Article

Cultural Intelligence, Firm Capabilities, and Performance: The Case of German Subsidiaries in Malaysia

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Abstract: The extant literature shows that firm capabilities such as knowledge transfer and innovation are highly related to firm performance. How these relationships express themselves for foreign-based firms operating in global environments is less understood. The objectives of this study are as follows: (1) to examine the differential effects of knowledge transfer and innovation on the performance of German-based companies operating in Malaysia; (2) to determine if these relationships and effects operate via an "intervening variable" or mediator, in this case, competitive advantage; and (3) to determine if another latent variable (cultural intelligence) has an altering or "moderating" influence on the effects of innovation and knowledge transfer on competitive advantage. Analyses of the causal relationships are tested using a sample of 475 respondents working in German subsidiaries in Malaysia and applying a structural equation model. The empirical findings indicate that innovation and knowledge transfer are positively and significantly related to German companies' overall performance, that these effects are mediated by competitive advantage, and that cultural intelligence interacts with innovation and knowledge transfer to affect the strength of the relationships between innovation (knowledge transfer) and competitive advantage.

Keywords: competitive advantage; cultural intelligence; firm performance; knowledge transfer; innovation; international business

1. Introduction

Disruptions in the normal operations and management of international business brought on by unexpected events such as the COVID-19 pandemic and the resultant trade breakdown and supply chain blockages have underscored the crucial roles of competencies such as adaptability, knowledge transfer, and innovation of foreign-based firms in conducting business in other countries. The unpredictability and speed of changes in the global business environment increase the challenges and risks for foreign firms operating under traditional business models. This study examines the roles and effectiveness of knowledge transfer and innovation activities in helping foreign-based firms or subsidiaries achieve their targeted firm performance in another country. More specifically, it looks at the moderating influence of cultural intelligence on the firm's capabilities (knowledge transfer and innovation) using German subsidiaries operating in Malaysia as the study sample.

Germany's government and multinational companies view Malaysia as an important, stable, and resilient economy in the Southeast Asian region [1]. For the past two years, Malaysia has become Germany's largest trading partner in the Association of Southeast Asian Nations (ASEAN) region. In 2022, German exports to Malaysia amounted to 6.2 billion euros, while imports from Malaysia totaled 12.4 billion euros ([2]. Net inflows of German FDI to the country in 2021 have risen to 129 million euros, after an earlier decline due to the impacts of the pandemic ([3]. Moreover, the number of German subsidiaries in Malaysia continues to grow as a result of the country's locational advantages of a skilled

labor force, low labor costs, and the presence of a strong supplier network. Thus, given the strong relationships between Malaysia and Germany and the former's multicultural environment, this study considers and employs German firms in Malaysia as the appropriate and critical sample to analyze.

The purpose of this study is to examine how competitive advantage mediates and how cultural intelligence moderates the relationships between two independent variables, knowledge transfer and innovation, and the main dependent variable, firm performance. Past literature shows that these firm resources or capabilities provide competitive advantages to the firm, which help achieve and enhance company performance in the market. How these relationships express themselves for foreign-owned firms operating in an international environment is less understood, however. In their 2023 survey, Castro and Moreira [4] state that the effects of knowledge transfers between MNCs and subsidiaries have not been investigated extensively. Another less studied area, based on Castro and Moreira's literature review, is the influence of MNC employee competency on knowledge transfer. Thus, in the present study, the analysis of these causal relationships is applied specifically to the case of German companies doing business in the multicultural country of Malaysia. Moreover, managerial competency (i.e., cultural intelligence) is linked to competitive advantage and firm performance. Structural equation modeling (SEM) is used to test the hypothesized relationships of the study.

The empirical findings of this study show that transfer of knowledge and innovation activity positively influence the firm performance of German subsidiaries. Moreover, the results indicate that cultural intelligence partially moderates the relationship between knowledge transfer and firm performance and between innovation and firm performance. Lastly, the study finds that competitive advantage mediates the relationships between knowledge transfer and firm performance and between innovation and firm performance.

Thus, knowledge transfer and innovation are important determinants of overall performance of German subsidiaries in Malaysia. More importantly, the moderating role of cultural intelligence is critical for the operational success and sustainability of German-based firms operating in the Malaysian market. This study demonstrates the practical and social importance of studying different aspects of cultural intelligence and awareness [5]. Lastly, using structural equation modeling (SEM), it integrates different levels of research by analyzing both individual and firm-specific factors that may affect the performance of a company.

