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## **INFLUENCE OF TA'AWUN (MUTUAL COOPERATION) IN SUSTAINING INNOVATION ALLIANCES**

**Suhaimi Mhd Sarif<sup>a\*</sup>, Yusof Ismail and Dolhadi Zainudin<sup>a</sup>**

<sup>a</sup>Department of Business Administration, Kulliyah of Economics and Management Sciences, International Islamic University Malaysia

*Corresponding author: albanjari@yahoo.com*

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### **ABSTRACT**

Companies use cooperative strategies in sustaining performance and competitive advantage. The driver behind the cooperative strategies is mutual cooperation. There is an integration in the inter-companies' alliances at horizontal level. The inter-companies' alliances provide platforms and coworking spaces for value creation and innovation. This purpose of the study is to explore the influence of ta'awun (mutual cooperation) in sustaining innovation alliances. The study used personal interview with key managers with manual data collection and data analysis. The key results suggested that the influence of ta'awun is the spirituality and social driven on the contractual arrangements in the alliances. The main theoretical contribution is the alliances with spiritual cooperation through unified socialization.

**Keywords:** *Ta'awun*, innovation alliances, value creation, cooperation.

### **INTRODUCTION**

The market is very competitive. Due to the stiff competition, left companies have no choice but to cooperate with other companies. Companies can do the cooperation at many levels. There can be cooperation between two companies or more than two companies (Velu, 2016, 2018; Galkina & Lundgren-Henriksson, 2017; Peszko & Horobet, 2022; Jobér, 2023). This inter-organizational arrangement is new approach in operating business organization. All this while, companies are operating on their own whether doing one business or multiple businesses (Bengtsson, Eriksson & Wincent, 2010; Jobér, 2023). The arrangement needs different speed and pace (Velu, 2016; Jobér, 2023) with business models (Velu, 2018; Jobér, 2023).

When companies are into the inter-organizational arrangement, they have to align the coopetition arrangement with the existing strategy and performance (Le Roy & Czakon, 2016; Martinsuo & Ahola, 2022). As if, companies are doing the business activities with entrepreneurial approach (Dahl, 2014; Bengtsson & Kock, 2014; Czachon & Mucha-Kus, 2014; Galkina & Lundgren-Henriksson, 2017; Velu, 2018; Peszko & Horobet, 2022; Jobér, 2023). In short, when companies are into the inter-organizational arrangement, they are operating with new paradigm, new entrepreneurial process, and disruption in the existing strategic planning process (Gynawali & Park, 2011; Le Roy & Czakon, 2016; Velu, 2018; Peszko & Horobet, 2022; Jobér, 2023).

The innovation alliances through the coopetition arrangement enable participating companies to create, maintain and sustain dynamic capability for value creation in digitized, informal and social businesses (Osarenkhoe, 2010; Correia Filho & Baggio, 2022). This arrangement is apparent in the horizontal integration strategies when the participating companies in the alliances share value chain, resources and competency to create and enhance value creation (Johansson, 2012; Faloye, 2013; Sindakis, Aggarwal & Theodorou, 2017; Peszko & Horobet, 2022; Jobér, 2023). The arrangement through innovation alliances enables inter-firm alliances to provide platforms and co-working spaces for value creation. This is particularly essential in the knowledge-and innovation-based businesses.

The physical cooperation through innovation alliances can be sustainable with the value and principles upheld and respected by the participating companies. However, without spiritual, emotional, and faith attachment to the physical cooperation, the alliances might be affected in terms of trust and commitment (Martinsuo & Ahola, 2022; Jobér, 2023). Thus, this study argued that ta'awun (mutual cooperation) that is integrated with spirituality will be able to reinforce trust and commitment in coopetition arrangement for innovation and value creation.

### **Problem statement**

In a very still competition, competing companies resort to coopetition, a situation when the competing companies are on simultaneous cooperation and competition at various levels, whether between two companies, among many companies, or just at networks or intra-organizational levels (Velu, 2016, 2018; Galkina & Lundgren-Henriksson, 2017; Peszko & Horobet, 2022; Jobér, 2023). This is very challenging situation when the competing companies have to have a shift in thinking and they need to align the coopetition arrangement with the existing strategy and performance (Le Roy & Czakon, 2016). This process is very risky, entrepreneurial and challenging due to a lot of interactions between the competing companies who are cooperating and competing simultaneously (Dahl, 2014; Bengtsson & Kock, 2014; Czachon & Mucha-Kus, 2014; Galkina & Lundgren-Henriksson, 2017; Velu, 2018; Jobér, 2023).

Another challenge for competing companies resort to coopetition is resource sharing at all levels. In the coopetition, there is a need to share resources to create, maintain, and sustain alliances for innovation. This arrangement requires high commitment in the alliances to share value chain, resources and competency to create and enhance value creation (Johansson, 2012; Faloye, 2013; Sindakis, Aggarwal & Theodorou, 2017; Jobér, 2023).

Besides paradigm shift, accepting risk, competing companies in the coopetition requires physical and spiritual mutual cooperation. The physical cooperation through innovation alliances could be sustained through contracts and mutual agreement (Velu, 2016, 2018; Galkina & Lundgren-Henriksson, 2017; Jobér, 2023). In this context, competing companies in the coopetition are required to uphold with values and principles. However, the physical and contractual mutual cooperation requires spiritual mutual cooperation. In the absence of spiritual, emotional, and faith, the coopetition and innovation alliances might be affected in terms of trust and commitment (Mhd. Sarif, 2016, 2017, 2018).

Thus, *ta'awun* (mutual cooperation) integrates spirituality into mutual cooperation to reinforce trust and commitment in cooperation arrangement for innovation and value creation. *Ta'awun* has spirituality and physical dimensions. The spirituality *ta'awun* is an Islamic spiritual concept that emphasizes the need to find balance, harmony, and unity in all aspects of life (Al-Haddad, 2015; Zar'um, 2016). It encourages individuals to strive for a deeper connection with their Creator through prayers, meditation, and reflection on the divine teachings found within the *Qur'an* and *Sunnah*. *Ta'awun* also stresses the importance of developing positive relationships with others in order to foster inner peace and tranquility (Al-Haddad, 2015; Zar'um, 2016).

The dimensions of spirituality include the intrapersonal dimension, which focuses on the individual's relationship with self and their spiritual beliefs and practices, the interpersonal dimension, which involves relationships with others, including family members, friends, and community, the transcendental dimension, which involves connecting to a higher power or divine being, the experiential dimension, which includes experiences such as prayer or meditation that help one to reflect upon their values and beliefs, the ethical/moral dimension, which encourages individuals to live according to certain ethical principles based on religious teachings; and the cultural/social dimension, which emphasizes how one's spiritual beliefs and practices influence their culture and society (Mhd. Sarif et al., 2022; Noer, 2022; Dzul, Hussin & Sulaiman, 2023; Al-Haddad, 2015; Zar'um, 2016).

At the individual level, integrating dimensions of spirituality into one's life can be done in a variety of ways. One way is to practice spiritual activities such as prayers, meditation, or reflection on the divine teachings found within the *Qur'an* and *Sunnah* (Al-Haddad, 2015; Zar'um, 2016). Additionally, individuals may find comfort in connecting with others through meaningful conversations about faith and values. It is also important to recognize how our beliefs play an integral role in shaping our culture and society; thus, it is essential that we strive for unity of mutual respect among different faiths and backgrounds. Finally, living according to ethical principles based on religious teachings can help us foster inner peace and harmony.

