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**COOPETITION AND BARGAINING POWER OF
FARMERS: THE MEDIATING ROLE OF
ANALYTICAL CAPABILITY**

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**COOPETITION AND BARGAINING POWER OF FARMERS:
THE MEDIATING ROLE OF ANALYTICAL CAPABILITY**

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Mohammed Jaafar MOHAMMED

Signature

DEDICATION

This thesis is dedicated to: The sake of Allah, my Creator and my Master, My great teacher and messenger, the prophet Mohammed (May Allah bless and grant him), who taught us the purpose of life.

I am dedicating this thesis to all my mentors practically my advisor Dr. Mehmet Gruel Tekeilioglu, special support Ms Kesper, and Miss. Hilal. I couldn't have done this without you. Thank for all of your support along the way.

My great parents, who never stop giving of themselves in countless ways, My dearest wife, who leads me through the valley of darkness with light of hope and support, My beloved brothers and sisters; particularly my dearest brother, Hassan, who stands by me when things look bleak, My lovely kid: Adam I can't force myself to stop loving. To all my family, the symbol of love and giving, my friends who encourage and support me, all the people in my life who touch my heart, I dedicate this research.

I love you all and miss you all beyond words. May God bless you all brothers and sisters
Amen.

Mohammed Jaafar MOHAMMED

ABSTACT

COOPETITION AND BARGAINING POWER OF FARMERS: THE MEDIATING ROLE OF ANALYTICAL CAPABILITY

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The agriculture sector is one of the interesting sectors that can provide unique insights on how farmers can collaborate with competitors to achieve common goals. The farmers' alliances are based on the sharing of information, challenge sanctions, research, collective decision-making about the scale of production, and an agreed negotiation with the contractors/market. This study explored the coopetition (simultaneous cooperation and competition) among agriculture farmers to increase their bargaining power. This study has developed and test a theoretical framework to advance the coopetition strategy and its relationship with the bargaining power of farmers. The cross-sectional survey was used to collect the data from individual farmers from Baghdad, Iraq. The study chooses convenience sampling easy to contact and reach farmers and get 208 valid responses. The study has tested a mediating model using regression analysis and all four hypotheses were found statistically significant. The study has found the formation and formalization of the coopetitive relationships positively affect the bargaining power of the individuals. Moreover, the study also contributed to highlight the importance of the context that plays a significant role in inducing coopetition among individuals or organizations. The study also suggests some future research directions such as a diverse sample from different geographical locations can provide a basis for generalization.

Keywords: Coopetition, Analytical Capability, Bargaining Power, Farmers

ÖZET

Tarım sektörü, çiftçilerin ortak hedeflere ulaşmak için rakiplerle nasıl işbirliği yapabilecekleri konusunda benzersiz bilgiler sağlayabilen ilginç sektörlerden biridir. Çiftçi ittifakları, bilgi paylaşımına, yaptırımlara karşı mücadeleye, araştırmaya, üretim ölçeği hakkında toplu karar vermeye ve yükleniciler/piyasa ile üzerinde anlaşmaya varılmış bir müzakereye dayanmaktadır. Bu çalışma, tarım çiftçileri arasındaki pazarlık güçlerini artırmak için işbirliğini (eşzamanlı işbirliği ve rekabet) araştırdı. Bu çalışma, işbirliği stratejisini ve bunun çiftçilerin pazarlık gücü ile ilişkisini iletirmek için teorik bir çerçeve geliştirmiş ve test etmiştir. Bağdat, Irak'tan bireysel çiftçilerden veri toplamak için kesitsel anket kullanıldı. Çalışma, çiftçilere ulaşması ve ulaşması kolay kolayda örneklemeyi seçiyor ve 208 geçerli yanıt alıyor. Çalışma, regresyon analizi kullanarak aracı bir modeli test etti ve dört hipotezin tümü istatistiksel olarak anlamlı bulundu. Çalışma, işbirlikçi ilişkilerin oluşumu ve resmileşmesinin bireylerin pazarlık gücünü olumlu yönde etkilediğini bulmuştur. Ayrıca, çalışma, bireyler veya kuruluşlar arasında işbirliğini teşvik etmede önemli bir rol oynayan bağlamın önemini vurgulamaya da katkıda bulunmuştur. Çalışma ayrıca, farklı coğrafi konumlardan çeşitli bir örneklem gibi gelecekteki bazı araştırma yönlerinin genelleme için bir temel sağlayabileceğini öne sürüyor.

Anahtar Kelimeler: İşbirliği, Analitik Kabiliyet, Pazarlık Gücü, Çiftçiler

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1. INTRODUCTION

The farming businesses have inherent risks and uncertainties as external factors i.e., weather, production, buyers' bargaining power, technological advancement, and price fluctuations. The management of risks is further critical for the micro-level farmers because they usually have limited access to the machinery, debt financing, and power to price bargain. However, the increasing access to information has been facilitating the farmers in terms of more options and flexibility that enable them to secure income.

The security situation in Iraq directly impacts all the economic sectors. Similarly, the deteriorated infrastructures, weak private sector, partial price structures, and government incentive framework complicate the socio-economic development of the farmers. On the other hand, the increasing population further pressurize the agriculture sector to feed. For instance, the high imports (USD 5 billion) of basic food items to meet the annual shortage indicate the dire need for sustainable growth of domestic farmers.

The low production and growth of the agriculture sector in Iraq are attributed to the government policies e.g., setting low prices for consumers, controls on price and production, and restrictions on marketing. Moreover, the lack of maintenance of agricultural infrastructures such as irrigation systems, cleaning of canals, and control of loss of water. The literature on power relations and the issues of farmers have been under significant investigation in academics and politics (Reardon & Timmer, 2007). The literature has been using different lenses to explore the perspective both theoretically and practically (Swinnen, 2007).

The existing literature mainly focused on the supply chain of goods and the successive stages of power relationships. Moreover, the emphasis has been on the established farms and the actors of the supply chain—for instance, the relationship of farms and processors and/or retailers and farms. Therefore, there is an overlooking of the bargaining power of the individual farmers and the potential outcomes of their position in the sector. Moreover, the literature on power relations in the food supply chain lacks the position of farmers in negotiations (Fałkowski, Malak-Rawlikowska, & Milczarek-Andrzejewska, 2017).

Most of the prior work quantitatively measured the farmers based on the size of the farm, production volumes, and distance from the market/contractor (Dries, Germenji, Noev, &

Swinnen, 2009; Falkowski, 2012; Vandeplas, Minten, Swinnen, 2013). These aspects of the farmers' activities are natural for bargaining power; however, they are highly likely imperfect. The farmers' bargaining power may also stem from other things such as collaboration among competitors (coopetition)—that is farmers can collaborate to better bargain the prices for their yield. Moreover, the personal contacts of the farmers, how long those relationships are, and negotiation power (Swinnen, 2007; Gorton et al., 2015). Therefore, individual farmers (micro farmers) can make alliances to avoid the exploitation on price and this can help them to tackle the market forces i.e., contractor or the wholesaler.

The literature on cooperative alliances/strategies is abundant and has been growing. The concept of coopetition is a “*double-edged sword*” (Bouncken & Kraus, 2013), however, most of the insights are from large companies and SMEs. It is interesting to note that coopetition demonstrates both positive and negative relationships with the performance of the alliance. Therefore, the role of context and the attitude of the participating organizations is paramount in determining the potential outcomes. The coopetition strategy has been extensively applied in industries such as high-tech companies, automobiles, airlines, and health (Dahl, 2014). Thus, the mixed findings invite the further exploration of the concept of bargaining power in the context of farmers.

The agriculture sector is one of the interesting sectors that can provide unique insights on how farmers can collaborate with competitors to achieve common goals. The farmers' alliances are based on the sharing of information, challenge sanctions, research, collective decision-making about the scale of production, and an agreed negotiation with the contractors/market. For instance, cooperatives have been proved to be the most successful business model for individual small-scale producers to gain higher and consistent profits. Similarly, it is logical to start cooperating without legalizing the initiatives—the coopetition strategy may provide the instant alternative to the lengthy and technical process of making cooperatives.

