Bank Specific as Moderator between Intellectual Capital and Malaysian Microfinance Institutions Performance

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I. Introduction

Throughout the world, experience has resulted in a major reorientation of companies' innovation and creativity patterns, resulting in a change in firm valuation away from tangible assets and intangible assets. According to [1], intellectual capital (IC) is a multidimensional term used to characterize intangible assets that constitute the firm's expertise. Thus, IC is a significant factor in the growth of a knowledge-based economy and enhanced competition in both profits- and non-profit-oriented businesses [2]. Companies are currently facing significant obstacles to remain competitive in the current economic climate. In this vein, market dynamism drives an enormous demand for information (intangible asset) [3]. Not only are businesses struggling to add value, but the critical role of intellectual capital as a significant factor in determining a nation's economic and financial success

has been ignored [4]. In a rising economy, [5] claimed that resources are scarce, cannot be replaced and provide a competitive advantage. Resources also contribute to value creation, and act as growth drivers, ultimately improving the company's performance; both of these traits are found in intellectual capital [6], [7]. Regrettably, senior management is dubious whether the firm's valuable resources will contribute to the success of new plans. As a result, disregarding IC will place the business in ineffective employees, substandard service, a lack of knowledge, and poor client relations.

IC has developed into a valuable asset in today's financial world. To thrive in today's economy, managers must compete in an increasingly competitive environment. One of the aspects that the organization must examine to continue to exist is its IC. By investing in IC, a business can increase its productivity and efficiency [8]. As a result, microfinance institutions (MFIs) should prioritize their IC, enabling institutions to function effectively and stay sustainable in the long run. Banks and non-bank microfinance institutions (MFIs) are both types of microfinance providers [9]. Both providers are assessed in this study to serve as an excellent illustration of how the industry's demand and supply sides interact to support its rapid expansion. Thus, the study's objective was divided into two halves. In its first section, the current research examines the importance of IC in microfinance institutions' (MFIs) performance. The study's second component looked into the effects of MFI specific (banks versus non-banks) as a moderating variable on the relationship between IC and MFIs performance. The study is aimed to raise MFIs' awareness of the necessity of focusing on human resources, such as staff and customer perspectives, in addition to financial and commercial factors [10]. The economy will profit from this employee-customer strategy since it will increase customer motivation to repay a loan as a result of the high-quality service provided by employees, resulting in greater revenue output. The researchers also hope that this study will contribute to and improve awareness about MFIs among human resource managers in particular and microfinance policymakers, government officials, and non-governmental organizations (NGOs) in general, as well as recommend areas for future research.

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II. Resource base Theory

Academic scholars have increasingly accepted the resource-based view (RBV) [11]. Strategic management, human capital management, and economics are used to develop this theory [12]. The fundamental concept of the RBV is that company resources are heterogeneous, not completely transportable, and robust. MFIs resources are considered as the basic building elements of its operation and success. These assets, which comprise both tangible and intangible assets like financial capital, qualified people, and machinery, would influence MFIs production quality. The RBV theory is relevant to this study since it explains the optimal strategy for improving MFIs efficiency by using readily available assets and capabilities to achieve or increase sustainable competitive advantage [13]. According to the RBV, a firm's productivity and effectiveness are highly dependent on its capital [14]. Thus, applying the RBV perspective in Malaysian MFIs, it can aid in identifying its critical capabilities, depict their potential development, and their relationship to explicit indicators of the institution's competitive advantage [15]. As a result, it is argued that the RBV theory provides the best way for the MFIs to gain a competitive edge over its competitors, resulting in increased profit opportunity [16]. The research framework of this study is depicted in Figure 1.
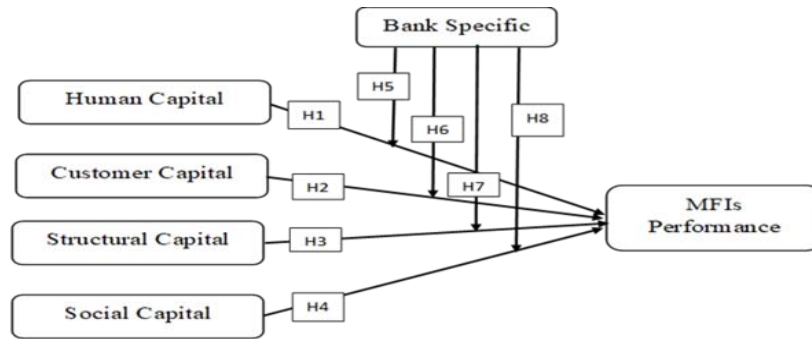