At the workplace, practicing workplace spirituality cooperation involves creating a sense of unity and harmony among coworkers (Mhd. Sarif et al., 2022; Noer, 2022; Dzul, Hussin & Sulaiman, 2023; Al-Haddad, 2015; Zar'um, 2016). This can be done by encouraging open dialogue and meaningful conversations about faith and values and providing opportunities for spiritual activities such as prayer or meditation. Additionally, it is important to recognize the diversity in beliefs among coworkers; thus, fostering understanding and respect amongst people of different backgrounds can help create a more cohesive work environment. Finally, striving to live according to ethical principles based on religious teachings will ensure that everyone feels respected and valued in the workplace.

Physical *ta'awun* takes the form of mutual assistance and cooperation between two or more people. It involves helping each other out in times of need, such as through labor, resources, or money (Dwyer, 2022; Khairunisa & Muafi, 2022; Zhang et al., 2022). This type of support helps strengthen relationships and provides a sense of community for those involved (Mhd. Sarif et al., 2022; Dwyer, 2022; Khairunisa & Muafi, 2022; Zhang et al., 2022).

One may ask what are the dimensions of physical *ta'awun*? The dimensions include time, resources, work force, communication, coordination, support, and encouragement. Time is the horizon within which effort is devoted to helping each other out. Resources include materials, tools and/or money are offered in order to help the person or group in need (Dwyer, 2022; Khairunisa & Muafi, 2022; Zhang et al., 2022). The work force is the actual work being done by members involved in the *ta'awun*, such as providing manual labor or advice and guidance. The communication and coordination are related to how effectively people express their needs and coordinate efforts with one another. The support and encouragement provide moral support, encouragement, and positive reinforcement for those involved in the *ta'awun* (Mhd. Sarif et al., 2022; Dwyer, 2022; Khairunisa & Muafi, 2022; Zhang et al., 2022).

Physical *ta'awun* at workplace can be done by creating opportunities for collaboration vis-à-vis working together on projects and brainstorming activities; offering praise and recognition, acknowledging the efforts of individuals who help each other out, whether these are performed through physical labor or providing advice and guidance (Dwyer, 2022; Khairunisa & Muafi, 2022; Zhang et al., 2022). In addition, the organization could provide resources and tools (machines) to make sure that everyone has access to necessary materials, tools, and equipment they need in order to execute their tasks. Fostering open communication and showing appreciation and gratitude will help create a sense of camaraderie amongst team members.

### **Research objective**

This study aims to explore the paradigm shift in managing cooperation alliances with multiple dimensions of risk, entrepreneurial venture, and alliance management. The paradigm shift includes the readiness and willingness of competing companies in the cooperation alliances to share resources and strategies. Thus, companies in the cooperation require high commitment, willingness, and mutual cooperation. The mutual cooperation includes physical and spiritual aspects.

### **Significance of the study**

This study is significant because cooperative strategies enable companies to sustain performance and competitive advantage by leveraging resources, sharing risks, accessing new markets, developing innovative products and services, increasing efficiency and effectiveness of operations, creating value through economies of scale or scope, gaining access to specialized knowledge or expertise from other organizations in the network, and achieving greater market presence (Weitzel et al., 2006; Feng et al., 2022; Jennings, 2022; Codini et al., 2023; Gutierrez et al., 2023; Teece, 2023). By engaging in cooperative activities with other firms or partners both within their industry as well as outside it (including suppliers), companies can gain a significant competitive edge over their rivals.

Academics could benefit from the study on companies use of cooperative strategies in sustaining performance and competitive advantage by gaining a better understanding of how different strategies can be used to achieve success. This knowledge would allow academics to provide more informed advice to businesses on how best to utilize cooperative strategies, as well as develop new frameworks for analyzing the effectiveness of such approaches. Additionally, this research could help contribute toward public policy decisions related to business competition and sustainability.

Theories related to cooperative strategies among companies to sustain performance and competitive advantage include the Resource-Based View (Wernerfelt, 1984; Barney, 1991), Transaction Cost Economics (Williamson, 1989), Dynamic Capabilities Theory (Teece, 2023), Network Effect Theory (Metcalfe, 2013), and Game Theory (Von Neumann & Morgenstern, 2007). The Resource-Based View suggests that sustained competitive advantage can be achieved by leveraging a company's unique resources and capabilities (Audretsch & Belitski, 2023; Grant & Phene, 2022). Transaction Cost Economics proposes that cooperation between firms can help reduce transaction costs associated with market exchange (Jennings, 2022; Codini et al., 2023). The Dynamic Capabilities Theory postulates that organizations must have the capability to rapidly adapt in order to remain competitive in dynamic environments (Teece, 2023; Beamish & Lupton, 2016). Network Effect Theory states that networks of cooperating companies are more valuable than individual companies operating independently due to increased efficiency from economies of scale (Von Neumann & Morgenstern, 2007). Finally, Game Theory explores how different strategies interact in situations where multiple parties compete for limited resources.

Strategists and managers could benefit from the study of cooperative strategies among companies to sustain performance and competitive advantage by gaining a better understanding of how different

approaches can be used to achieve success. This knowledge would allow strategists and managers to create more effective strategies for their organization, as well as develop new frameworks for analyzing the effectiveness of such approaches (Beamish & Lupton, 2016; Jennings, 2022). Additionally, this research could help recommend the time companies cooperate with other organizations, or remain independent in order to achieve their objectives.

## **Research Scope**

This research project investigates the influence of *ta'awun* (mutual cooperation) among knowledge-and innovation-based firms. As a concept, *ta'awun* refers to working together, helping each other out, and being generous towards those in need (Zar'um, 2016; Mhd. Sarif & Ismail, 2022). *Ta'awun* also emphasizes the importance of solidarity within a community or society as well as between different groups or nations (Hilman & Purwati, 202). A knowledge-based firm is an organization that relies heavily on the use of knowledge and expertise to create value for its customers. It typically involves a combination of people, processes, technologies and data to effectively leverage the organisation's intellectual capital (Shahriari et al., 2017; Hughes et al., 2022; Songkajorn et al., 2022; Aliu Mulaj & Dedaj, 2023).

Knowledge-based firms are often technology driven and seek out new ways to generate insights from their data in order to gain competitive advantage (Shahriari et al., 2017; Hughes et al., 2022; Songkajorn et al., 2022). They focus on developing innovative products and services based on cutting edge research and development. Examples include companies like Google, Apple, Microsoft or Amazon. Examples of knowledge-based firms in Malaysia are Freescale Semiconductor, Sunway Group, Petronas, Maxis Berhad, SapuraKencana Petroleum, DiGi Telecommunications, and Astro Malaysia Holdings Berhad.

Innovation-based firms are companies that focus on creating and implementing new products, services, processes or business models in order to gain a competitive advantage (Weerawardena, 2003; Sok & O'Cass, 2011; Arunachalam et al., 2022). They rely heavily on research and development as well as creative ideas from their employees to come up with innovative solutions that can help them stand out from the competition. Innovation-based firms often have an entrepreneurial spirit and actively seek out opportunities for growth through disruptive technologies or changes in customer preferences (Weerawardena, 2003; Sok & O'Cass, 2011; Arunachalam et al., 2022). Examples include companies like Uber, Airbnb and Amazon. Examples of innovation-based firms in Malaysia are CXA Group, Glueck Technologies, ZALORA Malaysia, MOLPay Sdn Bhd, MyTeksi/GrabTaxi Malaysia and JobStreet Corporation Berhad.

