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Investigating the Association between Intellectual Capital and Medium-Sized Cooperatives Performance in Malaysia

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Abstract: A cooperative is a business that strives to benefit and support its members through revenue-generating endeavors. Still, the Malaysian cooperative's performance is below average and unchanging. Malaysian cooperatives, despite their long history, are having difficulty surviving and deteriorating short of the intended goals. In addition, the ability of the cooperative to manage its resources in order to achieve sustainable success is correlated with the cooperative's performance. The components of intellectual capital are the strategic resources found in cooperatives: relational, structural, and human capital. Furthermore, how intellectual capital is used affects how well cooperatives perform. Research from the past has also indicated a strong correlation between an organization's performance and its intellectual capital. Furthermore, there exist additional variables that may impact the correlation between intellectual capital and cooperative performance. A total of 250 questionnaires were disseminated using email among cooperatives in Malaysia in order to collect the data; however, only 138 usable responses were gathered and employed for data analysis. Statistical Package for Social Science (SPSS) version 23 and SmartPLS version 3.3.8 were then used to analyze the data in this study using a combination of descriptive and inferential statistics. The results indicated intellectual capital was significantly related to the cooperative performance. It has been demonstrated that high intellectual capital cooperatives operate more effectively because their staff members are better equipped to create, share, integrate, and utilize information inside the company. As a conclusion, the present study is helpful to the managers and policy makers in deciding the optimal level of intellectual capital to enhancing cooperative performance.

***Keyword*:** Intellectual *Capital, Medium Cooperative, Cooperative Performance, Entrepreneurial Orientation, Managerial Capabilities.*

1. Introduction

In the dynamic landscape of contemporary business, non-financial performance metrics have emerged as essential indicators of organizational success alongside traditional financial measures (Tripathi et al., 2021). Within this context, intellectual capital, managerial capabilities, and entrepreneurial orientation stand out as critical determinants shaping an organization's ability to excel in complex and competitive environments. Intellectual capital, characterized by the intangible assets that drive value creation, has garnered substantial attention due to its role in fostering innovation and sustainable competitiveness (Secundo et al., 2020). Small and Medium-sized cooperatives in Malaysia, operating within diverse industries, rely on intellectual capital to address evolving member needs and achieve economic and social objectives (Tjahjadi et al., 2022). Intellectual capital, often defined as the intangible assets contributing to an organization's value creation, has been extensively recognized as a driver of innovation and long-term competitiveness (Jordão et al., 2022). In the context of small and medium-sized cooperatives in Malaysia, which play a crucial role in various economic sectors, intellectual capital is pivotal. These cooperatives, driven by their member-centric focus, rely heavily on knowledge, expertise, and innovative thinking to address diverse member needs. While the individual impacts of intellectual capital on organizational performance are well-documented, there is a notable research gap concerning their integrated effects on non-financial performance among small and medium-sized cooperatives in Malaysia (Jordão et al., 2020)

According to the Malaysia Co-operative Societies Commission (2021), the trend of the performance of cooperatives in Malaysia are low. Ironically, cooperatives in Malaysia have been established since 1922; it has been in operations for decades, yet the progress is still under satisfactory (Lajuni et al., 2019; Ishak et al., 2021). In the Ninth Malaysia Plan, the goal is for cooperatives to become the third largest contributor towards the nation’s Gross Domestic Product (GDP). In March 2021, Datuk Seri Dr. Wan Junaidi Tuanku Jaafar, the Minister of Entrepreneur Development and Cooperatives, mentioned that cooperatives would contribute RM100 billion to the nation's economy. Therefore, cooperatives must strive to improve their current performance.