Figure 1: Research Framework

III. Literature Review

a) Malaysian Microfinance Institutions Performance

Microfinance institution (MFI) is a 'social enterprise' with a principal mission to assist the poor by improving their lives through the means of financial services provision [17]. As posited by [18], the MFIs' growth and their sustainability are substantially depending on not only external funds that are available to them, but also the efficiency of their operations. Ahmed further added that if MFIs' train their employees regularly to acquire and hone relevant skills, MFIs are highly likely to operate efficiently. According to [19], MFIs must identify the primary issues in order to maintain their operations and remain sustainable. Due to the knowledge-based economy, a complete transformation has taken place in the current business. The determination of the MFIs' wealth and also its sustainability are very crucial indeed. Thus, the practice by firms in recognizing its intangible assets, particularly the capabilities and expertise of the employees must be encouraged and nurtured [20].

b) Intellectual Capital

Intellectual capital (IC) is essential to a knowledge-based economy's success [21]. To maintain the firm's competitiveness, a move from a labor-based to a knowledge-based business model is required [22]. IC is important, and it significantly impacts a company's financial results [23]. According to the accounting principle – Intangible Asset Standard (IAS 38), intangible assets are described as patents and copyrights. However, the IAS 38 does not recognise the capitalization of a company's human capital, structural capital, or consumer capital, all of which are components of IC and can obscure the company's overall value [24].

Additionally, [25] demonstrated that intangible assets and capacities contributed significantly more to firm success than tangible assets. Confronted with the rise of the "information-based economy" in the twentieth century, it drew attention to the importance of knowledge. IC is transforming into a significant generation factor, displacing conventional forces. It is directly responsible for nations' economic and financial growth and core drivers of businesses' ability to maintain competitive advantages [4]. The IC is composed of four components: human capital, structural capital, customer capital and social capital [26]. [27] previously clarified the three dimensions: human capital, structural capital, and customer capital. Combining all four dimensions strengthens MFIs ability to compete in a competitive market, as opposed to those that depend on a single source of IC [28]. MFIs will benefit from a longer-term competitive advantage as a result of this. MFIs can also demonstrate prudence toward their institutions by preserving intangible assets and fostering the practice of acknowledging intangible assets, especially their personnel' skills and competences [20].

i. Human Capital

Human capital (HC) includes the knowledge, skills, education, experience, and attitude of hired people and their capacity to do their duties, which ultimately results in the attainment of organizational objectives [29], [30]. In other words, HC is a composite of the experience and talents of a firm's personnel [31]. As a result, human resources are frequently regarded as a firm's most valuable asset. However, it is frequently overlooked [32]. MFIs must retain their employees' competency while also respecting their work by identifying and maintaining their degree of happiness, since this will increase their satisfaction and encourage them to stay with the company. According to [33], humans can be either a burden or a valued asset within a business. As such, MFIs must retain and value their expertise. Therefore, MFIs ensure that their staff feel more at ease and are more likely to remain loyal to the institution. MFIs should conduct satisfaction surveys to maintain the employees' loyalty to the institution. Furthermore, according to [34], organizations must invest in developing entrepreneurial leadership (human capital), improving management procedures (structure capital), and expanding ties with other enterprises to compete in the global market (customer capital). According to [35], HC has the most significant impact on the IC of the Turkish banking sector. Employees with a thorough understanding of Shari'ah (Islamic law) will increase their credibility and reputation in the capital market. In MFIs, HC includes senior management, such as CEOs, managers, executives, and other staff. Therefore, MFIs should seize opportunities to hire efficient and effective personnel or enhance their ability to play a substantial and successful role in the sector. As so, the hypothesis was:

H1: Human capital (HC) has a positive influence on MFIs performance

ii. Customer Capital

Customer capital (CC), also known as relational capital, is composed of two components: capability and alliance, the latter of which refers to an organization's intermediation with internal and external forces like as employees, suppliers, customers, and competitors [27], [30], [34]. Businesses must improve their interactions with stakeholders, particularly their clients [23]. Recent evidence confirms the considerable positive association between customer and Malaysian MFIs, which results in increased performance of their small and micro companies. According to [36], this relationship also benefits customer at the household level, not just in terms of asset purchase, but also in income generation. According to [32], customer, supplier, and local community support is critical for MFIs' performance and, in the long run, this support enables MFIs to remain sustainable. As a result, the following hypothesis was developed:

H2: Customer capital (CC) has a positive influence on MFIs performance

iii. Structural Capital

According to [29], [34], structural capital (SC) refers to knowledge that is contained within a business but is not owned by its employees, such as systems, norms, structure, culture, strategy, trademarks, and patents, all of which contribute to the organization's innovative capability. In a nutshell, an MFI is made up of its internal structure and personnel. When an MFIs' technology is strengthened, its processes are developed, and other internal initiatives are launched, structural capital is improved. Thus, structural capital can be defined as the capacity of a business to meet client needs. According to recent data, [37] argue that a microfinance institution with a strong organizational structure will perform better, provided the institution has skilled personnel who deliver high-quality service. [38] argue that even if an institution has competent and knowledgeable people, ineffective SC will prevent the firm's IC from being stretched to its full potential. As a result, the following hypothesis was developed:

H3: Structural capital (SC) has a positive influence on MFIs performance

iv. Social Capital

Social capital (SO) is defined as the relationships and the norms that produce the quality and quantity of social interaction of a society with people. According to [26], SO is one of the crucial components of IC. [39] explained that the critical roles of SO are that they enable adoption and disables human, natural capital, and financial constraints. Furthermore, SO is the institutions' sum that underpins society and a crucial adhesive agent that holds them together. The creation of microfinance is believed to assist those who are poor. Nonetheless, the determination of poverty is frequently based on the social instead of financial factor [40]. Such a determination is due to socioeconomic factors concerned with customers. For example, language differences, lack of numerical skills, borrowers' locations, accounting practices, customers being unfamiliar with documentation, and ethnicity are the contributing factors to unproductive operations. Therefore, the hypothesis was:

H4: Social capital (SO) has a positive influence on MFIs performance

v. Bank Specific

Bank specific refers to two types of institutions namely, bank-based and non-bank-based MFIs [41]. The non-bank MFIs, are regarded as government agencies and non-governmental organizations. They provided outstanding microcredit programs for microenterprises. These MFIs have offered development assistance to entrepreneurs, which is critical for young and inexperienced entrepreneurs. The non-bank MFIs

required the fewest supplemental documentation for loan applications, resulting in a reduced cost and more efficient resource allocation [42]. Regarding bank-based MFIs, they continue to request specific documentation to back loan applications, which are frequently impossible for consumers to produce. This suggests that the latter MFIs are more selective in their customer selection and operate similarly to traditional commercial banks. Hence, evidence suggests that IC's effects on company performance vary per firm [34]. Furthermore, it was discovered that the banking industry has the least impact on IC (intellectual capital), insurance companies, and brokerage firms compared to non-financial institutions whose IC has a favorable correlation with their success [43], [44]. As so, the hypothesis was:

H5: Bank Specifics as moderator has a positive influence on HC and MFIs performance

H6: Bank Specifics as moderator has a positive influence on CC and MFIs performance

H7: Bank Specifics as moderator has a positive influence on SC and MFIs performance

H8: Bank Specifics as moderator has a positive influence on SO and MFIs performance

IV.   Methodology

The current study explored MFIs in the setting of Malaysia. The study collected data through the use of a standardized questionnaire administered to respondents. The questionnaire is divided into three pieces, the first of which contains questions on IC components (human capital, structural capital, social capital, and customer capital). The second portion of the questionnaire includes questions about the performance of MFIs. The third segment includes things that delve into the respondents' profiles. The items in the questionnaire's first and second parts are graded on a seven-point Likert scale. The scale is between 1 and 7, with 1 indicating strongly disagree and 7 indicating strongly agree. The exogenous variable, IC, that represent four dimensions: human capital, structural capital, customer capital, and social capital was quantified using 29 items.