## **LITERATURE REVIEW**

This section provides critical review on key constructs of the research. Coopetition is the main construct in this study. Coopetition strategy is a disruptive in nature when it transforms inter-firms dynamic capability for value creation in digitalized, informal and social businesses. Competing companies are competing and cooperating simultaneously, for example in the horizontal integration in the inter-organizational value chain enhances value creation dynamics. In addition, the inter-firm alliances provide platforms and co-working spaces for value creation. The quest for innovation is essential for knowledge-and innovation-based businesses.

### **Knowledge-based firms**

Knowledge-based firms are often technology driven and seek out new ways to generate insights from their data in order to gain competitive advantage (Shahriari et al., 2017; Hughes et al., 2022; Songkajorn et al., 2022). They focus on developing innovative products and services based on cutting edge research and development. Examples include companies like Google, Apple, Microsoft or Amazon. Examples of

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### **Alliances**

An alliance is a formal agreement between two or more organizations to cooperate on specific projects or objectives, often with the goal of achieving mutual benefits. Alliances can be formed for different purposes, such as marketing and product development, research and development, joint ventures, and strategic partnerships (Gulati, 1998; Khanna, 1998; Gulati, Nohria & Zaheer, 2000; Reuer, 2004; Inkpen, 2005; Holtström, 2022; Wang, Jiang & Dong, 2022).

Strategic alliances are chosen for a variety of reasons. They can help companies expand into new markets, access technology and resources, create economies of scale through shared costs, reduce competition in the market, increase innovation capabilities, and improve brand recognition (Inkpen, 2005; Holtström, 2022; Wang, Jiang & Dong, 2022). Strategic alliances also allow organizations to leverage their strengths in order to create more value for their customers.

The main benefits of strategic alliances include increased market access, sharing of resources and technology, cost savings through economies of scale, risk reduction through shared responsibility, improved innovation capabilities, greater brand recognition and visibility, and increased competitive advantage (Holtström, 2022; Wang, Jiang & Dong, 2022). The successful implementation of strategic alliances can also result in improved customer service, enhanced product quality, and increased profitability.

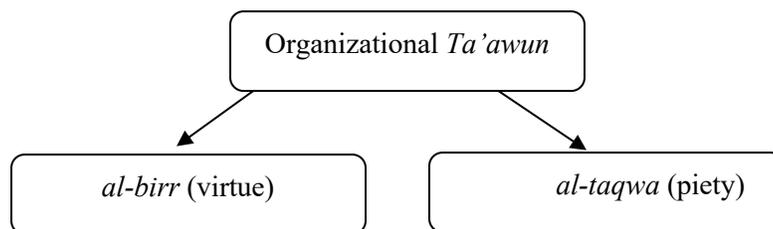
Mutual cooperation in a strategic alliance enables both parties to maximize their resources and capabilities. Through joint efforts, the partners can more effectively develop new products, services, or technologies; access new markets; reduce costs; share risks associated with projects and investments; improve customer service standards; and gain competitive advantages (Amin & Boamah, 2023; Holubčík, Soviar & Lendel, 2023; Xie et al., 2023). In addition, mutual cooperation can help build trust and strengthen relationships between the partners. This can lead to more successful collaborations in the future (Holubčík et al., 2023; Xie et al., 2023). Essentially, mutual cooperation in a strategic alliance can improve the visibility of both partners and increase their brand recognition. This can result in increased customer loyalty and higher sales.

There can be ta'awun (mutual cooperation) in strategic alliances because it is an important aspect of successful strategic alliances. Mutual cooperation enables both parties to benefit from the alliance by leveraging each other's strengths and resources (Holubčík et al., 2023; Xie et al., 2023). This can help them reach their goals more quickly and cost-effectively, while still allowing them to maintain a degree of independence. Through mutual understanding, trust, and collaboration, partners in a strategic alliance

can work together towards achieving common objectives. Ta'awun comes with spirituality (Holtström, 2022; Wang et al., 2022; Holubčík et al., 2023). By working together with trust and understanding, partners can create an environment of respect and collaboration that allows each party to benefit from the alliance while still maintaining their individual identities. This type of mutual cooperation is based on the principle of unity, which is often seen as a spiritual path. In this way, it may be possible for partners in strategic alliances to experience a greater sense of purpose and connection through their joint efforts.

### **Ta'awun (Mutual cooperation)**

*Ta'awun* is not just Arabic, but a religious concept in Islamic teaching. In Arabic, *ta'awun* can be defined as mutual cooperation or mutual assistance. Mutual cooperation can be between individuals and organizations. A religious concept, *ta'awun* is confined *within al-birr* (virtue) and *al-taqwa* (piety). This is based on Surah al-Maidah verse 2. There is prohibition for *ta'awun* on *ithm* (sins) and *'udwan* (enormity). *Ta'awun* drives mutual cooperation in executing any task within the scope of *al-birr* (righteousness) and *al-taqwa* (piety). *Taqwa* resides in an individual. It is the state of being mindful and conscious of one's actions, beliefs, and intentions (Zar'um, 2016; Mhd. Sarif, 2020). The mutual cooperation reinforces social connectedness and bonding among people (Al-Haddad, 2015; Zar'um, 2016). Figure 1 depicts the components of organizational *ta'awun* (mutual cooperation at organizational level).



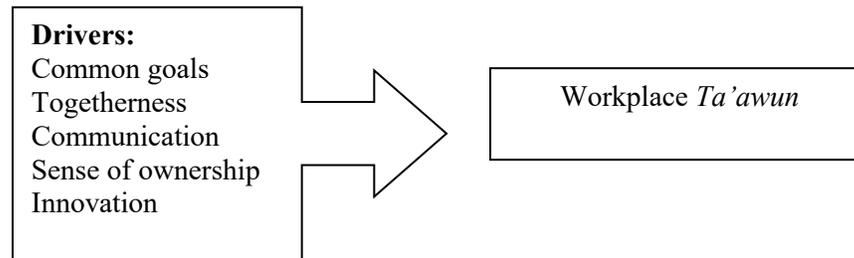
**Figure 1.** Components of Organizational *Ta'awun*

This is the explanation for Figure 1. Organizational *ta'awun* reflects the overall aura among organizational members. *Al-birr* (virtue) may be observable, such as caring, giving a suggestion to a colleague, whereas *al-taqwa* (piety) resides and is generally hidden within an individual.

*Ta'awun*, or mutual cooperation and support, is a fundamental part of the workplace. It involves working together as colleagues to ensure that tasks are completed efficiently and effectively (Mhd. Sarif, 2020; Noer, 2022; Dzul, Hussin & Sulaiman, 2023). This could include helping each other by completing tasks, offering advice when needed, sharing resources and knowledge, taking on additional responsibilities when necessary, and generally working in a collaborative manner towards common goals. *Ta'awun* also involves respecting one another's opinions and viewpoints despite differences in backgrounds or beliefs (Mhd. Sarif et al., 2022; Dwyer, 2022; Khairunisa & Muafi, 2022).

In the workplace, *ta'awun* can help to create a positive working environment and make it easier to achieve success (Dwyer, 2022; Khairunisa & Muafi, 2022; Zhang et al., 2022). The drivers for *ta'awun* at the workplace include achieving common goals, working together as a team allows each individual to contribute their skills and knowledge towards achieving a common goal, improving communication and collaboration, increasing motivation over sense of ownership over tasks and projects, improving problem-solving, and encouraging innovative thinking (Noer, 2022; Dzul, Hussin & Sulaiman, 2023; Khairunisa & Muafi, 2022; Zhang et al., 2022). Indeed, *ta'awun* encourages people to think differently

and challenge the status quo which can lead to new ideas or processes that could benefit the organization in the long run. Figure 2 summarises the drivers for *ta'awun* at workplace.