The remainder of the paper is organized as follows. The next section discusses the past literature, followed by the theoretical model listing the important determinants of firm performance of German companies in Malaysia. The statistical procedure and empirical findings are then presented. Finally, a summary, managerial implications, and limitations of the study are discussed.

2. Literature Review and Hypotheses Development

The theoretical model used in this study is based primarily on Ooi and Chelliah's [6] conceptual framework. The main objective of this study is to apply and test Ooi and Chelliah's theoretical framework using the real-world example of German subsidiaries operating in the culturally diverse environment of Malaysia. It focuses primarily on the moderating role of managers' cultural intelligence on firm capacities (knowledge transfer and innovation) and firm performance. Thus, it follows other studies by Berraies [7], who analyzed the effect of managers' cultural intelligence on the firm's innovation performance, and Kadam et al. [8], who examined the impact of small entrepreneurs' cultural intelligence and other competencies on the overall performance of firms.

This study also derives much from earlier studies by Corral et al. [9], who examined the relationships between knowledge transfer and innovation and firm performance; Neely et al. [10], who analyzed the relationship between innovation and firm performance; and Caputo et al. [11], who evaluated the moderating effect of cultural intelligence in the management setting of firms. The evaluation of business performance is an objective exer-

cise based on various economic, financial, and other measures, but it can also be subjective as different individuals may see and interpret performance indicators differently [12].

Based on the past studies by Xie et al. [13], Latifi et al. [14], and Wang and Wang [15], knowledge transfer and innovation create competitive advantages for the firm, which in turn contribute to better firm performance. Similarly, Ramirez et al. [16] and Ferreira et al. [17] demonstrated that the intangible assets of a firm (such as innovation capability and intellectual capital) are sources of a firm's competitive advantage and can lead to better performance. More recently, Castro and Moreira [4] conducted a literature review of 85 journal articles related to knowledge transfer within MNCs and subsidiaries and found the following: "Unsurprisingly, the knowledge-based view of the firm is the most popular theory in the literature on intra-MNC knowledge transfer, indicating that knowledge creation, transfer, retention, and application inside the firm are the best means to achieve sustainable competitive advantage and growth." (p. 9). Hence, competitive advantage acts as the mediating variable between the main independent variables (knowledge transfer and innovation) and the dependent variable (firm performance) in the present study.

This study attempts to add to the literature by analyzing the impact of managerial capabilities (i.e., cultural intelligence and awareness) of foreign companies on their business operations and performance in Malaysia. Specifically, it examines whether cultural intelligence has a moderating effect on the relationships between innovation and firm performance, as well as between knowledge transfer and performance.

2.1. Knowledge Transfer and Firm Performance

Although past studies have found that knowledge transfer improves firm performance [9,18], the complexity and nature of knowledge transfer and its relationship with firm performance may explain the mixed results [19]. For example, knowledge transfer has been studied as the primary causal factor [9] or as the mediating variable [20] in explaining firm performance. Furthermore, the effects of knowledge transfer on company performance may vary as employees with diverse cultural backgrounds may view knowledge transfer in working environments differently [21].

Other literature has shown that knowledge transfer may be unrelated to firm performance [22] or that its impact on firm performance may be partially mediated by other factors. Knowledge transfer may influence other primary managerial or organizational factors but have no direct effect on firm performance [23]. Alternatively, its influence on firm performance may be achieved through other factors such innovation [24] and cultural background [5].

In this study, the knowledge transfer construct variable consists of two components: codification knowledge transfer and personalization knowledge transfer. According to Jasimuddin et al. [25], codification knowledge transfer is easily transmitted and stored in a database, and is the most secure type of knowledge as it is protected by intellectual property rights [26]. On the other hand, personalization knowledge transfer is stored in human minds and transmitted only from person to person; this knowledge type is unique to an individual and to a firm if the firm is owned by the individual [25].

2.2. Innovation and Firm Performance

Innovation is the introduction of a new combination of factors from existing sources and processes in the existing system [27]. The innovativeness of the firm is highly dependent on knowledge and experience from the firm's human capital; it generates and creates a competitive advantage for the firm to achieve better firm performance [28].

Liao and Rice [29] found that firm performance is driven and influenced by innovation activities. In addition, innovation activities facilitated firms to gain a competitive advantage over their rivals. A study of the U.S. pharmaceutical industry [30] and another involving Fortune 100 companies [31] also evidenced a significant positive relationship between innovation and firm performance and firm economic value.

Competitive advantage is a specific value, resource, condition, or circumstance that allows the firm to capture existing and new opportunities [32,33]. Studies by Gunday et al. [34], Anh et al. [35], and Kuncoro and Suriani [36] showed that innovation creates a competitive advantage, which in turn helps to promote firm growth and performance.