On the other hand, the endogenous variable, MFIs' performance, was evaluated using 11 items. The questionnaire was distributed to 300 managers of Malaysian MFIs. Purposive sampling was used to choose the sample for this study. The researcher retains the right to select suitable respondents to represent their companies [45]. The data gathering period for this study was October to December 2019.

The current study's target group was made up of managers and senior executives from Malaysian MFIs responsible for the institution's internal management and played a role in its development. The G-power software was used to establish the required minimum sample size. The research model was built with a maximum of five predictors for the performance of MFIs, and the effect size was assessed to be moderate (0.15), while the required power was set at 0.80. According to [46], the acceptable minimum in social science is established at 80%. Because the needed sample size was 114, the obtained data were slightly larger than the required number. Only 156 managers answered the questionnaire out of 300 eligible respondents. This sample size represents a response rate of 52%, which [47] consider to be satisfactory. The model shown in Figure 2 was calculated employing Smart PLS 3.2.8 and is focused on path modelling and bootstrapping [48], [49], [50]. The PLS analysis consists of two stages: the measurement model and the structural model. It is necessary to conduct a reliability and validity analysis on the measurement model. Convergent and discriminant validity are used to assess the measurement model's validity, while the Composite Reliability Index is used to assess the model's reliability (CR). Following the development of the measurement model, a structural model testing with 500 resamples was done to examine the hypothesis regarding the links between important success variables and MFIs performance.

V.   Result and Findings

Although 300 surveys were given, only 156 respondents (52 percent) returned the questionnaires in a useable condition. According to Table 1, 71 respondents (45.5 percent) indicated they were in a senior management role, 52 respondents (33.3 percent) indicated they were in a middle management position, and 33 respondents (21.2 percent) claimed they were in a top management position. 143 (91.7 percent) of the 156 responders were male, while the remaining (8.3 percent) were female. The majority of respondents (83 or 53.2 percent) are between the ages of 26 and 35, 50 (32.1 percent) are between the ages of 36 and 45, 15 (9.6 percent) are between the ages of 46 and 55, six (3.8 percent) are between the ages of 20 and 25, and only two (1.3 percent) are over the age of 56. Regarding the managers of MFIs who answered, 132 were employees of bank-based MFIs (84.6%) and 24 were workers of non-bank-based MFIs (15.4%).

Table 1: Respondent's Profile

		Frequency	%
Gender	Male	143	91.7
	Female	13	8.3
Age Group	20-25	6	3.8
	26-35	83	53.2
	36-45	50	32.1
	46-55	15	9.6
	Above56	2	1.3
Designation	Top management	33	21.2
	Senior management	71	45.5
	Middle management	52	33.3
Working Experience	1-5	35	22.4
	6-10	57	36.5
	11-15	34	21.8
	Above15	30	19.2
Bank Specific	Bank-based	132	84.6
	Non-bank-based	24	15.4

a) *Partial Least Square – Structural Equation Modeling (Measurement Model)*

To determine the reliability, discriminant validity, and convergent validity measures, the confirmatory factor analysis (CFA) was conducted. As suggested by [51], factor loadings should be used in assessing the convergent validity. On the other hand, to assess convergent validity, Composite Reliability (CR) and Average Variance Extracted (AVE) could be used. Table 2 shows that most item loadings are higher than 0.5 (significant at $p < 0.01$), and all Average Variance Extracted (AVE) exceed 0.5, while the Composite Reliability (CR) for all the variables are more than 0.7 [52].