**Figure 2.** Drivers for *Ta'awun* at Workplace

Organizational *ta'awun* (cooperation) is a concept that encourages organizations to work together for mutual benefit (Mhd. Sarif et al., 2022; Dwyer, 2022; Khairunisa & Muafi, 2022) The scope of organizational *ta'awun* can include sharing resources and knowledge between organizations, such as technology, research capabilities, or marketing strategies, collaborating on projects between different departments or teams within the same organization, working together with other companies to create joint ventures or partnerships in order to gain access to new markets and customers, developing integrated systems and processes across multiple organizations in order to increase efficiency and reduce costs, and establishing networks of contacts between different stakeholders, such as customers, suppliers, employees, investors, etc., in order to facilitate communication and collaboration. According to Mhd. Sarif et al. (2022), the organized *ta'awun* also can create a culture of cooperation between different organizations in order to promote innovation, creativity, and problem-solving, develop shared standards and protocols for communication, data sharing, and service delivery between organizations, and working together to develop policies that will benefit all stakeholders involved in the *ta'awun* relationship.

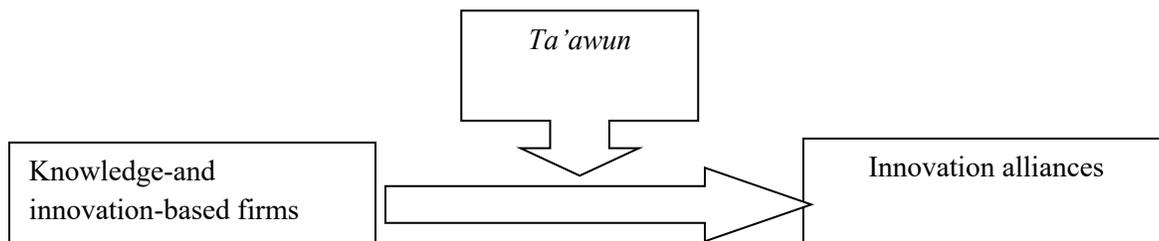
In any cooperation, there is a need for mutuality. Mutuality with spirituality dimension is *ta'awun* (mutual cooperation). *Ta'awun* (mutual cooperation) enables people to live in peace, harmony and unity. Unity and solidarity manifest mutual cooperation among members of the society (Mhd. Sarif, 2015). *Ta'awun* is *qalb* (heart) driven (Mhd. Sarif, 2017) to unite people with mutuality of *ukhuwwah* (bonding) (Mhd. Sarif, 2016). One needs *qalb* (noble heart) to produce a noble work (Mhd. Sarif, 2017). *Taqwa* (piety) mobilises noble hearts (Mhd. Sarif, 2020). The dynamism of *ta'awun* enables sustainability (Mhd. Sarif, 2018).

### **Innovation alliances**

There is a network arrangement in innovation alliances. The innovation alliances operate through the cooperation arrangement among competing companies. The alliances enable participating companies to create, maintain and sustain dynamic capability for value creation in digitized, informal and social businesses (Osarenkhoe, 2010; Correia Filho & Baggio, 2022).

The arrangement of innovation alliances is dynamic. The competing companies are competing and cooperating in the market. In the meantime, these companies are sharing resources and strategies. This arrangement is apparent in the horizontal integration strategies when the participating and competing companies in the alliances share value chain, resources and competency to create and enhance value creation (Johansson, 2012; Faloye, 2013; Sindakis, Aggarwal & Theodorou, 2017). The arrangement through innovation alliances enables inter-firm alliances to provide platforms and co-working spaces for value creation. This is particularly essential in the knowledge-and innovation-based businesses.

Based on the discussion about *ta'awun* and innovation alliances, the study postulated that *ta'awun* (mutual cooperation) can influence the *ta'awun* among knowledge- and innovation-based firms to sustain innovation alliances. Figure 3 shows the research framework of the study. It shows knowledge- and innovation-based firms are collaborating into alliances for the innovation purpose. *Ta'awun* is not a moderator or mediator as understood in the quantitative research. This is just to show the influence of *ta'awun* in the alliances among knowledge- and innovation-based firms to sustain innovation.



**Figure 3.** *Research Framework*

## **METHODOLOGY**

This section explains the personal interviews conducted with managers from knowledge- and innovation-based firms. The research follows Silverman (2020)'s qualitative research. Firstly, the researchers determined the selection of managers. The researchers retrieved a list of managers from the knowledge- and innovation-based firms that were available in the previous research database and contacted them. After securing informed consent, the researchers developed an interview plan that included the informants, the time and venue to conduct the interview. The interview plan also included duration and format (in-person or virtual), questions, and materials needed. The researchers shared this plan with the informants. The researchers had assured the informants of the interview atmosphere, including allowing plenty of time for questions, note taking (as mentioned in the informed consent given) during the conversation. The researchers transcribed the interview notes manually. When the interview notes were ready, the researchers sent them to the informants to verify.

The criteria used in selecting the informants (managers of knowledge- and innovation-based firms) for personal interviews include the individual's expertise, the type of information they can provide, and any relevant experience or knowledge they may have.

### **Interview questions**

Based on the literature review, the study developed the following questions to ask managers about mutual cooperation in organizational alliances for innovation. The interview questions were developed based on the research objective, problem statement, and research questions. Table 1 summarizes the research objective, research problems, research questions and initial interview questions.

Table 1

*Summary of Research Objective, Research Problems, Research Questions and Initial Interview Questions*

Research Objective	Research Problems	Research Questions	Initial Interview Questions
to explore the influence of <i>ta'awun</i> (mutual cooperation) in sustaining innovation alliances.	The problem (gap) derived from the policy, practice and theory discovered that there is no definite answer on how competing companies resort to cooperation when the competing companies are also simultaneously on cooperation and competition.	How could competing companies establish coepetition arrangement for innovation alliances?	<ol style="list-style-type: none"> <li>1. What strategies have you employed to develop successful organizational alliances?</li> <li>2. How do you ensure that all stakeholders in an alliance are working together effectively?</li> <li>3. How do you handle conflicts between members of different organizations in an alliance?</li> </ol>
	The problem is how could competing companies in the coepetition sustain alliances for innovation.	How could competing companies in competition arrangements sustain innovation alliances?	<ol style="list-style-type: none"> <li>4. What challenges have you faced while managing organizational alliances, and how did you address them?</li> <li>5. In what ways have your organizational alliances improved the performance of your organization?</li> <li>6. Describe a time when one of your organizational alliances was particularly successful, and why it worked so well.</li> <li>7. What lessons have you learned from past failures or difficult experiences with organizational alliances?</li> </ol>
	The problem is how competing companies in coepetition arrangements uphold values in innovation alliances.	How could competing companies in competition arrangements uphold values and principles in sustaining innovation alliances	<ol style="list-style-type: none"> <li>8. How do you measure the success of an organizational alliance?</li> <li>9. What methods do you use to ensure that all partners in an alliance are benefiting from it?</li> <li>10. How have your strategies for managing organizational alliances evolved over time?</li> </ol>

## Subject Matter Experts Review

The study approached two academics who are familiar with strategic management, innovation alliances, and qualitative research and one practitioner who are familiar with strategic alliances in technology. The experts were approached based on the contacts of the researchers. The experts validated the interview questions on face-to-face basis. The researchers corrected the interview questions immediately and showed them to the experts. The main concern of the experts is the number of interview questions and the practical duration to conduct the personal interview within 30-45 minutes. The experts suggested the researchers to ask only one interview question under each research question. The additional questions are reserved in case the informants are willing to be asked the additional questions. Table 2 shows the refined interview questions.