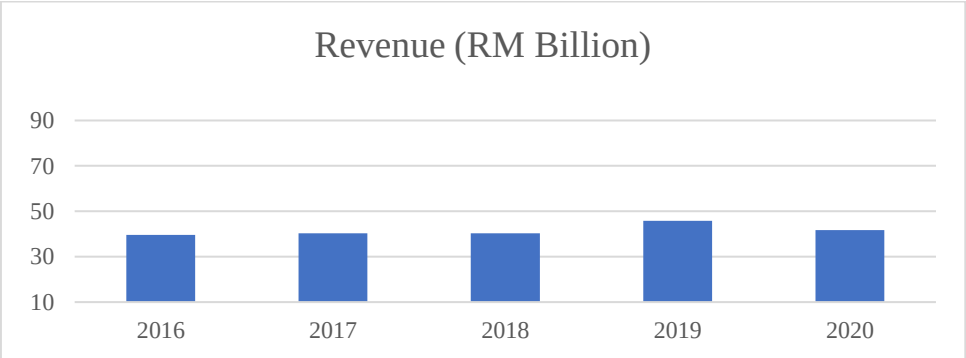

Figure Error! No text of specified style in document.**.1: Revenue of the cooperatives between the year 2016 and 2020 (Source: Malaysia Co-operatives Societies Commission, 2021)**

Figure 1.1 indicates the revenue of the cooperatives in Malaysia. According to Hamzah & Yusof (2021) the revenue has remained stagnant the past five years. Findings from a study conducted by Janudin et al., (2023) have also revealed stagnant performance in terms of the cooperative's revenue year after year, indicating low performance. In addition, according to the Malaysia Co-operative Societies Commission (2021), cooperatives contribute approximately 3% to 4% to Malaysia's GDP, indicating their limited economic influence. Despite being under the jurisdiction of Malaysia's Ministry of Entrepreneur Development and Cooperatives (MEDAC), cooperative performance has deteriorated and shown no improvement. Contrary to this underperformance, cooperatives in Malaysia have received less study attention as compared to cooperatives in other countries. Camargo et al. (2021) note that Malaysian cooperative sector studies are underrepresented, indicating a lack of knowledge. According to earlier studies, most researchers have examined the cooperative sector from a financial viewpoint (Aini et al., 2012).

In the case of cooperatives, among the strategic resource is intellectual capital (Beckb & Wiersema, 2013; Ishak et al., 2021). Ariffin (2021) also supported the fact that organization will be in better performance state when equipped with intellectual capital. To date, the literature on intellectual capital has primarily revealed positive results regarding the utilization of intellectual capital within organizations to achieve desirable outcomes (Barraud et al., 2012; Omar, 2021). On the other hand, in the past studies, intellectual capital can be expressed in terms of human capital, relational capital and structural capital (Rajasekhar et al., 2020; Rehman et al., 2023). Apart from that, research done by Malaysian Cooperatives Institute (2020) indicates that most of the management executives execute their task without considering the adoption of intellectual capital (Shakir et al., 2020).

The problem arises when considering intellectual capital within cooperatives, where its dynamics are significantly influenced by management capabilities and entrepreneurial orientation (Suhartanto, 2011; Akbari & Baharestan, 2017). Relying solely on intellectual capital studies can be misleading, requiring additional constructs for theory validation. Intellectual capital's complexity stems from its diverse elements, in which, it differs across enterprise types, ownership forms, developmental stages, and control subsystems (Basak & Acharya, 2020). Therefore, regardless of organizational specifics, it is imperative to identify and address universal intellectual capital management issues. Additionally, intellectual capital's definition lacks specificity and adaptability across organization types, as pointed out by Yu & Huo (2019) and Lajuni et al. (2018). This challenge persists in the cooperative sector, necessitating further research to tailor intellectual capital definitions to cooperatives' unique objectives. Based on the above discussion of the existing issues, the objective of this study is to investigating the relationship between intellectual capital and medium-sized cooperatives performance in Malaysia.

2. Literature Review

Human Capital

In order to reduce poverty and promote economic progress, human capital is essential. Macroeconomically speaking, the development of human capital boosts labor productivity, encourages technological advancements, raises returns on capital, and promotes more sustainable growth, all of which contribute to the decrease of poverty. Thus, in the context of the economy as a whole, human capital is considered a crucial factor of production at the macro level. When seen from a microeconomic angle, education raises one's earning potential and likelihood of finding employment in the labor market. However, in addition to its instrumental usefulness, human capital development is significant for development because of its inherent worth as a development objective in and of itself.