Table 2: Discriminant Validity

Construct	Items	Loading	CR	AVE
Human Capital	HCS1Employeespossessrelevant academic qualifications and Vocational training.	0.736	0.876	0.587
	HCS2Employeesare competent in handling matters about microfinance transactions.	0.726		
	HCS3Employeesarehighlymotivatedself-learners.	0.831		
	HCS4Employeesfocus on the quality of service provided.	0.791		
	HCS6 Our employees are committed to achieving the organization's vision and mission.	0.742		
Customer Capital	CC1 Our organization is aware of customer's complaints.	0.720	0.929	0.620
	CC2 Our customers select a broader range of our products or services.	0.794		
	CC3 Our customers show loyalty towards our organization.	0.737		
	CC4 Our organization cares about customer expectations.	0.838		
	CC5 Our customers are satisfied with the delivery of our services.	0.829		
	CC6 Our customers have trust in our staff capability.	0.818		
	CC7 Our products or services are market-driven.	0.753		
	CC8 Ourorganization keep track of customers 'feedback survey.	0.801		
Structural Capital	SC1 Efficient and integrated management system for customers.	0.750	0.945	0.659
	SC2 Organization's knowledge contains in manuals, data bases, etc.	0.781		
	SC3 Knowledge and information are transferred in structures, systems, and processes.	0.867		
	SC4Ourorganizationalsystemandproceduressupport innovation.	0.879		

	SC5 Our organization system supports continuous improvements including quality time in problem solving.	0.805		
	SC6 IT systems and their usage are enablers to higher productive performance.	0.790		
	SC7 Ourorganizations establish a networking system which engages customers, financial contributors, databases, etc.	0.788		
	SC8 Ourorganization has organizational control system and procedures.	0.843		
	SC9 Ourorganization has an effective internal communication system.	0.792		
Social Capital	SO1 Organizational culture is nurtured to attain social out reach acceptance.	0.796	0.921	0.624
	SO2 Environmental health and public social benefits are consideredinany planning, development, and implementation of projects.	0.792		
	SO3 Organizations establish trust with clients.	0.747		
	SO4 Clients establish a strong network among group members with the assistance of the organization.	0.849		
	SO5 Clients of the organization have a good and trust worthy relationship among the group members.	0.825		
	SO6 Ourorganization mobilizes resources for the poor/needy through easy access to the microfinance program.	0.774		
	SO7 Organization plays a vital role for creating positive social interaction.	0.740		
MFIs Performance	MP1 Our organization's revenue is continuously increasing growth.	0.806	0.960	0.687
	MP2 Ourorganization's return on assets has been increasing.	0.849		
	MP3 Ourorganization's return on sales has been increasing.	0.821		
	MP4 Ourorganization's return on capital employed/allocated grant has been increasing.	0.821		
	MP5 Ourorganization's product image has improved.	0.862		
	MP6 Management performance has been increasing.	0.829		
	MP7 Workers performance has been increasing	0.847		
	MP8 Shareholder value has been increasing	0.809		
	MP9 Our market share/social out reach is continuously increasing.	0.808		
	MP10 Practices 'On Time Delivery' to customers	0.794		
	MP11 Our organization has good overall performance and success.	0.865		

Note: HCS5wasdeleted due to low loading

Additionally, as indicated by [53], the current study used the Heterotrait Monotrait (HTMT) as the discriminant criterion for validating discriminant validity. According to [53], a correlation value of less than one between constructs shows the achievement of discriminant validity. Nonetheless, we used a more cautious criterion of 0.85 to imply a much stronger distinction between the conceptions, as suggested by [54], [55]. Correlation estimates for HTMT evaluations are shown in Table 3. Correlation coefficients between the tested constructs were less than 0.85. As a result, this finding demonstrates that the requisite degree of discriminant validity was attained through the evaluation of HTMT.