Table 2:  
*Summary of Research Objective, Research Problems, Research Questions and Refined Interview Questions*

Research Objective	Research Problems	Research Questions	Refined Interview Questions
to explore the influence of ta'awun (mutual cooperation) in sustaining innovation alliances.	Problem is how could competing companies resort to coepetition, a situation when the competing companies are on simultaneous cooperation and competition.	How could competing companies establish coepetition arrangement for innovation alliances?	What are the coepetition arrangements could be employed to develop successful organizational alliances for innovation.
	Problem is how could competing companies in the coepetition sustain alliances for innovation.	How could competing companies in coepetition arrangements sustain innovation alliances?	How could the competition arrangements sustain alliances?
	The problem is how competing companies in coepetition arrangements uphold values in innovation alliances	How could competing companies in coepetition arrangements uphold values and principles in sustaining innovation alliances	How could coepetition arrangements uphold good values and principles in sustaining innovation alliances?  How could terms and standards guide coepetition arrangements?

## Pilot Study

The researchers conducted a pilot study with two senior executives from knowledge- and innovation-based companies in Cyberjaya. Each informant in the pilot study spent 35 minutes and 40 minutes to answer all the four interview questions. Each informant coded as Pilot Informant. The researchers used note-taking technique to record the interviews. Each informant has different length of notes taken. The

Pilot Informants verified the notes immediately after the interviews. Table 3 summarises the findings conducted with the pilot informants.

Table 3  
*Summary of Findings in the Pilot Study*

Interview Questions	Pilot Informant 1	Pilot Informant 2
Duration	35 minutes	40 minutes
Data collection technique	Note taking	Note taking
Total Length of notes for 4 questions	5 pages	6 pages
Q1. What are the cooperation arrangements could be employed to develop successful organizational alliances for innovation?	2	2
Q2. How could the competition arrangements sustain alliances?	1	1
Q3. How could cooperation arrangements uphold good values and principles in sustaining innovation alliances?	1	2
Q4. How could terms and standards guide cooperation arrangements?	1	1
Verification	Notes immediately after the interview	Notes immediately after the interview

This research applies qualitative research method through personal interview. This research interviewed managers from three knowledge- and innovation-based firms. The informants were asked on how ta'awun (spirituality driven mutual cooperation) influences innovation alliances in enabling dynamic capability and coworking spaces for value creation.

Prior to the actual interview, the researchers obtained research permits and informed consent (Anderson, 2019; Silverman, 2015; Cohn & Larson, 2007). The researchers explained to the research approving bodies and informants about the objectives, nature and significance of the research. This is very essential protocol to secure informed consent.

Based on the consent given by the informants, the researchers did not use devices to record the interview. The researchers only used note-taking approach. Each interview took 30-40 minutes. For validation, the researchers used triangulation to validate the interview results (Anderson, 2007; Flick, 2018). Immediately after the interview, the researchers transcribed the interview notes into readable transcripts. The informants were asked to validate the interview transcripts (Silverman, 2020; Anderson, 2019). The researchers corrected the interview transcripts as pointed by the informants. Next, the researchers approached two independent qualitative researchers who are familiar with the context of the research to verify the validated interview transcripts (Flick, 2004; Silverman, 2015). The researchers used thematic content analysis to analyse the validated interview transcripts. The use of themes allowed the researchers to ground themes from the feedback of the informants.

## RESULTS AND DISCUSSION

The researchers interviewed two (2) informants. The two (2) informants represented their firms. Each informant coded based on the informant's firm. The informant from Firm 1 coded as Firm 1. Likewise, the informant from Firm 2 coded as Firm 2. The researchers asked the following interview questions:

- Q1. What are the cooperation arrangements could be employed to develop successful organizational alliances for innovation?  
 Q2. How could the cooperation arrangements sustain alliances?  
 Q3. How could cooperation arrangements uphold good values and principles in sustaining innovation alliances?  
 Q4. How could terms and standards guide cooperation arrangements?

Table 4  
*Summary of Interviews of the Informants*

Interview Questions	Informant Firm 1	Informant Firm 2
Duration	30 minutes	40 minutes
Data collection technique	Note taking	Note taking
Total Length of notes for 4 questions	5 pages	6 pages
Q1. What are the cooperation arrangements could be employed to develop successful organizational alliances for innovation?	2	2
Q2. How could the cooperation arrangements sustain alliances?	1	1
Q3. How could cooperation arrangements uphold good values and principles in sustaining innovation alliances?	1	2
Q4. How could terms and standards guide cooperation arrangements?	1	1

### Interview Question 1

When the researchers asked Question 1, the informants argued that the cooperation arrangements are based on the contractual agreements for strong relationships to collaborate.

According to the informant from Firm 1 (coded as Firm 1), the cooperation arrangements are formalised and legalised. Firm 1 said:

*In my opinion, I reckon the cooperation arrangements between technological companies can be done in many ways. More importantly, the arrangement should help them to spread the cost and risk associated with developing new technologies or products. Anyway, the arrangement should allow each company to focus on their own specific areas of expertise. They can also lead to increased innovation as two (or more) companies come together and share ideas that may not have been developed otherwise. I also thought that collaborations should allow for faster market entry due to the sharing of resources among partners. Ultimately, cooperation arrangements between technological companies can create significant value for all involved parties by leveraging the strengths and capabilities of each partner.*

While the cooperation arrangements are contractual-based, the informant from Firm 2 (coded as Firm 2) point out that there were screening activities at the market level to assure the best interest of the firms in the cooperation. Firm 2 said:

*We have to be practical in our reality of business. It is about money and money. No one is going to do something that cannot generate money. In my opinion, the cooperation arrangement between technology companies can be a great way to leverage the strengths and capabilities of each partner. By collaborating, two or more companies can work together to create new technologies or products that may not have been developed otherwise. Ideally, collaborations allow for faster market entry due to the sharing of resources among partners. It should allow companies to spread the cost and risk associated*

with developing new technologies or products while still focusing on their own areas of expertise. Sometimes, we have to be careful. There could be opportunists among them.

The next step is to summarise the answers given by Firm 1 and Firm 2 on interview question 1, “what are the cooperation arrangements could be employed to develop successful organizational alliances for innovation?” After summarised the answers, then the researchers identified keywords from each answer. The code for each keyword comprised question number and informant. For example, the code of keyword from Question 1 and informant of Firm 1 is Q1-F1 and for the informant of Firm 2 as Q1-F2. Then from the keywords, the researchers combined the keywords to form theme for the interview question 1. The themes from interview question 1 are “strong cooperation arrangements to address cost and risk and to share resources (Q1-F1)” and “strong relationships for collaboration and mutual understanding (Q1-F2).” Table 5 summarises the findings from the Interview Question 1.