The conceptual notion of human capital is unambiguous, but measuring it is challenging since it is nearly hard to watch individual competence and far more challenging to create a metric that is consistent throughout people and nations. Thus, various proxy measures of human capital have been proposed in the empirical literature, such as literacy rates (Azariadis & Drazen 1990); school enrollment rates (Barro 1991, Mankiw et al. 1992); years of schooling (Barro & Lee 1996, 2001, and 2010; Cohen & Soto 2007); and test scores (Hanushek & Kimko 2000, Hanushek & Woessmann 2009). Although the percentage of the population that can read and write is known as the literacy rate, it is not a reliable indicator of the workforce's skill level or educational achievement. Conversely, the school enrollment rate has limited value for the workforce and is primarily meaningful for children enrolled in school. Years of education can fairly represent the human capital stock of the workforce, but this simply indicates the quantity of human capital—it does not indicate the workforce's skill level. This brings us to test scores, an indicator of human capital suggested by Hanushek & Kimko (2000), which reflects the quality of education and is closely related to individual skill. Test results, however, have a drawback in that it is exceedingly challenging to obtain a measurement that can be consistently extrapolated for the whole workforce. The average cognitive skills measured at the national level by Hanushek & Kimko (2000) and subsequently by Hanushek & Woessmann (2009) may not accurately reflect the skill level of students across the country, let alone the workforce, because they are not based on a random selection of schools or students.

Intellectual capital is defined by Huang & Huang (2020) as the intellectual elements, which include consumer, structural, and human capital, that have the potential to generate value. Human capital specifically refers to the talents and abilities of the workforce, which might be acquired through education and training and could boost the company's efficiency in offering services to the public. Human capital, which is the third element of intellectual capital, is understood to be the knowledge, abilities, and commitment of employees to the organization that they need in order to carry out their duties (Sumedrea, 2013). Human capital also represents the employee’s skills and competencies which do not appear in the firm’s financial statements.

Furthermore, as stated by Khalique et al. (2013) in their study, human capital represents the most crucial source of development within a firm. This covers things like employee productivity in terms of knowledge, skills, and expertise that the company cannot possess. It's critical to understand that if workers choose to leave the company for another, the company runs the danger of losing these priceless assets. Human capital, according to Wang & Joshi et al. (2021), is the collective knowledge and skills of an organization's workers. It encompasses both organizational and individual viewpoints, such as workers' creativity, teamwork, and a positive work environment, and it can be improved through training and educational initiatives.

Structural Capital

In the literature, structural capital—also referred to as organizational capital—refers to the organizational systems and structures that might help workers reach their maximum potential intellectually and, as a result, perform better (Bontis et al., 2018). This suggests that even with the highest intellectual level, a company won't reach its full potential if it doesn't have appropriate structures, procedures, and processes in place to support the contributions made by its members (Hasan & Habib, 2020; Torres et al., 2018). 'Non-human assets' such as databases, organizational charts, process manuals, strategies, routines, and anything else whose value to the business outweighs its material worth are included in structural capital (Bontis et al., 2018). Structural capital then is "what remains in the company when employees go home at night" (Sitharam & Hoque, 2016). In addition to being closely related to human capital, structural capital is also the institutionalization of knowledge and experience that have been produced and are predicated on preexisting systems, procedures, and frameworks. Thus, structural capital serves as a means of organizing and coordinating a collection of workers and organizational components, offering the necessary framework for the use of certain tools, technologies, and protocols. Furthermore, knowledge that has been successfully implemented in the past can be preserved through the utilization of structural capital, with the goal of repurposing it inside the company (Ahmad & Ibraheem, 2018).

The ambition of firms to remain competitive in the market has led to a rapid increase in research interest in structural capital over the past few years. The structural capital strategy is related to the disruptive effects of the external environment and needs to be planned to support the organization's increase in market share. Many scholars and organizations use this classification, known as the "structural capital approach," which is split into internal and external capital (Abdirahman & Tarique, 2007). As a result, this idea is defined below with input from other authors in the field of literature.