On the other hand, Chen [37] showed that the innovation–performance relationship is ambiguous. He argued that the relationship can be affected by other factors such as domestic market instability, government policy uncertainty, and environmental policy change.

Thus, this study contributes to the literature and current debate by testing the following hypothesized relationships using a large sample of survey respondents from German subsidiaries operating in Malaysia.

2.3. Knowledge Transfer, Innovation, Competitive Advantage, and Firm Performance

Determining the competitive advantage of a firm entails assessing its capabilities. In this study, this is carried out by evaluating how effective knowledge transfer and innovation are in attaining a competitive advantage for the firm and how this competitive advantage eventually affects the firm performance of the German subsidiaries in Malaysia.

The above discussion led to the following hypotheses:

Hypothesis 1 (H1). *Knowledge transfer has a positive relationship with attainment of competitive advantage among the German subsidiaries in Malaysia.*

Hypothesis 2 (H2). *Innovation has a positive relationship with attainment of competitive advantage among German subsidiaries in Malaysia.*

Hypothesis 3 (H3). *Gaining competitive advantage has a positive effect on the performance of German subsidiaries in Malaysia.*

2.4. The Mediating Effect of Competitive Advantage

According to Collier [38], mediation is a "test to determine if the influence of an independent variable to a dependent variable takes place through an intervening variable called a mediator." (p. 195). If knowledge transfer and innovation activities create a competitive advantage for the firm, and this competitive advantage leads to improved firm performance, then competitive advantage serves as a mediator. Moreover, the mediating effect of competitive advantage can be either "full" or "partial". Full mediation is where the "direct effect" of the independent variable (say, knowledge transfer) on the dependent variable (firm performance) is statistically insignificant, while the "indirect effect" that moves through the independent variable to the mediator to the dependent variable is statistically significant. Partial mediation is when both direct and indirect effects are significant [38].

The above discussion led to the following hypotheses:

Hypothesis 4 (H4). *Attainment of competitive advantage by the German subsidiaries mediates the relationship between knowledge transfer and firm performance.*

Hypothesis 5 (H5). *Attainment of competitive advantage by the German subsidiaries mediates the relationship between innovation and firm performance.*

2.5. The Moderating Effects of Cultural Intelligence

The role of a moderator variable is to strengthen, diminish, or alter the relationships between the dependent variable and independent variables in the research study [39]. This study determines whether cultural intelligence affects the firm performance of German subsidiaries in Malaysia. Cultural intelligence is crucial for international businesses, especially those conducted in diversified markets and in markets without borders [40–42].

Albana and Yesiltas [43] find that cultural intelligence moderates knowledge transfer in a multicultural workplace. Cross-cultural knowledge transfer requires a high level of verbal and non-verbal communication to minimize the negative impact in markets with high levels of cultural distance [44]. Cultural intelligence also serves as the primary factor that influences the accuracy and effectiveness of knowledge transfer in firms operating in markets with high levels of cultural differences [45]. Jyoti et al. [46] argue that cultural intelligence improves firm performance as employees use knowledge transfer correctly to facilitate work efficiency. Moreover, Nosratabadi et al. [47] show that, the higher the manager's or leader's cultural intelligence, the greater the performance of organizations operating in multicultural environments.
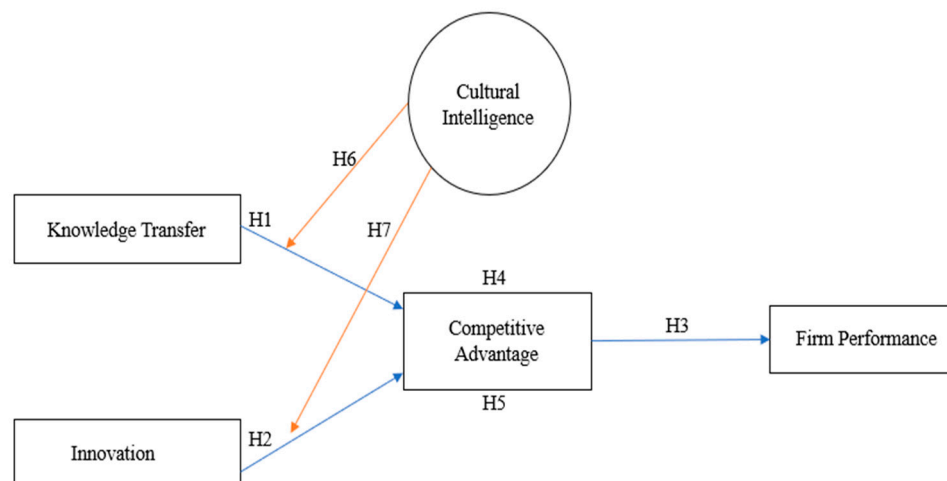
Similarly, Berraies [7] shows that cultural intelligence acts to moderate innovation in a diverse setting of foreign-based firms. Cultural intelligence is able to enhance the innovative behavior of employees through a high level of engagement in work [48] and by enabling employees to understand each other and tolerate and bridge cultural misunderstandings and conflict [21]. Moreover, cultural intelligence plays a moderating role in the managerial decisions and performance of subsidiary firms [49]. Thus, this study investigates both individual manager or leader (cultural intelligence) and firm-specific factors (knowledge transfer and innovation) that may affect the firm's competitive advantage and performance. Following previous studies that have shown a strong linkage between the individual manager's characteristics and the overall performance of the firm [8,50,51], this study examines the impact of the manager's cultural intelligence as an antecedent and moderating factor to firm-level constructs (innovation and knowledge transfer) and, eventually, to the overall performance and success of the firm.