Table 3: Heterotrait Monotrait (HTMT)

Constructs	CC	HC	MFIsPerf	SO	SC
CustomerCapital(CC)					
HumanCapital(HC)	0.744				
MFIsPerformance(MFIsPerf)	0.705	0.624			
SocialCapital (SO)	0.818	0.741	0.719		
StructuralCapital(SC)	0.826	0.689	0.750	0.833	

b) Partial Least Square – Structural Equation Modeling (Structural Model)

The R^2 value of the endogenous variable is used to calculate the explained variance. According to [56], an R^2 value greater than 0.60 indicates a high value, 0.30 to 0.60 indicates a moderate value, and less than 0.30 indicates a low value. The R^2 value reported in Figure 2 indicates that all exogenous factors (HC, CC, SC, and SO) could account for 59.9 percent of the MFI's performance.
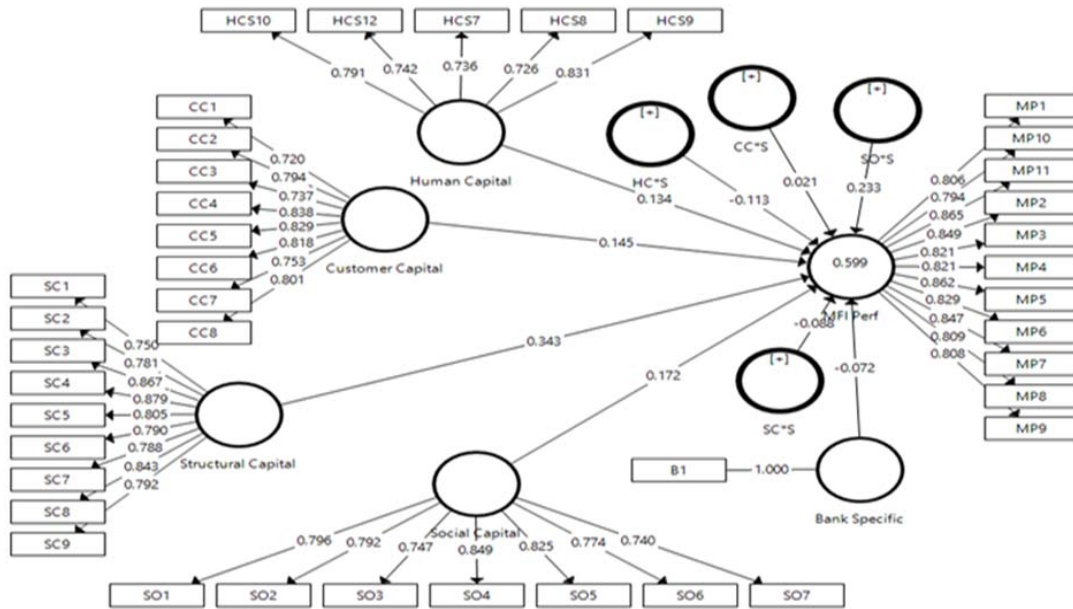

Figure 2: Measurement Model

Table 4 summarizes the hypothesis testing results and illustrates the routes for each hypothesis in terms of their coefficients, observed t-statistics, and significance levels. According to previous research [57], [58], the appropriate t-values for a one-tailed test are 1.28 (10 percent significance level at $p < 0.10$), 1.645 (5 percent significance level at $p < 0.05$), and 2.33 (1 percent significant level at $p < 0.01$). The study's findings indicate that four of the eight hypotheses evaluated strongly connected with the endogenous variable. In terms of MFI performance as an endogenous variable, HC (β= 0.134, t = 1.764, p<0.05) and SC (β = 0.343, t = 3.965, p<0.05) exhibit positive and statistically significant correlations with MFI performance. Consequently, H1 (HC has a significant positive influence on the performance of MFIs) and H3 (SC has a significant positive influence on the performance of MFIs) are supported. The findings of the HC and SC corroborate those of prior investigations [20], [31], [32], [35], [37], [38]. However, CC (β = 0.145, t = 1.447, non-significant) and SO (β = 0.172, t = 1.632, non-significant) have no discernible effect on the performance of MFIs. As a result, H2 (CC has a significant positive influence on the performance of MFIs) and H4 (SO has a significant positive influence on the performance of MFIs) are not supported.