The framework that underpins human capital is known as structural capital, and it consists of knowledge resources, organizational processes, and procedures. Regarding this, Van Caenegem (2002) highlights that database structures, manuals, and training materials comprise the structural capital, which is what's left over after personnel leave. This definition is thought to be among the more useful ones. According to Guthrie (2001), structural capital is a combination of knowledge and intangible assets that are obtained via internal organizational processes. It includes procedurally creative aspects, efficiency, and access to information that may be transformed into knowledge. Structural capital is derived from human capital. The staff

require these procedures and frameworks in order to function effectively. According to Bontis et al. (2018), structural capital refers to all of an organization's non-human knowledge assets, such as organizational charts, databases, procedures, strategies, and routines. They come to the conclusion that structural capital is present in any business whose market value is greater than its net worth. Consequently, companies with high structural capital will have a culture that encourages employees to experiment, learn, and apply new skills. Development, organizational structure, and managerial relationships are all part of structural capital. Conversely, connection capital pertains to the marketing relationship and is crucial for any kind of business. Through knowledge transfer, this capital may improve organizational effectiveness. As with other firms in different disciplines, universities must establish knowledge management (Kermally, 2002). Categories of structural capital can be either dynamic or static. The functioning of communities of practice as well as organizational culture and climate fall under the dynamic category. According to Pena (2002), structural capital comes from deriving the organizational value, on the one hand—internal processes, infrastructure and culture—and on the other hand, the renewal and development strategies. Structural capital is the embodiment, empowerment, and supportive infrastructure of human capital. From an alternative angle, structural capital is the consequence of the systems or products that the company has developed over time, including formulae, information systems, policies, processes, and competitive intelligence. It has a tight relationship with internal procedures, expertise, and knowledge. The systems and procedures that staff members create and use to be efficient, inventive, and productive make up the structural capital division (Boujelbene & Affes, 2013). The organization's information technology investments are generally increasing activity. Although they raise the organization's market value, a large portion of the expense of hiring new staff members and purchasing software might not be shown in the financial accounts. In order to gain a competitive edge and create value, corporations have boosted their R&D spending in recent decades. As a result, the context of supporting the formation and effect because of leveraging knowledge is translated by this structural component. Structural capital is different from human capital in that it is tradable. The defined knowledge foundation that is absent from employees' brains is represented by structural capital (Bontis & Fitz-Enz., 2002). It alludes to applying a very efficient method for gathering, evaluating, organizing, and integrating current knowledge. It then removes the impurities, holds onto the pure, and distributes it (Wu et al., 2022).

Lastly, organizational capital is meant to assist any other type of intellectual capital elements generated within the company, given the broad range of intangible assets (Wu et al., 2022). When organizational culture, company history, and an essential component of management are included in the structural capital, it may also be thought of as the source of knowledge, which is what propels the organization toward its vision, purpose, values, and objectives. The important component in this transactional process that transforms such abilities and skills into integrated networks, external organizational capacities, brands and trademarks, procedures, and other intangible and sustainable resources is innovation created by structural capital. Therefore, structural capital is created by the people and it belongs to the organization; however, it can be purchased from somewhere else. Over the past few years, a lot of

interpretations on the concept of structural capital and included keywords that outline the concept have been proposed. Figure 2.1 presents 15 keywords used to define the structural capital.

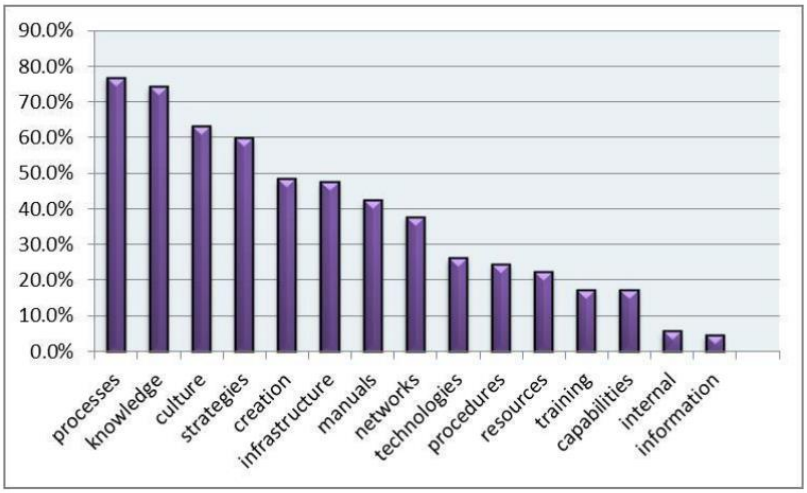

Figure Error! No text of specified style in document..**2The 15 keywords used to define structural capital (Grant et. al, 2015)**

Besides that, the entire contents of an organization's non-human knowledge reserves are considered to be part of its structural capital (component in intellectual capital). This encompasses elements such as databases, organizational charts, executive instructions for strategies and procedures, administrative programs, and other comparable assets whose significance to the organization exceeds their monetary value (Ahmed, Guozhu, Mubarik, Khan& Khan, 2019). It is anticipated that structural capital would promote knowledge management capacities in the organization via the enhancement and use of existing knowledge. In a similar vein, the research conducted by Bontis, Ciambotti, Palazzi, & Sgro (2018) found that structural capital is the most significant component of intellectual capital that directly influences cooperative performance. Their findings also support the results of this research, as structural capital is a component of intellectual capital that positively correlates with the performance of medium-sized cooperatives in Malaysia.