1.1 PROBLEM STATEMENT

Coopetition literature is accumulating over the years that address the simultaneous cooperation and competition among individuals, small businesses, and large organizations (Raza-Ullah & Bengtsson, 2014). The literature indicates that there is limited application of coopetition in the agriculture sector particularly the micro farmers (individuals) (Walley, 2007). However, Chien (2016) provided insights into the government-enforced cooperation among the competing farmers in Taiwan—the government adopted that state-led coopetition strategy to gain a competitive advantage. Similarly, the study of Walley and Custance (2010) explored the six cases from the agri-food supply chain and suggested that coopetition can benefit participating organizations beyond the economic, coopetition participants may not always know about their involvement and the variation in the intensity of coopetition.

Coopetition literature in the agriculture sector tried to answer the questions such as the role of the public sector to form cooperative alliances, private and public partnerships, and supply chain (Chien, 2016; Walley & Custance, 2010). It is pertinent to note that these studies focused on the context of the public sector and the supply chain. There is limited coopetition literature available that focused on the individuals in all the sectors and industries.

The rising problems of agricultural farmers across the world, specifically, war-torn Iraq needs a solution to sustain, generate profits, and increase their production levels. Therefore, the area is interesting to study because lack of government support, poor infrastructure, water scarcity, sanctions, and no price controls often end up in dropping farmers every year. Moreover, it is a reality that individual farmers have always been struggling to gain a good price for their yield and always remain in a break-even position. Therefore, the agriculture activity does not achieve significant growth, in fact, over the years there is a decline in productivity. Moreover, the war in Iraq has significantly damaged agriculture activity due to the loss of infrastructure, displacements, insecurity, and looting (FAO, 2018). However, the situation in Iraq has been improving with the help of the government, the United Nations, and other development sector organizations. Thus, there is a need for research to explore the coopetition (simultaneous cooperation and competition) among agriculture farmers to increase their bargaining power. Hence, the purpose of the study is:

“The development of a theoretical framework to advance the coopetition strategy and its relationship with the bargaining power of farmers”

1.2 RESEARCH QUESTIONS

The study addresses the following research questions:

1. How coopetition impacts the bargaining power of the farmers in Iraq?
2. How analytical capability mediates the relationship between coopetition and bargaining power of farmers in Iraq?

1.3 SIGNIFICANCE OF THE STUDY

The agriculture sector is interesting because the farms/farmers are intertype competitors (that sell the same products using different channels), therefore, they share similar information, ideas, market channels, and localities. Therefore, it is motivating to study the intentions to adopt the coopetition among these intertype competitors—who desire to generate higher profits but end-up up lacking bargaining power with contractors/market actors in the supply chain. The study will also conterbution to coopetition strategy and bargaining power literature by exploring the agricultural farmers in Iraq, their cooperation against market forces, and the impact on their bargaining power—and how it helps them to better negotiate.

1.4 DISPOSITION OF THE STUDY

Table 1.1: Disposition of the study

Chapter	Description
Chapter 1 Introduction	It contains the introduction, problem statement, research questions, significance of the study, and disposition.
Chapter 2 Literature Review	This chapter includes the in-depth literature review of coopetition, bargaining power, and the context. Moreover, it also provides the theoretical framework and hypotheses for the study.
Chapter 3 Methodology	The chapter presents the research design, population and sample, sampling, and measurement tools.
Chapter 4 Data Analysis	This chapter presents the data analysis, results, findings, and discussion.
Chapter 5 Conclusion	It includes the conclusion, limitations, and future directions.

2 LITERATURE REVIEW

2.1 COOPETITION

The term coopetition was created by Raymond Noorda in 1993. The concept embeds two notions i.e., cooperation and competition. The concept has been under extensive exploration for three decades with several extensions and evolution; however, the basic philosophy remained the same that is “*mindset, process, or phenomenon of combining cooperation and competition*” (Raza-Ullah & Bengtsson, 2016).

The application of the coopetition strategy usually undertakes direct interactions with the competing organizations to achieve a common goal. However, coopetition is also seen from one angle only i.e., either cooperation or competition. This leads to the voluntary participation of the partners to enable success. Therefore, the contextual range of the phenomena is possible to symbolize that would be inclusive with interdependency. The simultaneous cooperation and competition, thus, work together even with distinct nature. The pure nature of the coopetition as per the theory suggests extreme interlinkage of the participating organizations to achieve the outcomes (Barreta, 2008).

Literature provides abundant examples of inter-organizational relationships. These cooperative relationships are dyad, triad, and network and they have been at the forefront of scientific studies. There is an inherent drive to interact in the farmers/micro-businesses that is cooperation among them—and this context is extremely favourable to combine the resources to gain mutual benefits. Moreover, it is important to note that when more and more organizations become part of the alliance it can eventually create threats (Bengtsson, Raza-Ullah, & Kock, 2014).

2.2 COOPERATION AND COMPETITION

The concepts of cooperation and competition have been under rigorous investigation for decades in the disciplines of management, marketing, and strategic management. However, strategic management has traditionally focused on the competition and press companies to innovate and upgrade to gain a competitive advantage (Porter, 1991). Though, scholars now

emphasizing the importance of cooperation to gain mutual benefits with a win-win outcome (Padula & Dagnino, 2007).

The concepts of cooperation and competition and the related theories have been studied on all levels of the organizations—that is individual, dyadic, triadic, and network. The concepts have multiple definitions with diverse contexts; however, the central theme of the competition is the rivalry among the competition (Bengtsson & Kock, 2000). Competition is a zero-sum game—those results in win/loss (Brandenburger & Nalebuff, 1996). More formally, competition is “*a dynamic situation that occurs when several actors in a specific area (market) struggle for scarce resources, and/or produce and market very similar products or services that satisfy the same customer need*” (Osarenkhoe, 2010, p. 251). The actual sense of the phenomena remains the same for all types of organizations whether large or small or individuals. The sole object of each competitor is to gain a competitive advantage by offering a unique product or services (Porter, 1991).

On the other hand, cooperation highlights the importance of good relationships with competitors to achieve strategic goals (Baker, Simpson, & Siguaw, 1999). Cooperation among any of the parties is a win-win positive sum-game that advances mutual interests such as product demand and market share (Rusko, 2011). On similar lines, cooperation seeks to create collaboration advantage and emphasize the interdependent relationships between firms—these cooperative relationships often based on mutual agreements (Yoshino & Rangan, 1996). Therefore, the collective benefits and goals lay the basis for the strategic collaborative relationships among different businesses.

Cooperation and competition have pros and cons with limitations. The competitive approach in its actual form only focusses on competing and ignore collaborations—on the other hand, the cooperation approach overlooks the negative aspects of collaborative relationships (Padula & Dagnino, 2007). The cooperation school of thought criticizes the competition dynamics based on potential risks of knowledge leakage and the learning race. Both approaches seem entirely different in philosophy, application, and outcome—however, it is possible to utilize these approaches simultaneously. Therefore, cooptition has been one of the favorite strategies of contemporary businesses (Lado, Boyd, & Hanlon, 1997).

Cooperation in cooptitive relationships is the dominating aspect because it lay the basis to bring competitors close to each other. Inter-organizational relationships are also associated

with the cooperation that is *“when two or more parties have complementary objectives and are mutually dependent”* (Easton & Araujo, 1992, p. 76). The mutual inter-dependence motivates the businesses to pool the resources to achieve the common goal (Thomason, Simendinger, & Kiernan, 2013). It is pertinent to note that coopetition strategy is a voluntary action that depends on the context, trust levels, physical environment, and overall conditions (Snow, Miles, & Coleman, 2000). Therefore, it is most suitable for individual farmers/small businesses that belong to the same locality, know each other, and suffer the same kind of problems.

It is essential to differentiate between cooperation and collaboration as they are used alternatively. Collaboration is a *“process whereby two or more parties work closely with each other to achieve mutually beneficial outcomes”* (Miles & Snow, 2007, p.12). The slight difference in the definition overlooks the complexity and challenge of the collaboration process. For instance, collaboration integrates numerous inter-organizational relationships such as *“cooperation, coordination, and other forms of exchange of resources (including people, funding, information, ideas, and mutual respect for individual goals and/or joint goals)”* (Lewis, Isbell, & Koschmann, 2010, p. 462). Contrary, cooperation only deals with exchange relations in special contexts. This provides organizations with an opportunity to establish strategic, managerial, innovative, and financial relationships (Osarenkhoe, 2010).

The most common motivation to enter into a cooperative relationship is to gain access to the resources i.e., research and development, skills and knowledge, and capabilities (Gnyawali & Madhavan, 2001). Cooperative relationships are defined as follows:

“Exchanges are frequent, comprising business, information, and social exchange. Informal agreements are built on social norms and trust. These norms and sometimes formal agreements adjust the distribution of power and dependence among the competitors, which means that conflicts are rare. Competitors have common goals, and proximity between them is based on functional and psychological factors” (Bengtsson & Kock, 1999, p. 181).