The above discussion led to the following hypotheses:

Hypothesis 6 (H6). *The higher the cultural intelligence, the better the relationship between knowledge transfer and competitive advantage attainment among German subsidiaries in Malaysia.*

Hypothesis 7 (H7). *The higher the cultural intelligence, the better the relationship between innovation and competitive advantage attainment among German subsidiaries in Malaysia.*

In summary, the theoretical framework for this study consists of the seven hypothesized relationships discussed above and is represented diagrammatically by Figure 1 below. The figure shows how the firm competencies of knowledge transfer and innovation affect competitive advantage (H1 and H2, respectively) and, in turn, firm performance (H3). It also indicates how competitive advantage mediates (H4 and H5) and how cultural intelligence moderates (H6 and H7) the causal relationships between knowledge transfer and innovation and the main dependent variable, firm performance.

Figure 1. Theoretical framework.

3. Methodology

3.1. Sample

A subset of manufacturing companies operating in Malaysia that have parent firms in Germany were chosen as the sample population for this study. These targeted subsidiaries were identified from the membership directory of the Malaysia–German Chamber of Commerce and Industry. This study used an online survey instrument to examine the various hypotheses. The time period of the survey was May to November 2021. The respondents consisted of senior executives and managers from a sample of 560 German subsidiaries operating in the manufacturing industry in Malaysia. Based on the criterion of work experience and leadership position, 475 businesspeople participated in the online survey, representing an 85% response rate. The online questionnaire was created in Google Form and written in English. The respondents' anonymity and confidentiality were assured. The last section of the survey required the respondents to provide either the company's email or the company's name for cross-checking purposes to avoid duplication. To achieve a high response rate, several follow-up sessions were conducted on companies that had yet to respond to the survey.

In the sample, 53% of the respondents were male. Age was distributed as follows: 2.5% were less than 30 years old, 28% were 31–40 years, 29% were 41–50 years, 24% were 51–60, and 16% were over 60. In terms of educational attainment, 7% had a vocational certificate or lower degree, 53% had a bachelor's degree, 31% had a master's degree, and 9% had a doctoral degree. The study alleviated common method bias by informing participants of the voluntary nature of the survey and that personal information and responses are kept confidential. Harman's single-factor test was also used to assess the extent of common method bias [52]. The Harman's test result showed that the significance of the first factor accounted for less than 50% of the total variance, indicating that common method bias is not a problem in the data.

3.2. Measures

The latent variables were adapted from the extant literature and their respective indicators or determinants are measured using a five-point Likert scale: 1 = strongly disagree, 2 = slightly disagree, 3 = neutral, 4 = slightly agree, and 5 = strongly agree. There is no value of 0, as zero may give the idea of neutrality instead of disagreement, following Joshi et al. [53]. Data gathered from the online questionnaire were analyzed using the Statistical Package for Social Sciences (SPSS)-AMOS and Excel. The analysis involved a two-step procedure: (1) confirmatory factor analysis (CFA) to determine how well the specific indicators (survey questions) measure their respective latent construct and (2) structural equation modeling (SEM) to test the hypothesized relationships of the study. Following Collier [38], the CFA statistics used to assess model fit include absolute fit indices (CMIN/df and root mean square error of approximation (RMSEA)) and incremental fit indices (comparative fit index (CFI) and normed fit index (NFI)). The threshold values for CMIN/df should be below 3.0, RMSEA below 0.08, and CFI above 0.90.