Relational Capital

Among the elements of intellectual capital is relational capital. Consequently, it is associated with achieving performance and a durable competitive advantage (Huang & Hsueh, 2007). Regarding this idea, numerous definitions that are largely acknowledged have been proposed. The set of all relationships—such as those based on markets, power dynamics, and cooperation—that are formed between businesses, institutions, and individuals that stem from a strong sense of community and a highly developed capacity for cooperation typical of individuals and institutions with similar cultural backgrounds is known as relational capital. Rodriguez-Castellanos et al. (2010) describe relational capital as the body of explicit and tacit information about the nature of a company's relationships with its local agents. One of the primary agents is the customer. It can be divided into two categories: social capital (relations

that a firm maintains with the society: people, institutions, other agents) and client capital (relations that a company maintains with the other agents of the market: customers, suppliers, competitors, allies). Relational capital is favorably correlated with company outcomes, particularly financial outcomes, according to Cabrita & Vaz (2008).
Relationship competence (RC) was seen as a conceptual area through which we might examine organizations' activities and decisions intended to enhance the management of the relationships, using the interpretive lens offered by the Resource Dependence Theory (RDT). The following part centers on the application of RC to enhance company competitiveness by means of improved market circumstances and a more favorable interaction with the external environment. "All the intellectual capital linked with the external relationships of the firm, as, for example, the relationship with customers," is how Sanchez et al. (2000) describe RC. "Relational capital is unique and difficult for competitors to imitate because it is the result of a long process and because there are numerous links," according to Ordonez de Pablos (2004). Therefore, it has been highlighted by mainstream research that RC has numerous beneficial benefits on company performance and organization (Bresciani et al., 2018). Nonetheless, it is common to undervalue how RC affects a company's relationship with its suppliers (Somlai, 2022). According to Handfield & Bechtel (2002), RC may have a direct impact on a firm's market power through affecting supply chain processes' contractual terms.
Due to the fact that management almost always depends heavily on human activities and rarely follows a specified, systematic, and standardized procedure, relational capital, is often considered to be of lower importance in businesses. This finding is also consistent with the findings of the study conducted by Xu et al., (2024), who argued that enterprises could improve their performance by increasing the number of partners (relational capital), provided that the additional partners did not cause an excessively high level of complexity in the networks.

In the context of managing cooperatives, relational capital has been conceived as a resource (Zahoor, & Gerged, 2021). Therefore, according to the context of Malaysian medium-sized enterprises, relational capital enables a relationship of management skills, and it also empower management capacity strengthening. In line with the concept of intellectual capital, relational capital makes it easier for partners to communicate with one another and share information (Zhang et. al., 2021). Interactions in the intellectual capital context provide additional chances and avenues for disseminating and acquiring information and expertise among stakeholders. By incorporating partner learning into inter-organizational partnerships, shared knowledge may be ingrained into the day-to-day operations of such relationships (Jia, & Xu, 2021). Consequently, relational capital makes it easier for Malaysian medium-sized cooperatives to manage their intellectual capital. Relational capital refers to the intangible resources rooted in social relations and networks among individuals, organizations, societies, and whole cultures. Relational capital can be congested when a participant seeks to continue increasing the possibility of success in a purposeful activity because of the social relations and networks between individuals, organizations, communities, and whole societies. A number of research

in the past (Ritala, Baiyere, Hughes, & Kraus, 2021) revealed that relational capital has a significant effect on entrepreneurial orientation.