The informal agreements based on mutual trust to pursue exchange relations for information sharing, business, and social exchange is significant in terms of the individual farmers or the micro business. Interestingly, these micro-entrepreneurs may not have enough resources to legalize and execute formal relationships. Therefore, the cooperative relationships assist them to exchange, regulate, and allocate power to each other. Further, the frequency of interaction among the partners builds trust that led to favorable long-term relationships.

In contrast, competition explains the behavior of the organization to endeavor to gain what is not accessible. It is defined as “*a dynamic situation that occurs when several actors in a specific area struggle for scarce resources, and/or product and market very similar products or services that satisfy the same customer need*” (Osarenkhoe, 2010, p. 345). Interestingly, competition becomes severe when companies are from the same sector, industry, or region (Porter, 1990). Besides the involvement of the resources for competition, it challenges the psychological strength of the organization and pushes it to achieve more. However, the characteristics of competitive relationships explicitly explain it as “*interaction is simple and direct. Power and dependence are distributed among the competitors based on their position in the business network. Proximity or distance is based on functional and psychological factors, and competitors set their goals independently*” (Bengtsson & Kock, 1999, p. 181).

Competition is the consistent accomplishment of competitive advantage over competitors to create value—that is “*creating value is an inherently cooperative process, and capturing value is inherently competitive*” (Brandenburger & Nalebuff, 1996, p. 13). Competition not only creates value for companies but also benefits the customers. However, it is generally perceived as acts to pursue self-interests at the expense of others—thus, it leads to negativity (Birkinshaw & Lingblad, 2005). The competition and the perspective of the internal tension suggest that high competition high will be opportunistic behaviour—which can waste resources, problems in control mechanisms, and subsequently weaker relations (Das & Teng, 2000).

2.3 COOPETITION

Literature on coopetition immediately started mounting up after the formal introduction of the concept in 1993. Similarly, scholars have been trying to explore the multiple facets of the concept in diverse contexts. The concept has several perspectives that are dyadic (Bengtsson & Kock, 2000), multifaceted (Luo, 2004), intra-organization (Tsai, 2002), and industry level (Rusko, 2011). The concept has been successfully facilitating contemporary organizations to simultaneously cooperate and compete to achieve objectives. The simplest explanation and usage of coopetition is to cooperate and compete for mutual benefits. The cooperation helps companies to access the key resources of the partner and competition motivate them to strengthen their capabilities to gain a competitive advantage. However, the right balance between the two elements is the key to success. Literature indicated that a successful coopetitive relationship brings innovation, organizational learning, and capability enhancement (Afuah, 2000).

The earlier explained literature on competition (win-lose, lose-win) and cooperation (win-win) combined to have the positive-sum game in form of coopetition—that is a win-win-win game (Walley, 2007). Literature has significantly proved that the combination of the two elements produces a positive-sum game (Okura, 2007). Coopetition is a broad concept with application to various contexts, disciplines, and industries. Moreover, it has different levels of analysis that range from individual, intra-organization, inter-organization, and network. Therefore, the nature of the relationship will have different dynamics based on the level of analysis—for instance, the individual level may occur among teams to facilitate a particular project (Baruch & Lin, 2012). Moreover, the individual farmers can cooperate among themselves to increase their bargaining power, at the same time, they compete on productivity.

Intra-organizational level coopetition refers to a particular relationship among the different departments/teams within an organization. The subunits compete for “*parent resources, corporate support, power delegation, market expansion, and global expansion*” (Luo, 2005, p. 73). The most studied and significant of coopetition is inter-organizational that have two domains (i) coopetition among the companies in the same value chain, sector, and industry (direct competitors) (ii) coopetition among the companies in the same supply chain (indirect competitors) (Bengtsson & Kock, 1999; Daidj & Jung, 2011; Bakshi & Kleindorfer, 2009). The network-level coopetition focus on the relationship among the organizations in a network

structure (Gnyawali, He, & Madhavan, 2006). The intra-network coopetition occurs in a network and the intra-network is between networks. It is important to mention that these levels of analysis and the coopetition in diverse forms are complex and there are differences based on definitions, theories, dynamics, characteristics, and analysis—thus, the comprehension of the coopetition is difficult (Dorn, Schweiger, & Albers, 2016).

2.3.1 Inter-Individual Coopetition

The inter-individual coopetition is mainly studied in the context of intra-organizational coopetition—in which individuals or teams from the same organization simultaneously cooperate and compete with each other. On a more abstract level, people working in one organization naturally cooperate and at the same time compete for career advancement. Therefore, individual relationships are not either purely competitive or cooperative instead they are hybrid. Interestingly, coopetition is naturally existing in human relationships and it can be observed. In the case of agricultural farmers (being individuals) already engaged in coopetition, however, the cooperation can further materialize to achieve the common objective.

The research on inter-individual coopetition has been primarily focusing on digital companies and virtual platforms using laboratory experiments. The findings of these studies indicated increase creativity in all situations. Moreover, the coopetition in individuals suggests mixed results that are based on the different attitudes of the participating individuals—for instance, some individuals find a way to simultaneously compete and cooperate with each, however, some opt for one element either competition or cooperation.

Besides the findings of inter-individual coopetition in one organization in which employees do not have enough freedom to make their own decisions might produce different results. The inter-individual coopetition in the context of independent farmers—who have full authority to make his/her decisions and open negotiations. Therefore, the risks associated with inter-individual coopetition are less in independent individuals compared to those employed. For instance, coopetition in an intra-organizational setting creates suspicion, an unhealthy environment, and tensions. Furthermore, the conflict of interests can harm the performance of the organization. The collective intelligence can be better organized using inter-individual coopetition (Rusko, 2011).

The individuals' personality characteristics and the inter-individual linkages form the coopetition. Access to information further enhances the performance of that relationship (Borgatti, 2005). For instance, individuals carrying businesses activities/farming in a certain geographical region know each other very well—not only this, they live in almost the same social norms and values. Therefore, psychically proximity and alike personalities increase the adaptation of coopetition. Mutual trust and the same problems can quickly materialize the relationship—it is interesting to note that the trust level is always higher in individual interactions compare to inter-organizational relationships.

2.3.2 Inter-Organizational Coopetition

Inter-organizational relationships are referred to as the shared efforts to attain the common goals—that end up with a competitive advantage (Bengtsson & Kock, 2000; Bergenholtz & Waldstrom, 2011). Most of the inter-organizational relationships are established for a certain period or a project (Copulsky & Wolf, 1990). The pieces of evidence from the literature indicate that the manifestation relationships are contingent to survive growthgrow (Osborn & Hagedoorn, 1997).

An Inter-organization relationship is defined as *“the set of social, economic, and technical ties between two autonomous business organizations”* (Anderson & Narus, 1991, p. 96). The definition broadly explains the linkage between two or more organizations to achieve innovation, governance, and resources to match the needs of the partnering organizations. Moreover, competitive relationships help reduce risks and shape perceptions (Eikebrokk & Olsen, 2005). Inter-organization in the context of relational exchange is defined as *“a business relationship is more than just the deal. It is a connection between otherwise independent organizations that can take many forms and contains the potential for additional collaboration. It is a mutual agreement to continue to get together; thus, its value includes the potential for a stream of opportunities”* (Kanter, 1994, p. 98). Interestingly, the relational exchange perspective emphasized the value of the interaction among partners.

2.3.3 Exchanges in Inter-Organization and Individual Relationships

The mutual understanding among the organizations makes up an exchange relationship based on cooperation and competition (Peng, Pike, Yang, & Roos, 2012). There are two major domains of exchange i.e., transactional and relational—exchange is defined as *“a voluntary*

activity between two organizations which has consequences, actual or anticipated, for the realization of their respective goals and objectives” (Levine & White, 1961, p. 588). The voluntary engagement in the relationship facilitates the participation and the interaction between organizations whether it is for transactional or relational exchange.

On the other hand, the transactional exchange emphasizes internal organizational issues such as costs (Barringer & Harrison, 2000). The phenomena of exchange are vital in coopetitive relationships because two or more organizations continuously interact with each other and establish a strong bond (Johanson & Mattson, 1987). It is evident that the process starts with a single interaction and become a web over the years to form a trustworthy relationship.