The knowledge transfer (KT) construct is measured by an eight-item scale developed by Rhodes et al. [23]. The KT latent variable consists of two dimensions: the codification knowledge transfer and the personalization knowledge transfer. Four survey questions or indicators measure each of the two dimensions. An item example measuring codification KT is "The company saves and renews important information onto the computer for easy browsing" while questions such as "Employees are willing to share their experience and knowledge" measure personalization KT.

The innovation latent variable is adopted from Atalay et al. [54] and consists of four dimensions: product innovation, process innovation, marketing innovation, and organizational innovation. Each of these dimensions has four specific questions, for a total of sixteen questions. Through questions such as "Our company launches new products" and "Our company leads innovative distributing methods to markets", the innovation scale variable measures the company's level of innovative activity.

The competitive advantage latent variable following Chelliah [55] included innovation differentiation, marketing differentiation, low-cost leadership, quality differentiation, and service differentiation. However, only innovation differentiation and quality differentiation are applicable to this research study. Based on Ivancic and Jelenc [56], another competitive-advantage-related variable, resources and capabilities differentiation, was added. Thus, the competitive advantage latent variable has three dimensions: innovation differentiation, quality differentiation, and resources and capabilities differentiation. Each dimension is measured by four items. An item example for innovation differentiation relates to "R&D of new products", a survey indicator for quality differentiation involves "Benchmarking best manufacturing/operating processes", and an indicator for resources and capabilities differentiation is "Constantly seeking new resources to enhance the products and processes".

Following Chen and Lin [45], cultural intelligence consists of four dimensions (metacognitive, cognitive, motivational, and behavioral) and is measured by a list of eight survey questions (each dimension has two indicators or survey questions). Although cultural intelligence is primarily an individual-specific variable, this study maintains that the indicators of cultural intelligence used here reflect the manager's observations and opinions regarding company policies and procedures dealing with cultural awareness and behavior of employees. For example, "My company is conscious of the cultural knowledge employees will use when interacting with co-workers with different cultural backgrounds" and "My company encourages employees to change their verbal behavior when a cross-cultural interaction requires it". Thus, this study links an individual-level construct (cultural intelligence) with firm-level constructs (innovation and knowledge transfer) to explain the firm's competitive advantages and, eventually, overall performance. This approach follows past studies by Seet et al. [50] and Mollick [51].

Based on earlier studies by Azadegan and Dooley [57] and Jurgis and Valdas [58], firm performance is measured by twelve questions indicating four dimensions: accounting measures, market measures, operational measures, and economic value measures. Item examples include "Our company has good customer satisfaction" and "Our company creates long-term economic profit".

Dependent Variables:

The dependent variables are firm performance and competitive advantage.

Independent Variables:

The independent variables are knowledge transfer, innovation, and cultural intelligence.

Control Variables:

The control variables of the study include demographic characteristics such as gender, age, educational attainment, tenure in the company, and managerial position, as well as firm characteristics such as whether the subsidiary is fully owned by a German firm, whether the subsidiary has R&D facilities in Malaysia, number of establishment years in Malaysia, and the firm's market share in the industry.

4. Results

4.1. Descriptive Statistics

To begin the data analysis, Table 1 presents the descriptive statistics of and cross correlations among the five latent variables: knowledge transfer (KT), innovation (Inn), competitive advantage (CA), cultural intelligence (CI), and firm performance (FP). All of the inter-correlations are positive and statistically significant at the 0.01 level (two-tailed).

Table 1. Descriptive statistics and latent variable correlations (n = 475).

LV	M	SD	KT	Inn	CA	CI	FP
KT	4.3887	0.3816	1.000	0.537 ***	0.427 ***	0.382 ***	0.358 ***
Inn	4.3317	0.3434		1.000	0.596 ***	0.608 ***	0.463 ***
CA	4.3665	0.3282			1.000	0.474 ***	0.422 ***
CI	4.3689	0.3431				1.000	0.452 ***
FP	4.2072	0.3819					1.000

Note: *** $p < 0.01$. LV (latent variable), N (mean), SD (standard deviation), KT (knowledge transfer), Inn (innovation), CA (competitive advantage), CI (cultural intelligence), and FP (firm performance).

