision-making processes within organizations. Managers should invest in technologies that facilitate the analysis of large datasets to identify patterns and insights that can improve workforce management, productivity, and overall organizational performance. By leveraging web intelligence, organizations can better address

complex challenges such as labor shortages and unemployment.

Finally, aligning internship programs with the Sustainable Development Goals (SDGs) can provide a strategic advantage. By focusing on goals such as decent work and economic growth (SDG 8) and quality education (SDG 4), organizations can contribute to broader social and economic development. This alignment not only enhances the organization's reputation but also ensures the sustainability of the internship programs and their positive impact on both local and global scales.


7. CONCLUSION

The TITP's emphasis on the Japanese language and culture has overlooked the development of individual attributes, resulting in mediocre performance, highlighting a priority by the Indonesian Ministry of Manpower on quantity over quality of labor sent to Japan, contrary to Human Capital Theory's proposition. This failure to address individual qualities may impede participants' workplace performance. While interns exhibit favorable traits, such as conscientiousness and extraversion, their impact on individual competitive advantage remains moderate, although certain traits such as friendliness and trustworthiness positively influence relationships with Japanese coworkers. The program's focus on qualitative aspects of human resources limits its impact on enhancing competitiveness, necessitating a shift towards improving quantitative aspects like education and work achievements. Although the absorption of Japanese work culture during the internship modestly enhances competency, further integration of Indonesian and Japanese work cultures could improve overall competence and competitive advantage. Moreover, while competence does not significantly affect individual competitive advantage, more targeted training is needed to strengthen specific job-related skills. Overall, the study underscores the importance of balancing traditional Indonesian values with the modern Japanese work ethic to enhance individual competitive advantage and career prospects, aligning with prior research highlighting the influence of work culture on competitiveness.


Self-efficacy plays a nuanced role in shaping the competency and competitive advantage of interns within the context of Ginou Jisshu's Technical Intern Training Program (TITP). While it has the potential to moderately enhance individual competency by strengthening character qualities and fostering confidence in task accomplishment, its impact is tempered by various factors. Despite interns' high regard for traits like conscientiousness and friendliness, the TITP's exclusive focus on the Japanese language and culture, without adequate attention to individual attributes, hampers their development and adaptation during internships in Japan. Consequently, some interns struggle due to a lack of encouragement for Indonesian cultural values or personal attributes, as evidenced by instances of deportation resulting from a lack of self-confidence and competence at work. Moreover, self-efficacy paradoxically diminishes the influence of individual traits on intern competency, as cautious and trustworthy behavior, although valued, may limit efforts to showcase company culture and personal roles, which may not align with Japanese norms. Additionally, while interns may admire Japanese work culture and feel prepared to handle challenges, attempts to stand out with self-efficacy often conflict with the rigid procedural nature of Japanese work culture, hindering their efficiency. Furthermore, although interns appreciate the benefits of assimilating Japanese work culture, weak self-efficacy indicators impede their ability to effectively demonstrate competencies, especially in navigating cultural diversity and adhering to Japanese norms, ultimately limiting their competitive advantage in the workplace. Therefore, while self-efficacy may positively influence interns' attitudes towards work, its nuanced interplay with competence and adaptation to Japanese work culture underscores the need for a balanced approach to enhance interns' competitive advantage effectively within the TITP framework.


8. DECLARATIONS

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The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

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