This study intended to explore the potential coopetitive relationships among the individual farmers in Baghdad and surrounding suburbs in Iraq. This context is based on the individual level analysis but it would be in the form of a network. The potential cooperation among the farmers in specific geography refers to a network of dozens of individual farmers. The individual farmers cooperate on the bargaining power while they compete on the market share and productivity. The context and the network approach are also justified because it requires a high level of social integration (Poullymenakou & Klein, 2006). The trust, commitment, and identification of mutual benefits facilitate the partners to manage the capabilities. These characteristics are relatively natural in individual relationships to compare to the organizations; therefore, it is easy to share the values to achieve the common goals.

The external environment sets the boundaries of membership for organizations and individuals that also establish the conditions for coopetitive relationships. The interaction of individuals or organizations in the context of coopetition is a complex process, however, it is the prerequisite for the interactions at the individual and network level. Scholars consider these interactions more than the market exchange since generally the relationships are considered from the perspective of pure economics (Hakansson, Ford, Gadde, Snehota, & Waluszewski, 2009).

The coopetitive interactions and the relationship-building has associated costs, similarly, it also provides benefits in terms of resource sharing, access to information, and human resources. It is interesting to note that in the individual context (individual farmers), there are the least costs associated with interactions due to their proximity, easiness to approach each other, and limited or no administrative issues. Therefore, the initial level of interactions among

farmers to gaining bargaining power may potentially be formalized at the later stages. For instance, the formation of cooperative is an emerging phenomenon that is also context-specific—a mutual trust among the partners in the same sector leads to an organization.

The *explicit* interactions are the most suitable for the individuals since all the partners are aware of the interactions and the subsequent consequences—such as these interactions are likely to be kind and responsive. However, the *implicit* interactions remain unaware or deliberately ignore the context that negatively impacts their businesses. Therefore, the interaction objectives define the behavior of the organization—that is to prepare the agenda for the benefits before going into the discussion with the other organization. Moreover, it is necessary to understand the goals and the time to exploit the maximum from the coopetitive relationship. Therefore, the context (available resources and activities) is vital for inter-individual coopetition.

2.4 DRIVERS OF THE COOPETITION

The drivers of the coopetition are necessary to understand the motivation and formation of coopetitive relationships. These can be categories as (i) internal, (ii) external, and (iii) relational.

2.4.1 Internal Drivers

The internal drivers come from the inside of the organizations or internal environment that may refer to be open and conducive to consider the coopetitive relationships. Moreover, the ambitions of top management to gain access to critical resources and capabilities. The pressures from the external environment push companies to search for strategic choices, opportunities, and the right partnerships (Gnyawali & Park, 2009). Moreover, the goodwill of the company coupled with the attractiveness, mindset, and experience triggers the formation of coopetitive relationships (Ahuja, 2000).

2.4.2 External Drivers

The external drivers that normally related to the external environment such as characteristics of the industry, technological evolution and demand, and power of the stakeholders. The characteristics of industry refer to the context of coopetition in concentrated industries such as a large number of companies, scarcity of resources, and unification by-laws (Dowling, Roering, Carlin, & Wisniewski, 1996). Moreover, the growth patterns of the industry,

Uncertain circumstances of the industry, and structure push companies to simultaneously cooperate and compete (Chen, 2008).

The rapid technological evolution poses challenges to the companies in terms of complexity, expensiveness, and risk of continuous changes. Literature provides diverse examples of coopetition among companies in contexts such as sharing high costs, risk sharing, short product lifecycles, and other uncertainties of the skills and capabilities (Gnyawali & Park, 2009; Bouncken & Kraus, 2013).

One of the very interesting external factors is government intervention or a powerful customer that might force companies to cooperate. For instance, state-led coopetition in the agriculture sector of Taiwan to promote place-based marketing and potential collective competitive advantage Chien (2016). Therefore, governments can impose the coopetition using policy changes/introduction, reforms, incentives of different types, and subsidies. Interestingly, a powerful buyer can force companies to form a cooperative alliance to serve their needs. For example, one of the largest companies of car making, Volvo, mobilize two-seat making companies to create an inter-dependence for joint production (Dubois & Fredriksson, 2008).

2.4.3 Relational Drivers

The relational drivers are related to the specific characteristics of the partner and the relationship within the network. The role of partners' characteristics is important because it can lead a company to form a cooperative relationship with the strongest competitor. Luo, Shenkar, and Gurnani (2008) suggested that companies with distinct capabilities and complementary resources are more prone to coopetition. Moreover, the coopetition strategy also offers an opportunity for companies to gain collective power to affect the external stakeholders (Luo, 2005).

The structural aspects of the network of companies and their interdependencies lay the basis on which they compete and cooperate (Bengtsson & Kock, 2000). The characteristics of the industry structure highlight such as the density, connection, and relative position of the partner (Ritala & Huizingh, 2014). Autonomy is one of the significant aspects that influence the coopetition relationships—and it produces more interactions. For instance, some evidence indicates competitors' position, inter-connectedness, and closeness to the customers pushed the coopetition in firms from the dairy and brewery industry (Bengtsson & Kock, 2000).

2.5 COOPETITIVE NETWORKS

Informal businesses relationships lead to the formation of networks. It helps them to develop inter-dependent relationships to form governance structures, style of management, and potential objectives in the network (Peng & Bourne, 2009). As it has been discussed all the coopetitive relationships are based on cooperation and competition—therefore, the network relationships are also following the same to achieve the common interests. The concept of coopetition is context-dependent, thus, there can be several forms and shapes of the networks. The nature and operations of the network are possible to understand using nodes and the respective connections—two ways determine the relationships in a network (i) direct communication between the partners (ii) an indirect way that indicates an organization in a leadership role.

The direct communication between the partner organizations is reciprocal in the terms of the mutual agreement. In the dyadic relationship (two organizations), direct communication and reciprocity may lead to an asymmetric relationship in which one organization significantly depend on the other, In the network relationship, the mutual ties in the network highlight the relationships, however, how strong the ties are is vital for an organization to establish the identity. Therefore, the strength of the mutual ties between organizations determines the stability, regularity in communication, and intense emotionally—which in turn ensure the continuity of the coopetitive relationship (Gulati, Nohria, & Zaheer, 2000). On the contrary, the weaker ties i.e., irregular exchanges, momentary interactions, and casual connections will lead to weak ties.

2.6 BARGAINING POWER

The term bargaining power is broad and denotes different things to different people. It can be a monopoly power, control on supply, negotiation skills and ability, and power to hold a product/service until the terms are met. The action and reaction of the third party or the external player in the context of bargaining condition the behaviour of a bargained. For instance, in this study, the conflict of interest of farmers and the contractors/buyers defines the bargaining relationships. Moreover, there will be an attempt to resolve that conflict and every party will try to gain favourable results. Therefore, the individual farmer may not be in a conflict of interest with the contractor because of the low power and it goes on for all the individual farmers. Thus, collective bargaining power using cooperative relationships can provide significant power to farmers.

The context determines whether there is a conflict among the parties and a subsequent need to resolve it. However, sometimes the conflict of interest exists but no one attempt to resolve it—for instance, the individual farmers suffer from the contractors and wholesalers in terms of the price for their production but an individual farmer will never attempt to resolve the conflict or try to have bargaining power. Therefore, the cooperation among the farmers can provide the bargaining power to resolve the conflict. This can provide an opportunity for farmers to make direct communication and negotiations with other parties.

Bargaining, therefore, emerge from the existence of a conflict of interests and subsequent efforts to resolve it in favour. The conflict of interest is the starting point that initiates the process of bargaining to win self-interest. It is important to note that the resolution process of conflict of interests is vital for each party and everyone tries to convince others to resolve in their favour. The bargaining process outcomes (whether there is an agreement or not) depends on how participating parties change their preferred positions. Hence, the integrative relationship among the parties provides an understanding of the utilities and images of each other. The bargaining power, therefore, is the degree of influence one party has on another to convince them to get the concessions or push the agreement in their favour. The party, who has, large bargaining power will be able to get more favourable compared to the opponent.