4.2. Measurement Model Results

Before analyzing the results of the structural equation model, the confirmatory factor analysis (CFA) technique was applied to determine how well the indicators (i.e., survey questions for each construct) measure the respective latent variable. The reliability of the five latent constructs was assessed by Cronbach's alpha, average variance extracted (AVE), and composite reliability (CR), as shown in Table 2. The values of Cronbach's alpha ranged from 0.802 to 0.876 and exceeded the threshold value of 0.70, as recommended by Nunnally and Bernstein (1994). Similarly, the CR values of the five constructs were well above the threshold value of 0.70 [59]. More CFA details on the specific indicators of each latent construct, their standardized factor loadings, and *t*-values are presented in Appendix A. The AVE values of the constructs ranged from 0.7307 to 0.8495 and were higher than the cutoff value of 0.50, indicating and supporting the strong convergent validity of the latent variables [60]. Moreover, the results of tests for discriminant validity (cross-loading method and Fornell and Larcker [61] criterion) indicated that each latent construct is distinct and delineated from the other constructs.

Table 2. Latent construct quality.

Latent Construct	Average Variance Extracted (AVE)	Composite Reliability (CR)	Cronbach's Alpha
KT	0.7965	0.9328	0.837
Inn	0.7926	0.9647	0.876
CA	0.7776	0.9484	0.838
CI	0.8495	0.9541	0.802
FP	0.7307	0.9325	0.821

Note: KT (knowledge transfer), Inn (innovation), CA (competitive advantage), CI (cultural intelligence), and FP (firm performance).

4.3. Hypotheses Testing

The main hypotheses of the full structural model were tested using SPSS-AMOS. Table 3 presents the results.

Direct effects. In terms of direct effects, H1 is supported; that is, the construct knowledge transfer has a positive and significant, albeit small, effect on competitive advantage (H1: β = 0.118, t = 2.291). The construct innovation also has a positive impact on competitive advantage but has a larger and statistically more significant differential effect (H2: β = 0.657, t = 8.055); thus, H2 is supported. Both knowledge transfer and innovation combined explain 54.3% of the variance in competitive advantage. The results support H3, indicating that competitive advantage directly and significantly affects firm performance (H3: β = 0.543, t = 7.719). Competitive advantage explains 57.3% of variance in firm performance.

Table 3. Structural model test results.

Hypothesized Relationships	Standardized Estimates	t-Values	Hypothesis Supported
H1: Knowledge Transfer → Competitive Advantage	0.118 *	2.291	Supported
H2: Innovation → Competitive Advantage	0.657 ***	8.055	Supported
H3: Competitive Advantage → Firm Performance	0.543 ***	7.719	Supported
Squared Multiple Correlations:			
Comparative Advantage	0.530		
Firm Performance	0.295		
Model Fit Statistics:			
CMIN = 1.379, CFI = 0.926, IFI = 0.927,			
RMSEA = 0.038			

Significance levels: * $p < 0.05$, *** $p < 0.001$.

Mediation test analysis. Structural equation modeling (SEM) was used to evaluate the mediating effect of competitive advantage on the relationship between knowledge transfer and firm performance and on the relationship between innovation and firm performance. The results in Table 4 show that the mediation effect of competitive advantage on the relationships of knowledge transfer and innovation on firm performance is significant. In this study, both the direct and indirect effects are significant, indicating partial mediation of the competitive advantage variable.

Table 4. Mediation tests.

Relationships	Direct Effect	Indirect Effect	*p*-Value	Conclusion
H4: Knowledge Transfer → Competitive Advantage → Firm Performance	0.137 (2.650)	0.090 (2.063)	<0.008	Partial Mediation
H5: Innovation → Competitive Advantage → Firm Performance	0.323 (3.445)	0.692 (7.965)	<0.000	Partial Mediation

Note: t-values in parentheses.

Moderating effects. A model with the moderating effects of cultural intelligence on the knowledge transfer to competitive advantage relationship and on the innovation to competitive advantage relationship was specified and tested using AMOS 28. This was carried out to assess whether the moderator variable (cultural intelligence) influenced the indirect relationships from the independent latent constructs (innovation and knowledge transfer) to the final dependent variable (firm performance). As shown in Table 5, the results indicate that the moderating effects of cultural intelligence are positive and significant, thus supporting the hypotheses.

Table 5. Moderation tests.

Hypothesis	Path	Standard Error	t-Value	*p*-Value	Result
H6	Cultural Intelligence → Knowledge Transfer → Competitive Advantage → Firm Performance	0.040	7.905	***	Supported
H7	Cultural Intelligence → Innovation → Competitive Advantage → Firm Performance	0.043	2.606	0.009 **	Supported

Note: ** $p < 0.01$ (t-value > 2.326 (two-tailed)), *** $p < 0.001$ (t-value > 3.090 (two-tailed)), bootstrapping (n = 5000).