Table 5  
Summary of Findings from Interview Question 1

Interview Question 1	Informants	Keywords	Themes
Q1: What are the cooperation arrangements could be employed to develop successful organizational alliances for innovation?	<p><i>Firm 1</i> In my opinion, I reckon the cooperation arrangements between technological companies can be done in many ways. More importantly, the arrangement should help them to spread the cost and risk associated with developing new technologies or products. Any way, the arrangement should allow each company to focus on their own specific areas of expertise. They can also lead to increased innovation as two (or more) companies come together and share ideas that may not have been developed otherwise. I also thought that collaborations should allow for faster market entry due to the sharing of resources among partners. Ultimately, cooperation arrangements between technological companies can create significant value for all involved parties by leveraging the strengths and capabilities of each partner.</p> <p><i>Firm 2</i> I think the companies should focus on building strong relationships with my company’s alliance partners. This includes actively communicating and involving them in key decisions, providing transparency into the progress of projects they are involved in, and consistently delivering value to their organization. Things can change very fast. For this, they should create an atmosphere that promotes collaboration and mutual</p>	<p>“cooperation arrangements” (Q1-F1)</p> <p>“cost and risk” (Q1-F1)</p> <p>“sharing of resources among partners” (Q1-F1)</p> <p>“building strong relationships”</p>	<p>Strong cooperation arrangements to address cost and risk and to share resources (Q1-F1)</p>

	<i>understanding between our organizations. More importantly, all of them should make sure all agreements are documented properly and kept up-to-date so there is no confusion or misunderstanding about expectations from either side.</i>	(Q1-F2)  "collaboration and mutual understanding"  (Q1-F2)	Strong relationships for collaboration and mutual understanding (Q1-F2)
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## Interview Question 2

The interview question 2 says, "How could the coopetition arrangements sustain alliances?"

According to the informant from Firm 1 (coded as Firm 1), coopetition arrangements are sustained with trust, open and honest communication. Firm 1 said:

*My take on this matter is very simple. In any alliance, it is important to focus on building trust between the parties involved. This can be done through open and honest communication, developing a shared vision for the future of the alliance, being transparent about expectations and outcomes, and honoring commitments made by both sides. It is important to ensure that each party feels respected and valued in the relationship so as to foster cooperation and collaboration.*

Likewise, the informant from Firm 2 (coded as Firm 2) argued that open communication and being transparent could sustain coopetition arrangements. Firm 2 said:

*I think the companies should focus on building strong relationships with my company's alliance partners. This includes actively communicating and involving them in key decisions, providing transparency into the progress of projects they are involved in, and consistently delivering value to their organization. Things can change very fast. For this, they should create an atmosphere that promotes collaboration and mutual understanding between our organizations. More importantly, all of them should make sure all agreements are documented properly and kept up-to-date so there is no confusion or misunderstanding about expectations from either side.*

Then the researchers summarised the answers for interview question 2 (how could the coopetition arrangement sustain alliances?) given by the informants from Firm 1 and Firm 2. The researchers generated keywords from the answers given by the informants. A code is assigned to each keyword.

Then from the keywords, the researchers combined the keywords to form theme for the interview question 2. The themes from interview question 1 are "the parties in the coopetition adhered to the terms of coopetition arrangements with trust, open, honest, shared, and fostering cooperation (Q2-F1)" and "active communication with mutual understanding in keeping relationships with documents and agreements (Q2-F2)." Table 6 summarises the findings from the Interview Question 2.

Table 6  
*Summary of Findings from Interview Question 2*

Interview Question 2	Informants	Keywords	Themes
How could the cooperation arrangements sustain alliances?	<p><i>Firm 1</i>  <i>My take on this matter is very simple. In any alliance, it is important to focus on building trust between the parties involved. This can be done through open and honest communication, developing a shared vision for the future of the alliance, being transparent about expectations and outcomes, and honoring commitments made by both sides. It is important to ensure that each party feels respected and valued in the relationship so as to foster cooperation and collaboration.</i></p> <p><i>Firm 2</i>  <i>I think the companies should focus on building strong relationships with my company's alliance partners. This includes actively communicating and involving them in key decisions, providing transparency into the progress of projects they are involved in, and consistently delivering value to their organization. Things can change very fast. For this, they should create an atmosphere that promotes collaboration and mutual understanding between our organizations. More importantly, all of them should make sure all agreements are documented properly and kept up-to-date so there is no confusion or misunderstanding about expectations from either side.</i></p>	<p><i>"building trust"</i>  <i>(Q2-F1)</i></p> <p><i>"open and honest communication"</i>  <i>(Q2-F1)</i></p> <p><i>"shared vision"</i>  <i>(Q2-F1)</i></p> <p><i>"foster cooperation"</i>  <i>(Q2-F1)</i></p> <p><i>"strong relationships"</i>  <i>(Q2-F2)</i></p> <p><i>"actively communicating"</i>  <i>(Q2-F2)</i></p> <p><i>"mutual understanding"</i>  <i>(Q2-F2)</i></p> <p><i>"all agreements are documented"</i>  <i>(Q2-F2)</i></p>	<p>The parties in the cooperation adhered to the terms of cooperation arrangements with trust, open, honest, shared, and fostering cooperation.</p> <p>Active communication with mutual understanding in keeping relationships with documents and agreements.</p>

### Interview Question 3

The Interview Question 3 is to answer how could cooperation arrangements uphold good values and principles in sustaining innovation alliances?

According to Firm 1, all parties in the cooperation upheld good values and principles in sustaining innovation alliances by adhering to the contracts and good faith of parties in the contracts. Firm 1 said:

*It is all about humans and promises made and delivered. I think they should instill good values by promoting transparency and open communication. I meant all parties involved should be aware of their roles and responsibilities, as well as any changes or updates made to the alliance. Those managers and*

executives should focus on fostering trust between partners through consistent follow-ups, timely feedbacks and clear expectations. More crucial, I supposed, encourage team members to work together towards shared goals and objectives.

In the same echoes, Firm 2 emphasised that all parties must be responsible to the trust, obligations, contracts, and standards in sustaining innovation alliances. Firm 2 said:

*People in the alliances cannot be separated. They must honor the contracts. I reckon it should be held to the same standards as individuals when it comes to upholding promises and contracts. All companies involved in an alliance should take responsibility for ensuring that all agreements are followed through on, and that everyone involved is held accountable for their actions. Companies should strive to build trust between themselves and other parties, so that they can feel confident about fulfilling their obligations under any agreement made.*

Then from the keywords, the researchers combined the keywords to form theme for the interview question 2. The themes from interview question 3 are “by adhering to the contracts and good faith of parties in the contracts (Q3-F1)” and “be responsible to the trust, obligations, contracts, and standards (Q3-F2).” Table 7 summarises the findings from the Interview Question 3.

Table 7  
Summary of Findings from Interview Question 3

Interview Question 3	Informants	Keywords	Themes
Q3: How could cooperation arrangements uphold good values and principles in sustaining innovation alliances?	Firm 1 <i>It is all about humans and promises made and delivered. I think they should instill good values by promoting transparency and open communication. I meant all parties involved should be aware of their roles and responsibilities, as well as any changes or updates made to the alliance. Those managers and executives should focus on fostering trust between partners through consistent follow-ups, timely feedbacks and clear expectations. More crucial, I supposed, encourage team members to work together towards shared goals and objectives.</i>	“promises made and delivered” (Q3-F1) “transparency and open communication” (Q3-F1) “transparency and open communication” (Q3-F1)	By adhering to the contracts and good faith of parties in the contracts
	Firm 2 <i>People in the alliances cannot be separated. They must honor the contracts. I reckon it should be held to the same standards as individuals when it comes to upholding promises and contracts. All companies involved in an alliance should take responsibility for ensuring that all agreements are followed through on, and that everyone involved is held accountable for their actions. Companies should strive to build trust between themselves and other parties, so that they can feel confident about fulfilling their obligations under any agreement made.</i>	“honor the contracts” (Q3-F2) “standards” (Q3-F2) “take responsibility” (Q3-F2) “build trust” (Q3-F2) “obligations” (Q3-F2)	Be responsible to the trust, obligations, contracts, and standards

## Interview Question 4

The Interview Question 4 is to answer how could terms and standards guide cooperation arrangements in sustaining innovation alliances?