Power relations are prominent in the academic and literature of agriculture and supply chain management (Hingley, Lindgree, & Grant, 2015). The literature on power distribution has been growing in the in-food supply chain starting from the farmer to the consumer. However,

the literature must be approached with caution—first, it only gives fragmented details of the power relations and bargaining power. Most of the studies only focus on the two stages i.e., the relationship between farmer and processor and the relationship among farmer and retailer. Secondly, the literature on the supply chain in the food industry overlooked the power relations and bargaining dynamics because it lacks to measure the negotiation position of the farmers and their relationship to the market (). The quantitative studies mainly focused on the size of the farms, market-farm distance, and contractors (Deplas et al., 2013).

There is sufficient literature available on the power relations in the dairy industry in the context of integration and price transmission (Dries et al., 2009; Bakucs, Falkowski, & Ferto, 2014). The execution of the power in the supply chain refers to that a party can convincingly threaten to another and convince to switch to the alternative. Further, if a party can have the power to just take or leave the offer is an extreme situation. Accordingly, the bargaining power of farmers increases if they can substitute the contractor or find a new market. In that case, the threats of contractors/market actors to find farmers' production or alternative farmers will be less effective. Therefore, the cooperation among farmers can provide them with stronger bargaining power that subsequently increases profitability. It is reasonable to say that the position of the farmers in the supply chain not only depends on the production but also on how farmers perceive their strengths (cooperation among farmers) against the contractors and the market.

2.7 ANALYTICAL CAPABILITY

The concept of analytical capability refers to “*the firm’s capacity to obtain a clear and accurate understanding of the co-opetition situation*” (Gnyawali, Madhavan, & Bengtsson, 2016, p. 13). Further, Raza-Ullah () proposed that a measurement scale that is based on the conceptualization of analytical capability as a mindset of the individual to handle the simultaneous cooperation and competition. The mediating variable, analytical capability, suggests that how the acceptance of contradictory aspects is important for the success (the alliance of farmers).

The analytical capability provides farmers with a unique perspective to scan the environment (internal and external) to identify the opportunities for coopetition. Moreover, it also helps to identify, choose, and make relationships with the appropriate partners at a right time. Further, the capability also provides an opportunity to establish long-term relationships and achieve mutual objectives (Das & Teng, 2000). Farmers can credibly recognize the partners and the particular areas for cooperation and competition using analytical capability.

Analytical capability also impacts the thinking process of the individuals (farmers) and how they think, perceive, and praise the coopetition which in turn would determine the bargaining power. For instance, if the farmers perceive that the coopetitive relationship is overly cooperative then it will positively impact the bargaining power.

2.8 THEORETICAL FRAMEWORK

The theoretical framework is based on integrated literature from coopetition, bargaining power, and agriculture. The exogenous construct of coopetition indicates simultaneous cooperation and competition among the farmers and it impacts the endogenous construct of bargaining power. The mediating construct of analytical capability suggests that how the acceptance of contradictory aspects is important for success (coopetition and bargaining power).

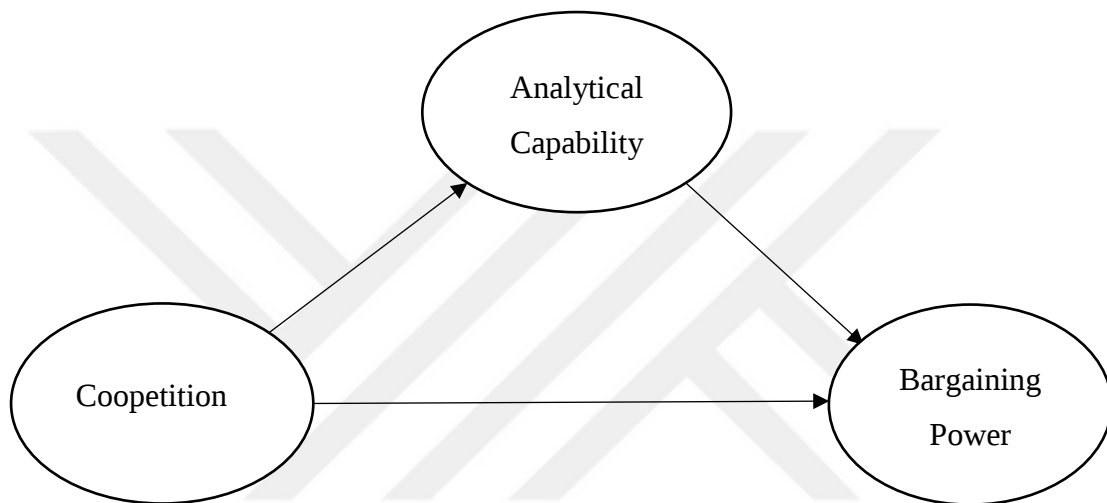


Figure 2.1: Theoretical Framework

2.8.1 Hypotheses

The hypotheses of the study are as follows:

H1: There is a positive and direct effect of coopetition on the bargaining power of the farmers.

H2: There is a positive and direct effect of coopetition on analytical capability.

H3: There is a positive and direct effect of analytical capability on bargaining power.

H4: Analytical capability mediates the relationship between coopetition and bargaining power such that farmers' coopetition with high levels of analytical capability will report a high level of bargaining power.

3 METHODOLOGY

3.1 RESEARCH DESIGN

The study will use a quantitative research method. It will statistically test the relationships between the variables proposed in the theoretical model using SPSS. Quantitative research tries to identify trends and measure the relationships using mathematical models (Creswell, 2009). Moreover, it is a useful way to find the relationship between the variables and test the hypotheses.

The most dominant method to collect the data for a quantitative research method is a survey (questionnaire) that helps to collect data from a broad population. It is also easy to administer the questionnaire compared to other methods such as an interview. The questionnaire will be administering face-to-face to farmers from Baghdad (and suburbs), Iraq. The questionnaire will be based on closed-ended questionnaires on a 7-Likert scale.

3.2 RESEARCH METHOD—SURVEY

The cross-sectional survey will be used to collect the data which means that data will be collected at one point in time (Babbie, 1990).

3.3 SAMPLING

It is critical to choose a sample for any study because it is not possible to measure the whole population. The study chooses convenience sampling to reach the easy to contact and reach farmers in Baghdad (and suburbs), Iraq.

3.4 MEASUREMENT TOOLS

The measurement instrument is vital for any research study because it is important to collect valid and reliable data. A reliable and valid tool has to be consistent and it has to measure what is expected to be measured.

3.4.1 Coopetition questionnaire

The study will adopt coopetition questionnaire from Czakon, Klimas, and Mariani (2019). The scale is developed to measure the behavioural antecedents of coopetition and it is suitable for this study. The questionnaire contains 7 items are as follows:

Table 3.1: Coopetition questionnaire items

To start a collaboration with a competitor, it is enough that I see benefits (e.g., resource access, cost reduction opportunities, competitor control, gaining an advantage over rivals, effective strategy implementation)
To start the collaboration with a competitor it is enough that partners are strategically fit (including convergent vision, common goals, and development strategy)
The fact that my competitor is well recognized in the local community encourages me to collaborate with her/him
Me being a member of a local partnering network/organization encourages me to collaborate with a competitor who is also a member
My trust in a competitor encourages me to collaborate with him/her
The general collaboration willingness in my community encourages me to collaborate with my competitor
My prior experience of collaboration with competitors encourages me to collaborate with other competitors

3.4.2 Analytical capability questionnaire

The questionnaire to measure the analytical capability will be adopted from Gulshan (2020), the same was earlier used as coopetition capability by Bengtsson, Raza-Ullah, & Vanyushyn (2016). Gulshan (2020) used the same scale in the doctoral dissertation that was focused on small-scale non-profit organizations. The scale is adopted on personal request since the doctoral thesis is still not published. The questionnaire includes 5 items which are as follows:

Table 3.2: Analytical capability questionnaire items

I understand why it is beneficial to both cooperate and compete
I identify the suitable areas of cooperation and competition
I quickly determine which factors can cause relationship instability
I acknowledge the constructive nature of contradictory forces
I identify and select the right firm to engage in such relationships

3.4.3 Bargaining power questionnaire

There is a rare questionnaire available to measure the bargaining power, particularly, in the context of farmers. Falkowski, Malak-Rawlikowska, and Milczarek-Andrzejewska (2017) developed a self-reported scale to measure the bargaining power of farmers. The scale is adopted and altered for agriculture farmers that contain two items:

Table 3.3: Bargaining power questionnaire items

How easy would it be for you to find a substitute for your production deliveries
How easy would it be for your contractor to find a substitute for your production purchases

4 DATA ANALYSIS AND FINDINGS

This chapter reports the data analysis, hypotheses testing, and the findings of this study. The data analysis has been conducted using IBM SPSS Statistics Trial Version. The model was tested using the regression analysis to test the hypothesized relationships. Moreover, a brief description of the sample is also provided in descriptive statistics. This chapter is arranged as it starts with the descriptive statistics of demographics, regression analysis for direct, mediating, and indirect relationships, and hypotheses testing. Moreover, the chapter also discusses the findings of this study concerning the literature.