5. Discussion

The effects, benefits, and costs of foreign direct investment on economic growth and employment generation in the host country have been well-researched and supported. As important as its direct effects, foreign direct investment has been shown to create spillover

benefits such as knowledge transfers, better technology and innovation, and improved management practices.

Since the 1970s, Malaysia has been a popular location in Southeast Asia for foreign-based MNEs (from the United States, Japan, China, and Europe) thanks to its manufacturing capability and well-educated labor force. The objectives of this study were as follows: (1) to examine the differential effects of knowledge transfer and innovative activities on the performance of German-based companies operating in Malaysia; (2) to determine if these relationships and effects (direct and indirect) operate via an "intervening variable" or mediator; in this case, competitive advantage was tested as the mediating variable; and (3) to determine if another latent variable (cultural intelligence) has an altering or "moderating" influence on the effects of innovation and knowledge transfer on competitive advantage.

Analyses of the causal relationships were tested using a sample of 475 respondents working in German subsidiaries in Malaysia and applying structural equation modeling. The empirical findings indicate that innovation and knowledge transfer are positively and significantly related to German companies' overall performance, that these effects are mediated by competitive advantage, and that cultural intelligence interacts with innovation and knowledge transfer to affect the strength of the relationships between innovation (knowledge transfer) and competitive advantage. These findings are consistent with earlier studies by Kadam et al. [8], Ramirez et al. [16], and Ferreira et al. [17].

6. Conclusions

The activities or indicators associated with knowledge transfer (e.g., database and information systems, employee training) and innovation (e.g., product, process, marketing innovation) have direct effects on the German subsidiary's performance, but also work indirectly by contributing to the company's competitive advantage. Thus, competitive advantage is a mediating variable. Moreover, awareness of and sensitivity to cultural differences are critical to the performance and success of companies engaged in international business. German firms operating subsidiaries in Malaysia must recognize and be sensitive to cultural differences and adapt their corporate structures, management techniques, operations, and strategies to fit the local culture, which, in this country, is a melting pot of Malay, Chinese, Indian, and other ethnic influences. The results of the study demonstrate that the direct effects of innovation and knowledge transfer activities of German subsidiaries are moderated by cultural intelligence. By focusing on a culturally diverse country such as Malaysia, the study demonstrates the critical importance of cross-cultural awareness and literacy to the local performance of foreign-based companies. For companies operating in foreign markets, the role and relevance of cultural intelligence/awareness/sensitivity to cultural differences should not be confined solely to the level of the individual employee (staff member or executive) but must be a part of the "corporate culture". As Lawrence et al. [62] defines it, "Corporate culture is a blend of ideas, customs, traditional practices, company values, and shared meanings that help define normal behavior for everyone who works in a company" (p. 119). International businesses must be prepared to bridge the cultural and knowledge differences by providing appropriate training and education to their leaders and employees on topics such as the foreign country background, language, customs, attitudes, and beliefs. Following Nosratabadi et al. [47], "... companies are encouraged to invest in improving the cultural intelligence of their leaders [and other employees] to improve their performance in cross-cultural environments, and to design appropriate organizational structures for the development of their intellectual capital". The corporate culture should also be reflected in a company code of conduct that encourages and promotes ethical behavior, open communication, nondiscrimination/diversity, and reporting and incentive mechanisms.

Finally, understanding the connections between the firm's internal competitive advantages and cultural intelligence is important as this has implications on the firm's strategic decisions related to where to locate its international facilities; how diverse a workforce it needs; and who are its potential foreign suppliers, partners, and competitors.

This study has several limitations. First, it focused on the activities of German subsidiaries in Malaysia. The findings may not be generalizable to other foreign companies with international business in Malaysia or to German firms operating in other foreign nations. Future work may extend to other geographic locations where foreign direct investment is significant. Second, the survey respondents were primarily senior-level personnel working in the manufacturing sector. Further research could expand the cross-sectional study to include other levels of employees from different industries to garner more insights into the effects of knowledge transfer and innovation on employee productivity and overall company performance. Lastly, the research model and its hypotheses were tested using cross-sectional data at a specific point in time. A longitudinal study or comparative time-period study would provide more insights into the processes involved in the relationships between foreign investment and local economic performance in the host country.

Appendix A

Table A1. Confirmatory factor and reliability analysis.