According to Firm 1, adherence to terms of reference and contractual terms with compliance to standards and procedure guide cooperation arrangements in sustaining innovation alliances. Firm 1 said:

*In any collaboration, there must be terms of references. The terms can guide the contractual terms. Everyone has a duty for standards compliance. This has to be followed with systematic procedures.”*

Likewise, Firm 2 pointed out that the provision of work manual contains guidelines guide cooperation arrangement in sustaining innovation alliances. Firm 2 said:

*I reckon terms and standards are just guidelines. There is information kit given to all parties. It is sort of a manual. The practice of having documentation is good.*

Then from the keywords, the researchers combined the keywords to form theme for the interview question 2. The themes from interview question 4 are “adherence to terms of reference and contractual terms with compliance to standards and procedure (Q4-F1)” and “the provision of work manual contains guidelines (Q4-F2).” Table 8 summarises the findings from the Interview Question 4.

Table 8  
*Summary of Findings from Interview Question 4*

Interview Question 4	Informants	Keywords	Themes
Q4. How could terms and standards guide cooperation arrangements?	<p><i>Firm 1</i> <i>In any collaboration there must be terms of references. The terms can guide the contractual terms. Everyone has a duty for standards compliance. This has to be followed with systematic procedures.</i></p> <p><i>Firm 2</i> <i>I reckon terms and standards are just guidelines. There is information kit given to all parties. It is sort of a manual. The practice of having documentation is good.</i></p>	<p><i>“terms of reference” (Q4-F1)</i></p> <p><i>“contractual terms”(Q4-F1)</i></p> <p><i>“standards compliance”(Q4-F1)</i></p> <p><i>“systematic procedure”(Q4-F1)</i></p> <p><i>“guidelines”(Q4-F2)</i></p> <p><i>“information kit”(Q4-F2)</i></p> <p><i>“manual”(Q4-F2)</i></p> <p><i>“documentation”(Q4-F2)</i></p>	<p>Adherence to terms of reference and contractual terms with compliance to standards and procedure.</p> <p>The provision of work manual contains guidelines.</p>

## Assigning Labels and Values

The next step, the researchers approached two independent researchers to assign labels and values for the keywords generated from each interview question. Table 9 summarises the assigning label for the keywords.

Table 9  
Assigning Labels

Keywords	Independent Research 1	Independent Research 2	Labels
<b>KEYWORDS FROM INTERVIEW QUESTION 1</b> <i>“cooperation arrangements” (Q1-F1)</i> <i>“cost and risk” (Q1-F1)</i> <i>“sharing of resources among partners” (Q1-F1)</i> <i>“building strong relationships” (Q1-F2)</i> <i>“collaboration and mutual understanding” (Q1-F2)</i>	Arrangement of collaboration	Arrangement of Cooperation	<b>COOPETITION ARRANGEMENTS (CA)</b>
<b>KEYWORDS FROM INTERVIEW QUESTION 2</b> <i>“building trust” (Q2-F1)</i> <i>“open and honest communication” (Q2-F1)</i> <i>“shared vision” (Q2-F1)</i> <i>“foster cooperation” (Q2-F1)</i> <i>“strong relationships” (Q2-F2)</i> <i>“actively communicating” (Q2-F2)</i> <i>“mutual understanding” (Q2-F2)</i> <i>“all agreements are documented” (Q2-F2)</i>	Alliance for trust	Sustaining trust and honesty	<b>SUSTAIN ALLIANCES (SA)</b>
<b>KEYWORDS FROM INTERVIEW QUESTION 3</b> <i>“promises made and delivered” (Q3-F1)</i> <i>“transparency and open communication” (Q3-F1)</i> <i>“transparency and open communication” (Q3-F1)</i> <i>“honor the contracts” (Q3-F2)</i> <i>“standards” (Q3-F2)</i> <i>“take responsibility” (Q3-F2)</i> <i>“build trust” (Q3-F2)</i> <i>“obligations” (Q3-F2)</i>	Principles of contracts	Values of contracts	<b>VALUES AND PRINCIPLES (VP)</b>
<b>KEYWORDS FROM INTERVIEW QUESTION 3</b> <i>“terms of reference” (Q4-F1)</i> <i>“contractual terms” (Q4-F1)</i> <i>“standards compliance” (Q4-F1)</i> <i>“systematic procedure” (Q4-F1)</i> <i>“guidelines” (Q4-F2)</i> <i>“information kit” (F2)</i> <i>“manual” (Q4-F2)</i> <i>“documentation” (Q4-F2)</i>	Terms of contracts	Standards of procedure	<b>TERMS AND STANDARDS (TS)</b>

The researchers also requested the interview researchers to assign value for the keywords from each interview question. The value for Interview Question 1 (+7 best -- +1 worst), Interview Question 2 (-1 best -- -7 worst), Interview Question 3 (+7 best -- +1 worst), and Interview Question 4 (-1 best -- -7 worst) to each key words. After assigning the values, the calculation to get weighted score for each independent research is by total up all assigned values, and then divided by the number of keywords. Then, total up both weighted scores of the independent researchers. After that, divide the total weighed scores from both independent researchers by two to get average value for each label. Table 10 shows the assigning of values by the independent researchers.

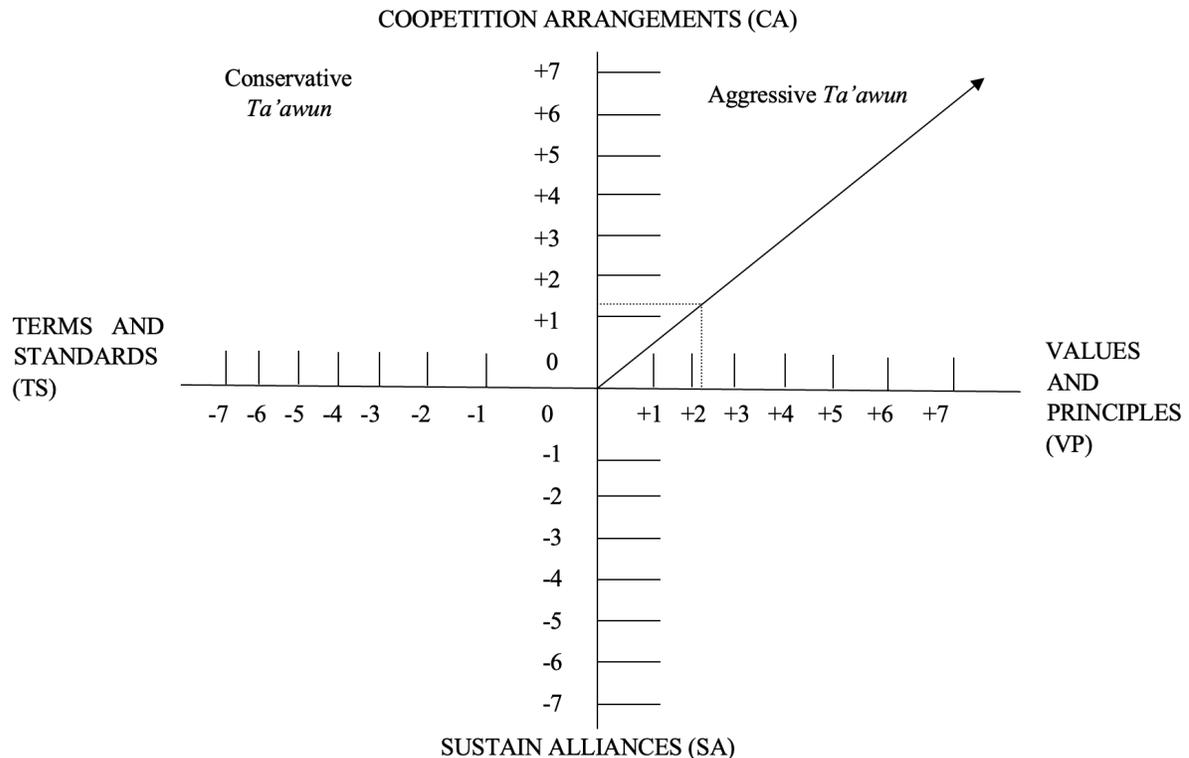
Table 10  
*Assigning Values by Independent Researchers*