Table 4: Path Coefficient and Hypothesis Testing

Hypothesis	Relationship	Std Beta	Std Error	T Values	PValues	LL	UL	Decision
H1	Human Capital-> MFI Perf	0.134	0.076	1.764	0.039	0.016	0.26	Supported
H2	Customer Capital -> MFI Perf	0.145	0.100	1.447	0.074	-0.029	0.298	Not Supported
H3	Structural Capital-> MFI Perf	0.343	0.086	3.965	0.001	0.21	0.486	Supported
H4	Social Capital ->MFI Perf	0.172	0.105	1.632	0.052	-0.023	0.325	Not Supported

The moderating effect is explored in Table 5 using a t-statistic with pooled standard errors. According to [59], this is a strategy known as a parametric approach. The findings indicated that investing in human capital (HC) in non-bank MFIs will improve performance. Additionally, the data revealed that increased social capital (SO) of bank-based MFIs results in improved MFI performance. In general, there is an effect of HC and SO on the performance of banks and non-bank MFIs. As a result, H5 (MFI Specific as moderator has a positive influence on HC and MFIs performance) and H8 (MFI Specific as moderator has a positive influence on SO and MFIs performance) are supported.

Table 5: Indirect Effect of MFIs Specific

Hypothesis	Relationship	Std Beta	Std Error	T Values	PValues	LL	UL	Decision
H5	HC*S-> MFI Perf	-0.113	0.067	1.686	0.046	-0.235	-0.018	Supported
H6	CC*S -> MFI Perf	0.021	0.095	0.225	0.411	-0.129	0.183	Not Supported
H7	SC*S -> MFI Perf	-0.088	0.071	1.242	0.107	-0.200	0.031	Not Supported
H8	SO*S->MFI Perf	0.233	0.095	2.458	0.007	0.081	0.391	Supported

VI. Discussions and Conclusion

The current study met its research aims by examining the impact of IC dimensions and the moderating effect of bank-specific on the performance of Malaysian MFIs. As a result, the conclusion was reached based on the study's findings, derived during the study's process. Numerous studies have demonstrated that IC dimensions may be utilized to assess an organization's performance [60], [61], [62], [63]. Additionally, [64] found a positive correlation between intellectual capital and firm performance in the Indonesian banking sector, meaning that banks with a higher degree of intellectual capital efficiency would perform better. [65] discovered a positive link between intellectual capital efficiency and firm performance in Indian public and private banks, implying that banks with higher intellectual capital efficiency typically perform better. As for [66], their study on Thailand's listed banks, [5] on Islamic banks in the Gulf, and [7] on Indonesian banks, all of which demonstrated a positive and statistically significant relationship between intellectual capital and company performance. It may be stated that IC dimensions can be utilized to compare the performance of MFIs, and that among the four IC dimensions, human capital and structural capital are the most predictive of MFI success. The relationship between resources is critical to RBV theory [67]. As a result, the findings indicate that enhancements to IC elements enhanced their association with financial performance.

The current study's findings corroborate previous findings [26], [32], [35], [39]. The overall findings of this study indicate that all four components of IC (HC, CC, SC, and SO) have a considerable impact on the financial success of MFIs in Malaysia. These findings reflect the work of scholars such as [68], who argue that the primary necessity for a firm to succeed in a competitive market is to use resources that are not only distinctive, but also specific to the firm. Additionally,

MFIs foster entrepreneurial education and training, skill development, asset accumulation, self-sufficiency, and communal services, all of which improve business performance [69].

Therefore, it can be concluded that financial capital and physical assets are no longer necessary for an organization to maintain a sustained competitive edge; instead, it is contingent on the institution's ability to channel its distinctive intellectual assets effectively. Earlier research has established distinctions between different types of firms, including a study of sector banks in Pakistan, which found that public sector banks operated worse than the private sector banks due to insufficient capital utilization or inefficient intellectual capital management [70]. Thus, managers of MFIs should address organizational issues expeditiously regardless of whether the MFI is bank-based or not. On the other hand, managers must exercise sound judgement on behalf of their organizations by emphasizing intellectual capital and recognizing intangible assets, most notably their employees' capabilities and knowledge. As an extension to the current study, future research should incorporate the location of MFIs (urban or rural) as a variable to ascertain its effect on the performance of microfinance institutions in the Malaysian setting.

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