Constructs	Standardized Factor Loading	t-Value
Knowledge Transfer (C.R. = 0.9328)		
Indicator #1: The company saves and renews important information onto the computer for easy browsing	0.7880	17.394
#2: Knowledge is categorized in the database for use by all company employees	0.8240	18.392
#3: The company saves important information through words, pictures in the computer systems	0.7800	17.371
#4: Employees use e-mail or internal network to share their knowledge with others	0.7940	17.696
#5: Employees are willing to share their experience and knowledge	0.8170	18.772
#6: The company transfers employee experiences to other employees	0.7840	18.106
#7: The company transfers effective knowledge to employees through training courses, presentations, and internal magazines	0.7970	18.446
#8: The company always organizes employee sharing session for all employees to share their knowledge and skills	0.7880	18.212
Innovation (C.R. = 0.9647)		
Indicator #1: Our company launches new products	0.7800	17.471
#2: Our company extends numbers of product lines	0.8520	19.468

Table A1. *Cont.*

Constructs	Standardized Factor Loading	t-Value
#3: With NPD (new product development), our company enlarges new markets	0.8370	19.124
#4: Our company launches customized products according to market demands	0.8020	18.213
#5: Our company adopts advanced real-time process control technology	0.7880	17.564
#6: Our company imports advanced automatic quality restriction equipment/software	0.7700	17.119
#7: Our company imports advanced programmable equipment	0.7870	17.547
#8: Our company engages in business process re-engineering	0.8250	18.416
#9: Our company leads innovative distribution methods to markets	0.8360	20.922
#10: Our company leads innovative promoting methods to markets	0.7630	18.556
#11: Our company continually enlarges potential demand markets	0.8300	20.804
#12: Our company continually spreads latest newsfeed to the market	0.8380	21.054
#13: Our company adopts innovative reward systems	0.6250	11.672
#14: Our company adopts innovative work designs	0.7020	12.302
#15: Our company adopts innovative administration aiming at NPD	0.8600	13.819
#16: Our company engages in organizational reconstruction for pursuing operational efficiency	0.7870	13.286
Competitive Advantage (C.R. = 0.9484)		
Indicator #1: R&D of new products	0.7540	15.572
#2: Innovative marketing techniques	0.7710	16.253
#3: Marketing of new products/services	0.8220	17.274
#4: Obtaining patents/copyrights	0.8050	16.963
#5: Benchmarking best manufacturing/operating processes	0.7950	17.342
#6: Strict products/services quality control	0.8280	18.418
#7: Immediate resolution on customer query	0.7610	16.899
#8: Time to time product improvements based on feedback	0.7600	16.881
#9: Employed knowledgeable and skilled employees	0.7520	15.762
#10: Encourages employees to take extra milestone for self-pace learning	0.7730	15.592
#11: Provides funding for employees to enroll in professional course	0.7230	14.659
#12: Constantly seeks new resources to enhance the products and processes	0.7870	15.816
Cultural Intelligence (C.R. = 0.9541)		
Indicator #1: My company is conscious of the cultural knowledge employees will use when interacting with co-workers with different cultural backgrounds	0.8300	11.525
#2: My company encourages employees to check the accuracy of their cultural knowledge as they interact with people from different cultures	0.8710	12.250
#3: My company knows well the legal and economic systems of all employees from different cultures	0.8960	13.792
#4: My company encourages employees to know the arts and values of other employees from different cultures	0.8190	12.073
#5: My company will ensure all employees can deal with the stresses of adjusting to a culture that is new to them	0.8510	12.151
#6: My company encourages all employees to socialize with people in a culture that is unfamiliar	0.8350	11.585

Table A1. *Cont.*

Constructs	Standardized Factor Loading	t-Value
#7: My company encourages employees to change their verbal behavior when a cross-cultural interaction requires it	0.8140	9.564
#8: My company encourages employees to change their non-verbal behavior when a cross-cultural situation requires it	0.8800	10.386
Firm Performance (C.R. = 0.9325)		
Indicator #1: Our company's sales growth	0.7540	13.512
#2: Our company's profit growth	0.7330	13.331
#3: Our company's employee growth	0.7410	13.401
#4: Our company has better intangible assets (resources)	0.7170	11.121
#5: Our company has good customer satisfaction	0.6280	10.687
#6: Our company outperforms average industry product innovation and quality	0.7300	11.335
#7: Our company creates long term economic profits	0.6790	11.523
#8: Our company outperforms average market returns	0.7420	12.023
#9: Our company has better return to shareholders	0.7380	12.003
#10: Our company has better residual income	0.7020	13.915
#11: Our company creates more returns than actual accounting measure	0.7830	14.190
#12: Our company has better cash flow return on investment	0.8210	14.367

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