4.1 DEMOGRAPHIC

The demographic section of the questionnaire has contained the gender, age, and experience of the respondents. Table 4.1 illustrate the summary of cases that several cases are 208—it is interesting to note that the average of the farmers (respondents) is 37.6 and the experience of farming is 9 years. Therefore, the respondents are young with handsome experience. This may also indicate that farming is a profession that comes from family and most of the farmers start working on fields early in their lives.

Table 4.1: Summary of cases

	N	Minimum	Maximum	Mean
Gender	208	1.00	2.00	1.1154
Age	208	25.00	55.00	37.6923
Experience	208	1.00	25.00	9.0144
Valid N (listwise)	208			

The detailed frequency tables indicate the distribution of the respondents based on gender, age, and experience. Table 4.2 illustrate the gender indicating that 88% of the total sample was male and there is a small representation of the female respondents. The reason behind such comparatively low female respondents is the low association of females with farms and avoidance to participate in the survey. However, this study managed to ensure the participation of female respondents from a conservative neighbourhood of Baghdad, Iraq.

Table 4.2: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	184	88.5	88.5	88.5
	Female	24	11.5	11.5	100.0
	Total	208	100.0	100.0	

The demographic factor of age was open to the respondents and there were no categories to choose from. Thus, the age table (see appendix) has dozens of entries. However, the age variable indicated that 53% of the respondents belong to 30-40 years of age. It is also indicated that the sample respondents are young.

Furthermore, the variable of experiences was also not categorized because it was interesting to see the distribution of experience by not limiting the respondents. Therefore, the table has dozens of entries and is attached in the appendix for details. However, the findings are interesting as 11.5% of the respondents reported on years of experience while 9.1% indicate 9 years of experience. These were the highest figures in the n sample; however, the average experience was 9 years. The demographics of the study are diverse in terms of gender, age, and experience. The representation of various relevant respondents makes the findings of this study interesting.

4.2 EXPLORATORY FACTOR ANALYSIS

Before going for the hypotheses testing, exploratory factor analysis was conducted to check the factor loadings and significance. It is pertinent to note that a certain level of factor loading is mandatory to proceed with the regression analysis. The study has used the principal extraction model for 14 items. Table 4.3 illustrate the Kaiser-Meyer-Olkin Measure of Sampling (KMO) and Bartlett's Test. KMO measures the adequacy of the sampling and the threshold value of 0.6—more the values are measure as 0 to 1 and it is better if the value is closer to 1. The KMO value indicated in Table 4.3 is 0.843 with is excellent.

Bartlett's Test of Sphericity tests "*the null hypothesis that the correlation matrix is an identity matrix*". The value Chi-square value and significance of 0.000 indicate that the hypotheses are significant.

Table 4.3: KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.843
Bartlett's Test of Sphericity	Approx. Chi-Square	841.029
	df	91
	Sig.	0.000

The factor loadings indicates how much-retained factor explains the variable's variance. It is to note that the rule of thumb for the threshold of factor loadings is at least $|0.4|$ (meaning $\geq +.4$ or $\leq -.4$). Therefore, all the factors in this study illustrated in Appendix are represented in the common factor space since there is a particularly low value. Therefore, these results indicate that the study can proceed with regression analysis.

4.3 RELIABILITY ANALYSIS

Reliability analysis is a mandatory statistic before moving to hypotheses testing. The reliability test (Cronbach's Alpha) is the most popular tool to check the consistency of the measurement scale. Particularly, the test is suitable for scales on the Likert scale. The reliability analysis for this study was conducted for the full scale and then for each variable. Table 4.4 illustrate the reliability results for the full scale containing three variables. There were 14 items on the scale and the results show that Cronbach's alpha is 0.818. The value of Cronbach's Alpha indicated a high level of scale consistency.

Table 4.4: Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.818	0.819	14

4.3.1 Coopetition Scale Reliability

Coopetition is an independent variable in this study and it has seven items on the scale. Separate reliability analysis was conducted to test the consistency of the Coopetition scale. Table 4.5 indicates the value of Cronbach's Alpha is 0.811 which suggests a high level of consistency and therefore the scale is reliable.

Table 4.5: Coopetition reliability

Cronbach's Alpha	N of Items
0.811	7

4.3.2 Analytical Capability Reliability

Analytical capability is conceptualized as the mediating variable that mediates the relationship between coopetition and bargaining power. The scale was adopted and there are five items, Table 4.6 shows the Cronbach's Alpha value of 0.811 which is far above the threshold. It indicates that the scale of analytical capability is consistent and reliable.

Table 4.6: Analytical capability reliability

Cronbach's Alpha	N of Items
0.811	5

4.3.3 Bargaining Power Reliability

The variable of bargaining power is the dependent variable that only has two items on the scale. This scale was adopted and probably it was the only available scale to measure the bargaining power of farmers. Table 4.7 provided the reliability details of bargaining power and the value of Cronbach's Alpha is 0.730 which indicates the consistency of the scale; therefore, it is reliable.

Table 4.7: Bargaining power reliability

Cronbach's Alpha	N of Items
0.730	2

4.4 HYPOTHESES TESTING

The proposed theoretical model was a mediation model that consists of three variables. Similarly, there are two hypotheses derived from the model. It is to note that this study has used SPSS for data analysis and hypotheses testing, therefore, the mediation model follows a step-by-step approach. SPSS does not test the full model as SEM; however, the study has tested every single relationship of variables and then calculated the mediation. Figure 4.1 illustrates the theoretical model with coding the relationships.

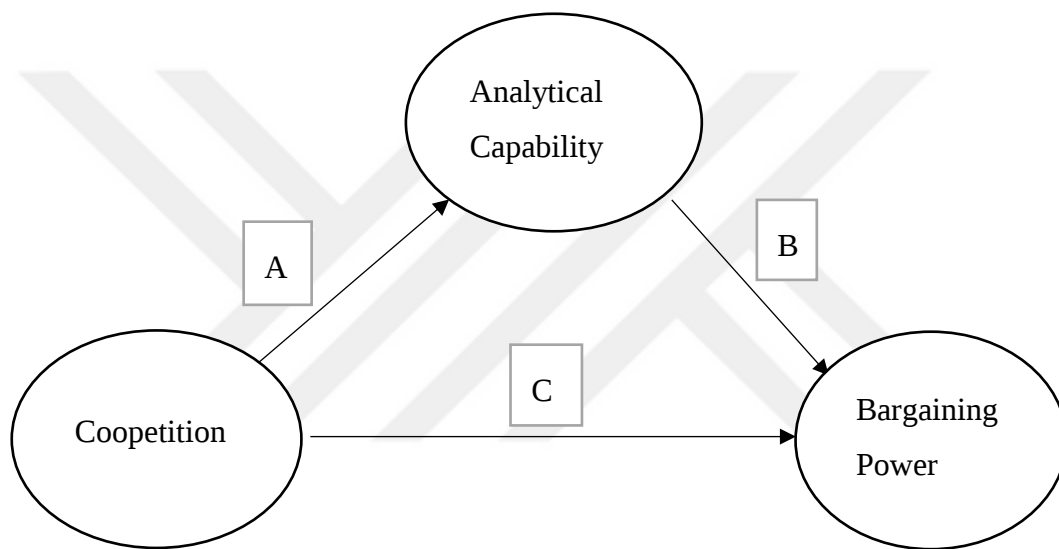


Figure 4.1: Theoretical Framework

4.4.1 Hypotheses

H1: *There is a positive and direct effect of coopetition on the bargaining power of the farmers.*

H2: *There is a positive and direct effect of coopetition on analytical capability.*

H3: *There is a positive and direct effect of analytical capability on bargaining power.*

H4: *Analytical capability mediates the relationship between competition and bargaining power such that farmers' coopetition with high levels of analytical capability will report a high level of bargaining power.*

4.4.2 Process of Conducting the Mediated Model

Step 1: Total effect between coopetition and bargaining power (bivariate regression).

Step 2: Estimated direct effect between coopetition and analytical capability (bivariate regression).