Previous research found a positive and significant relationship between relational capital and entrepreneurial orientation (Al-Jinini, Dahiyat, & Bontis, 2019). Moreover, entrepreneurial organizations continuously strap their social networks to acquire new information and techniques and develop new entrepreneurial opportunities. These findings are also in line with the findings of the previous study (Sulistyo, 2016) that examined the significance of relational capital and business adoption. According to the findings, relational capital had a considerable and positive impact on the entrepreneurial orientation.

3. Methodology

The present study employed a quantitative approach, involving the distribution of a structured questionnaire. The questionnaire for the intellectual capital section is adapted from Khan, Abdullah & Ah, 2016. Altogether, there are 12 items. The choice of specific items in the questionnaires for the dimensions of intellectual capital, structural capital, and relational capital is carefully justified based on the context and objectives of the study. Each dimension captures essential aspects of the cooperative's intellectual, structural, and relational resources and their impact on cooperative performance. The chosen items assess the employees' qualifications, knowledge, skills, experience, and ability to use information systems effectively. These attributes are fundamental indicators of the intellectual capacity and competency of the cooperative's workforce, directly influencing its performance and innovation potential.

The selected items focus on policies, procedures, process improvement, data access, and the work environment. These items align with the structural components of the cooperative's resources, addressing how efficiently processes are managed, how innovation is encouraged, and how the cooperative's environment supports effective operations. The items emphasize support from government agencies, feedback utilization from suppliers, and responsiveness to customer feedback. These elements capture the cooperative's external relationships and how it leverages them to enhance its products and services. This dimension is crucial in understanding how the cooperative's external network contributes to its overall performance.

Non probability sampling was used for collecting and analyzing primary data. The data analysis employed Smart PLS, subjecting the dataset to multiple tests to ensure reliability and validity. To gather responses, the questionnaire was disseminated through two channels. It was distributed physically and also via email, utilizing the platform of the Malaysia Co-operative Societies Commission (MCSC) as well as directly reaching out to the respondents from the managerial group of cooperatives in Malaysia, sourced from MCSC data. All participants were explicitly informed of the confidential nature of their data, emphasizing that access was limited to approve personnel only.

The data analysis was conducted using the Statistical Package for the Social Science (SPSS) version 23, which includes functions like the cumulative mean, normality test, EFA, and standard deviation. A normality test of skewness and kurtosis was conducted following the initial data screening in order to rule out any univariate and multivariate outliers. A profile using percentages has been created to ascertain the respondents' socioeconomic characteristics. The intellectual capital and its effects on the cooperative's performance have been examined using PLS-SEM.

4. Results And Discussion

Descriptive analysis

The respondents were requested to provide information about themselves, including their gender, age, marital status, ethnicity, number of years of experience, and education level. According to the study, most respondents (58%) were male, while only 42% were female. The cooperatives are made up of more senior age group. In fact, 38% of these responses fell within the age range of 40 to 50 years old, followed by 30% of the age range of 30 to 40 years old. Based on the current information, it appears that the education level is predominantly composed of individuals without tertiary education, accounting for approximately 44.93%. Following this, 28.99% hold a Bachelor's degree, 21.74% hold diplomas, 3.62% have Master's degrees, and the lowest percentage is for doctorate level (0.72%). In terms of designation, majority of the respondents are directors (27.54%); managers (23.91%); treasurer (23.91%); assistant manager (16.67%); finance executive (43.5%); and other position (3.62%). Besides that, 21.01% of the respondents had experienced between 1 to 4 years, 49.28% had experienced between the 5 to10 years, 16.67% had experienced between 11 to 15 years, and 13.04% had experienced of more than 15 years.

Table 3.1: Socio-demographic Background of Respondents (n=138)

Item	Respondents	Frequency	Percentage	Total
Gender	Male	80	58%	138
	Female	58	42%	
Age	20-30 years	28	20%	138
	30-40 years	42	30%	
	40-50 years	52	38%	
	50 and above	16	12%	
Education level	Diploma	30	21.74%	138
	Degree	40	28.99%	
	Master	5	3.62%	
	Doctorate	1	0.72%	
	Others	62	44.93%	
Designation	Director	38	27.54%	138
	Manager	33	23.91%	

	Assistant Manager	23	16.67%	
	Finance executive	6	4.35%	
	Treasurer	33	23.91%	
	Others	5	3.62%	
Years hold the position	1-4 years	29	21.01%	138
	5-10 years	68	49.28%	
	11-15 years	23	16.67%	
	More than 15 years	18	13.04%	

Relationship between Intellectual Capital and Cooperative Performance (RQ1)

This study aims to determine the direct relationship between intellectual capital and cooperative performance. To answer Research Question 1 (RQ1) and address Research Objective 1 (RO1), the researcher has formulated Hypothesis 1 (H1) in this study. Details confirming H1, which was formulated based on RQ1, are provided in the following subsections.