Keywords	Independent Researcher 1	Independent Researcher 2	Average Value
<b>COOPETITION ARRANGEMENTS (CA)</b>			
“cooperation arrangements” (Q1-F1)	+6	+4	+5
“cost and risk” (Q1-F1)	+5	+3	+4
“sharing of resources among partners” (Q1-F1)	+5	+4	+4.5
“building strong relationships” (Q1-F2)	+4	+5	+4.5
“collaboration and mutual understanding” (Q1-F2)	+3	+6	+4.5
<b>TOTAL</b>	<b>+23</b>	<b>+22</b>	<b>+22.5</b>
<b>Weighted score</b>	<b>+4.6</b>	<b>+4.4</b>	<b>+4.5</b>
<b>SUSTAIN ALLIANCES (SA)</b>			
“building trust” (P-Q2-Info1)	-1	-2	-3
“open and honest communication” (P-Q2-Info1)	-2	-2	-4
“shared vision” (P-Q2-Info1)	-2	-1	-3
“foster cooperation” (P-Q2-Info1)	-1	-2	-3
“strong relationships” (P-Q2-Info2)	-1	-2	-3
“actively communicating” (P-Q2-Info2)	-2	-1	-3
“mutual understanding” (P-Q2-Info2)	-1	-1	-2
“all agreements are documented” (P-Q2-Info2)	-2	-2	-4
<b>TOTAL</b>	<b>-12</b>	<b>-13</b>	<b>-25</b>
<b>Weighted score</b>	<b>-1.5</b>	<b>-1.6</b>	<b>-3.1</b>
<b>VALUES AND PRINCIPLES</b>			
“promises made and delivered” (P-Q3-Info1)	+6	+4	+5
“transparency and open communication” (P-Q3-Info1)	+5	+3	+4
“transparency and open communication” (P-Q3-Info1)	+5	+4	+4.5
“transparency and open communication” (P-Q3-Info1)		+5	+4.5
“honor the contracts” (P-Q3-Info2)	+4	+6	+4.5
“standards” (P-Q3-Info2)	+3	+5	+4
“take responsibility” (P-Q3-Info2)	+5	+6	+5.5
“build trust” (P-Q3-Info2)	+6	+5	+5.5
“obligations” (P-Q3-Info2)	+6	+5	+5.5
<b>TOTAL</b>	<b>+40</b>	<b>+43</b>	<b>+83</b>
<b>Weighted score</b>	<b>+5</b>	<b>+5.3</b>	<b>+5.15</b>
<b>TERMS AND STANDARDS</b>			
“terms of reference” (P-Q4-Info1)	-1	-2	-3
“contractual terms” (P-Q4-Info1)	-2	-2	-4
“standards compliance” (P-Q4-Info1)	-2	-1	-3
“systematic procedure” (P-Q4-Info1)	-1	-2	-3
“guidelines” (P-Q4-Info2)	-1	-2	-3
“information kit” (P-Q4-Info2)	-2	-1	-3
“manual” (P-Q4-Info2)	-1	-1	-2
“documentation” (P-Q4-Info2)	-2	-2	-4
<b>TOTAL</b>	<b>-12</b>	<b>-13</b>	<b>-25</b>
<b>Weighted score</b>	<b>-1.5</b>	<b>-1.6</b>	<b>-3.1</b>

## Development of Matrix

The independent researchers developed a matrix based on the average scores obtained from each label. The matrix requires X-axis and Y-axis. The value of X-axis and Y-axis derived from the values of each label. X-axis obtained by adding the average weighted scores of Value Principles (VP) and Terms Standards (TS). The calculation of X-axis is  $TS+VP = -3.1+ (+5.15) = +2.05$ . Y-axis obtained by adding the average weighted scores of Coopetition Arrangement (CA) and Sustain Alliances (SA). The calculation of Y-axis is  $CA+SA = +4.5 +(-3.1) = +1.4$ ,

From X-axis and Y-axis values, the independent researchers developed a matrix to reflect the strategic position of the *ta'awun* on coopetition arrangement to sustain innovation alliances. Figure 4 shows the types of *ta'awun* that can be used by coopetition arrangements.



**Figure 4.** Strategic Position Matrix for Organizational *Ta'awun*

The *ukhuwwah* bonding has been enhanced with team building, informal socialization, and community services (Mhd. Sarif, 2016; Akliyah, Hindersah & Burhanudin, 2022). Collaboration through communities of practice leads sharing of intelligence (Somers, Stockstrom & Henseler, 2021) for innovation (Bolisani, Fedeli, Bierema & De Marchi, 2021). The alliances with *ukhuwwah* and *ta'awun* also contributed to resilience (Mead et al, 2021).

This approach is applicable to work with innovation institutes, key players of the industry, research universities, and related government agencies for commercial and social innovation value creation (Amaral & Cai, 2022; Huian, Bisogno & Mironiuc, 2022). The smart innovative alliances started during pandemic covid-19 restrictions to produce social innovation business models to deliver food, to provide some employment spaces, and to reduce mental illness (Islam, Jerin, Hafiz, Nimfa & Wahab, 2021).

The grassroots innovation is capable to create social innovation value during the pandemic covid-19 restrictions (Raj, Feola, Hajer & Runhaar, 2022; Ng, Wong & Santos, 2022). The movement restriction has limited the geographical spaces for technology-based firms to share physical resources (Nursyahidin, Rohman & Febriyanti, 2021; Sareen & Pandey, 2022). Alternatively, Firm 3 has established local platform for technology-based firms, other firms, civic organizations, and individuals in the community to create social innovation through agriculture activities (Islam et al, 2021).

## CONCLUSION

The research discovered that co-competition strategy has transformed inter-firm dynamic capability for value creation in digitalized, informal and social businesses. The informants argued that the typical arrangement among competitors through horizontal integration in the inter-organizational value chain has enhanced value creation dynamics. The informers emphasised that inter-firm alliances had provided platforms and coworking spaces for value creation. Therefore, the inter-firm alliances had increased value in the knowledge- and innovation-based businesses. In terms of *ta'awun* (spirituality driven mutual cooperation), the informants had accomplished the purpose of innovation alliances when the companies in the co-competition innovation alliances created and maintained trust and dynamic capability for value creation. The informants recognised the influence of *ta'awun* (spirituality driven mutual cooperation) in the innovation alliances among knowledge-and innovation-based firms. The informants argued that spirituality driven mutual cooperation through unified socialization in community of practices enhances *ukhuwwah* (social bonding) to establish and protect (*takaful*) the mutual interests.

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