Step 3a: Estimated the direct effect between coopetition and bargaining power (multiple regression with coopetition and analytical capability as predictor and bargaining power as dependent variable).

Step 3b: Estimated the direct effect between analytical capability and bargaining power.

Step 4: Estimated and tested indirect effect for statistical significance.

4.4.3 Total Effect between Coopetition and Bargaining Power

The theoretical model testing started with the major relationship that is coopetition and bargaining power. The bivariate regression was conducted to statistically test the relationship. Table 4.8 provides the model summary for hypothesis 1 illustrating R, R-square, and adjusted R-square. The value of R indicates how much change in bargaining power is being explained by coopetition. It is to note that the value of R-square is extremely low, however, R-square is not the absolute measure for the variance.

Table 4.8: Model summary for H1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.315 ^a	.099	.095	2.62037

a. Predictors: (Constant), Coopetition

The next output is ANOVA in Table 4.9 that statistically tests the effect of coopetition on bargaining power. The F value = 22.716 with sig. 0.000 that indicates that the regression model significantly predicts that bargaining power.

Table 4.9: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	155.975	1	155.975	22.716	.000b
	Residual	1414.468	206	6.866		
	Total	1570.442	207			
a. Dependent Variable: Bargaining Power						
b. Predictors: (Constant), Coopetition						

Table 4.10 Coefficients is the most important in terms of statistical output. Beta or coefficient is the value that indicates the change in the bargaining power forever of change in the coopetition. The beta value is 0.315 which indicated the strength in the relationship. Similarly, T-value = 4.766 and Sig. 0.000 indicating a statically significant relationship between coopetition and bargaining power as T-value = 4.766 is higher than 1.96 (5% confidence interval).

Table 4.10: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.253	.738		7.115	0.000
	Coopetition	.126	.026	0.315	4.766	0.000
a. Dependent Variable: Bargaining Power						

The regression results for coopetition and bargaining power indicate that there is a statistically significant relationship and coopetition predicts the bargaining power of the farmers. Thus, the H1 is accepted.

4.4.4 Direct Effect between Coopetition and Analytical Capability

The next relationship is between coopetition and analytical capability. It is to note that the analytical capability is the mediating variable, however, to calculate the mediating effect, it is necessary to estimate the direct relationships. Therefore, the direct relationship between coopetition and analytical capability is the second hypothesis (H2) of the study. The application of the statistical analysis is the same as it was for the first hypothesis. The bivariate regression was used to test the relationship between coopetition and analytical capability. The output of the regression analysis is provided in three different tables.

Table 4.11 present the model summary for coopetition and analytical capability. R-square is the most important measure in this table as it indicates how much coopetition is explaining the analytical capability. The value of R-square is extremely low; however, it is because there is one predictor. Moreover, R-square is the only indicator of the relationship testing. Thus, the ANOVA and Coefficients are the major determinants of hypothesis testing.

Table 4.11: Model summary

Model	R	R Square	Adjusted R Square	Std. An error of the Estimate
1	.241a	.058	0.054	4.77410
a. Predictors: (Constant), Coopetition				

The next output is ANOVA in Table 4.12 that statistically tests the effect of coopetition on Analytical capability. The F value = 12.728 with sig. 0.000 that indicates that coopetition significantly predicts that analytical capability.

Table 4.12: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	290.097	1	290.097	12.728	0.000 ^b
	Residual	4695.168	206	22.792		
	Total	4985.264	207			
a. Dependent Variable: Analytical Capability						
b. Predictors: (Constant), Coopetition						

Table 4.13 Coefficients is the most important in terms of statistical output. Beta is the value that indicates the change in the analytical capability for an every-1 unit of change in the coopetition. The beta value is 0.241 which indicates a mediating strength in the relationship. Similarly, T-value = 3.568 and Sig. 0.000 indicating a statically significant relationship between coopetition and bargaining power as T-value = 43.568 is higher than 1.96 (5% confidence interval).

Table 4.13: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.132	1.345		13.480	0.000
	Coopetition	0.172	0.048	0.241	3.568	0.000
a. Dependent Variable: Analytical Capability						

4.4.5 Direct Effect of Coopetition and Analytical Capability on Bargaining Power

The direct effect of coopetition and analytical capability on bargaining power is executed using multiple regression. This model used two independent variables that are coopetition and analytical capability and the dependent variable was bargaining power. This model provides the details of how coopetition and analytical capability affect the bargaining power. This will provide output for the mediation analysis and the direct effect of analytical capability on bargaining power. Therefore, this multiple regression output will help to statistically test the H3: there is a positive and direct effect of analytical capability on the bargaining power, and H4: analytical capability mediates the relationship between competition and bargaining power such that farmers' coopetition with high levels of analytical capability will report a high level of bargaining power.

Table 4.14 provides the model summary that contains the R values that indicate how much bargaining power is being explained by independent variables (coopetition and analytical capability). It is interesting to note that the R-square value is 0.151 which has improved a lot comparing to the earlier regression output. The reason behind this is that this model is using two independent variables to predict the bargaining power, therefore, it is the total effect of coopetition and analytical capability.

Table 4.14: Model summary

Model	R	R Square	Adjusted R Square	StAn error of the Estimate
1	0.389 ^a	0.151	0.143	2.54982
a. Predictors: (Constant), Analytical Capability, Coopetition				

Table 4.15 illustrate the ANOVA statistics as the F-value = 18.274, Sig. =0.000 indicates a significant relationship among the variables. The higher F-value also indicate that R-square is not equal to zero and there is a correlation between coopetition, analytical capability, and bargaining power. Thus, the model is statistically significant.

Table 4.15: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	237.619	2	118.810	18.274	0.000 ^b
	Residual	1332.823	205	6.502		
	Total	1570.442	207			
a. Dependent Variable: Bargaining Power						
b. Predictors: (Constant), Analytical Capability, Cooperation						

The coefficients Table 4.16 is the most important in regression analysis since it contains the beta coefficients and t-statistics. These measures are the final verdict on whether the model is statistically significant or not. Beta coefficient for cooperation is 0.258 indicating the direct effect of cooperation cause on bargaining power—a change of 1 standard deviation change in cooperation will cause more than 0.258 change in the bargaining power. Moreover, the relationship is statistically significant as the t-value = 3.899 and Sig. 0.000 indicating that relationship is significant at confidence interval of 5% (t-value = 1.96).

The direct effect of analytical capability (mediator) is also statistically significant as the beta coefficient is 0.235 which is more than average. Similarly, the statistical measure of significance at a 5% confidence interval (t-value = 1.96) is significant as the t-value for analytical capability is 3.544 and Sig. is 0.000. Therefore, analytical capability significantly affects the bargaining power of farmers. Overall, the model is statistically significant.

Table 4.16: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.862	0.986		2.904	0.004
	Coopetition	0.103	0.026	0.258	3.899	0.000
	Analytical Capability	0.132	0.037	0.235	3.544	0.000
a. Dependent Variable: Bargaining Power						

4.4.6 Mediating Relationship

The fourth step has estimated and tested the indirect effect of coopetition on bargaining power using analytical capability as a moderator for statistical significance.

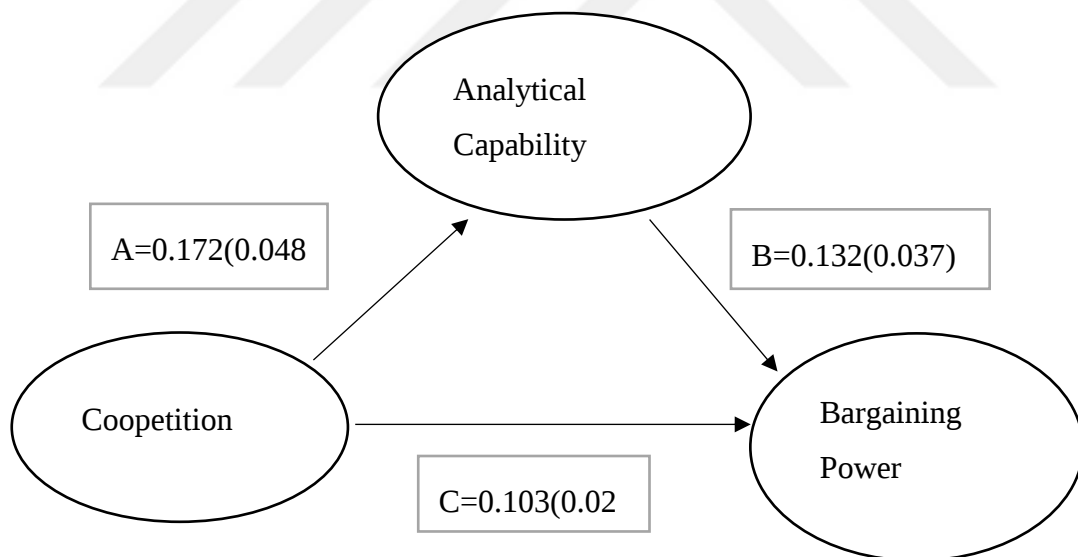


Figure 4.2: Mediating Relationship

Figure 4.2 illustrates the theoretical model with variables. The relationships between are measured using the unstructured coefficients and beta (standard error) to calculate the indirect effect or the mediating effect. It is to note that the Sobel test has been used to confirm the significance of the mediating effect between coopetition and bargaining power.