H1: There Is a Positive Relationship between Intellectual Capital and Cooperative Performance

Table 4.1 Result of hypothesis, H1

Hypothesis	Relationship	β	t-value	p-value	Decision	f^2
H1	IC->CP	0.458	3.978	0.000	Supported	0.210

Table 4.1 shows the result of analysis of H1. Based on the findings the relation between intellectual capital and cooperative performance is significant; thus, H1 is supported. It was shown that intellectual capital has the value of (β = 0.458, t = 3.978), which support Hypothesis 1. The influence of intellectual capital on cooperative performance is significant, despite the effect size ranging from small to medium (f2 = 0.210). Intellectual capital's effect on cooperative performance has received a lot of attention from researchers in the past ((Mubarik et al., 2021; Castilla-Polo, & Sánchez-Hernández, 2020) all of whom have mentioned and supported this relationship. In addition, this study also supports the idea that intellectual capital enhances cooperative performance. It has been shown that cooperatives with a high degree of intellectual capital function better because employees are better able to develop, transmit, integrate, and exploit knowledge inside the organization (Chen et. al., 2017; Mubarik et al., 2021). As a result, employees have an enhanced capability to comprehend new information, assimilate that information, and apply that information to a wider range of jobs. Furthermore, intellectual capital in terms of individual performance and cooperative acts as an input for knowledge utilization in businesses and, as a result, enhances cooperative performance. Hence, the findings of this research are consistent with the findings of the previous studies (Xu et al., 2024) that have shown that intellectual capital does influence the performance of cooperatives.

Moreover, Bontis (2003) proposes the concept of intellectual capital as the essential component for organizations. Intellectual capital is a broader conceptualization that encompasses the knowledge inherent in all relationships an organization forms among consumers, competitors, suppliers, industry groups, and the government (Giudici, Guerini, & Rossi-Lamastra, 2018). Intellectual capital is another factor that underpins the organization's performance, leading to a positive and direct association with cooperative performance. Thus, this research demonstrates that the intellectual capital inside organizations affects the medium-sized cooperative performance. Hernández-Carrión (2022) previous research has established strong evidence that intellectual capital, such as business networks that include clients, suppliers, and competitors, are an important determinant of firm performance. The current results provide further evidence of research that was conducted by Tran & Beddewela (2020), which supported intellectual capital's function in assisting absorptive capacity and firm capabilities in Indonesia's automotive sector. They demonstrated that businesses improve their financial performance by expanding their intellectual capital. Firms that participated in learning activities such as debates and meetings either within their internal departments or with external parties were able to promote more knowledge transfer in both formal and informal contexts which is related to the component in the intellectual capital. This means that the findings of the research are consistent with the findings of Downe, Loke, & Sambasivan (2012), who examined the role of intellectual capital in cooperative performance in terms of relational capital. In their research, the researchers look at how cooperative performance is affected by intellectual capital. The fact that they successfully proved that intellectual capital has a direct positive influence on performance and outcome demonstrates a strong link between intellectual capital and cooperative performance.

5. Conclusion

In the context of medium-sized cooperatives in Malaysia, this study aims to investigate the complex relationship between intellectual capital and cooperative performance. The primary objective of this research is to underscore the profound significance of intellectual capital on cooperative performance. The investigation was carried out among the management members of the cooperative entities, who were selected as respondents. The choice of medium-sized cooperatives as the sample was driven by their revenue sustainability, which aligns well with the dependent variable, namely cooperative performance. The study's geographical focus is Malaysia. This study holds potential to enrich the theoretical landscape in several dimensions. Firstly, the findings can serve as a foundational reference for future researchers operating within similar contexts and variables. The implications of this study are poised to extend the realm of knowledge pertaining to intellectual capital and organizational performance. By offering new insights into the relationship between these constructs, the study contributes to the theoretical understanding of their interplay, potentially prompting further investigation into nuanced dynamics.

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