$$\begin{aligned}\text{Indirect effect} &= A * B \\ &= 0.172 * 0.132 \\ &= 0.0227\end{aligned}$$

CALCULATION FOR THE SOBEL TEST
quantpsy.org

An interactive calculation tool for mediation tests

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To conduct the Sobel test

Details can be found in Baron and Kenny (1986), Sobel (1982), Goodman (1960), and MacKinnon, Warsi, and Dwyer (1995). Insert the a , b , s_a , and s_b into the cells below and this program will calculate the critical ratio as a test of whether the indirect effect of the IV on the DV via the mediator is significantly different from zero.

Input:	Test statistic:	Std. Error:	p-value:
a 0.172	Sobel test: 2.52820683	0.00898028	0.01146468
b 0.132	Aroian test: 2.48017022	0.00915421	0.01313197
s_a 0.048	Goodman test: 2.57914726	0.00880291	0.00990446
s_b 0.037	Reset all Calculate		

Alternatively, you can insert t_a and t_b into the cells below, where t_a and t_b are the t-test statistics for the difference between the a and b coefficients and zero. Results should be identical to the first test, except for error due to rounding.

Figure 4.3: Sobel Test Results

The calculation for the Sobel test was done using the website <http://quantpsy.org/sobel/sobel.htm> Calculation for the Sobel test: An interactive calculation tool for mediation tests by Kristopher J. Preacher (*Vanderbilt University*) and Geoffrey J. Leonardelli (*University of Toronto*).

The screenshot in Figure 4.3 illustrates the calculations of the Sobel Test that confirm the statistical significance of the mediating (indirect) effect of coopetition on bargaining power. The p-value of 0.011 is less than the confidence interval of 5%, therefore, analytical capability mediates the relationship between coopetition and analytical capability.

4.4.7 Hypotheses Testing

The theoretical model and subsequent operationalization of the variables established four hypotheses. The study has tested a mediating model with three direct relationships and one indirect (mediating) relationship. The four hypotheses were tested using the regression analysis and the summary of the results is provided in Table 4.17. This study has emphasized coopetition and its effect on the bargaining power of the farmers—coopetition is a strategy that pushes competitors to cooperate and compete at the same time. The concept has been extensively applied to corporations and small and medium companies. However, there has been a limited application of coopetition on individuals. Therefore, this study suggested that individual farmers in Baghdad and suburbs face difficulties in getting the right price from the wholesales. The results indicated the coopetition strategy can help the farmers to increase their bargaining power to face the market forces in terms of price. The cooperation among the farmers to decide the price of their yield significantly increase their bargaining power.

H1: *There is a positive and direct effect of coopetition on the bargaining power of the farmers.*

Table 4.10 indicates the value of beta or coefficient that is the value that indicates the change in the bargaining power for an every-1 unit of change in the coopetition. The beta value is 0.315 which indicates a mediating strength in the relationship. Similarly, T-value = 4.766 and Sig. 0.000 indicating a statically significant relationship between coopetition and bargaining power as T-value = 4.766 is higher than 1.96 (5% confidence interval). The next output is ANOVA in Table 4.9 that statistically tests the effect of coopetition on bargaining power. The F value = 22.71 with sig. 0.000 that indicates that the regression model significantly predicts that bargaining power.

The regression results for coopetition and bargaining power indicate that there is a statistically significant relationship and coopetition predicts the bargaining power of the farmers. Thus, the H1 is accepted.

Table 4.17: Summary of the results

	Beta Coefficients	t-values	p-values	Significance (p<0.05)
Coopetition > Bargaining Power	0.315	4.766	0.000	Yes
Coopetition > Analytical Capability	0.241	3.568	0.000	Yes
Analytical Capability > Bargaining Power	0.235	3.544	0.000	Yes
Coopetition > Analytical Capability > Bargaining Power	a*b=0.0227	2.528	0.011	Yes

H2: *There is a positive and direct effect of coopetition on analytical capability.*

Referring to Table 4.17 the beta coefficient value Coopetition > Analytical Capability beta value is 0.241 which indicates a mediating strength in the relationship. Similarly, T-value = 3.568 and Sig. 0.000 indicating a statically significant relationship between coopetition and bargaining power as T-value = 4.766 is higher than 1.96 (5% confidence interval). The ANOVA in Table 4.9 statistically tests the effect of coopetition on bargaining power. The F value = 22.716 with sig. 0.000 that indicates that coopetition significantly predicts that bargaining power. Therefore, the second hypothesis that indicated that there is a positive and direct effect of coopetition on the analytical capability is accepted.

H3: *There is a positive and direct effect of analytical capability on bargaining power.*

H4: *Analytical capability mediates the relationship between coopetition and bargaining power such that farmers' coopetition with high levels of analytical capability will report a high level of bargaining power.*

The direct effect of coopetition and analytical capability on bargaining power is executed using multiple regression. This model used two independent variables that are coopetition and analytical capability and the dependent variable was bargaining power. This model provides the details of how coopetition and analytical capability affect the bargaining power. This also provided the output for the mediation analysis and the direct effect of analytical capability on bargaining power. Therefore, this multiple regression output will help to statistically test the H3: there is a positive and direct effect of analytical capability on the bargaining power, and

H4: analytical capability mediates the relationship between coopetition and bargaining power such that farmers' coopetition with high levels of analytical capability will report a high level of bargaining power.

Table 4.14 provides the model summary that contains the R values that indicate how much bargaining power is being explained by independent variables (coopetition and analytical capability). It is interesting to note that the R-square value is 0.151 which has improved a lot comparing to the earlier regression output. The reason behind this is that this model is using two independent variables to predict the bargaining power, therefore, it is the total effect of coopetition and analytical capability. Table 4.15 illustrate the ANOVA statistics as the F-value = 18.274, Sig. = 0.000 indicates a significant relationship among the variables. The higher F-value also indicate that R-square is not equal to zero and there is a correlation between coopetition, analytical capability, and bargaining power. Thus, the model is statistically significant.

Beta coefficient for coopetition is 0.258 indicating the direct effect of coopetition cause on bargaining power—a change of 1 standard deviation change in coopetition will cause more than 0.258 change in the bargaining power. Moreover, the relationship is statistically significant as the t-value = 3.899 and Sig. 0.000 indicating that relationship is significant at confidence interval of 5% (t-value = 1.96).

The direct effect of analytical capability (mediator) is also statistically significant as the beta coefficient is 0.235 which is more than average. Similarly, the statistical measure of significance at a 5% confidence interval (t-value = 1.96) is significant as the t-value for analytical capability is 3.544 and Sig. is 0.000. Therefore, analytical capability significantly affects the bargaining power of farmers. Overall, the model is statistically significant.

The mediating relationships between are measured using the unstructured coefficients and beta (standard error) to calculate the indirect effect or the mediating effect. It is to note that the Sobel test has been used to confirm the significance of the mediating effect between coopetition and bargaining power. The calculations of the Sobel Test confirm the statistical significance of the mediating (indirect) effect of coopetition on bargaining power. The p-value of 0.011 is less than the confidence interval of 5%, therefore, analytical capability mediates the relationship between coopetition and analytical capability. Therefore, the third fourth hypothesis is also accepted.

4.5 DISCUSSION

This study has built and extended the coopetition theory to develop a theoretical framework in which coopetition among farmers affects their bargaining power in the market. Moreover, the study has also used analytical capability as a mediating variable to see how coopetition coupled with analytical capability impacts the bargaining power. This study has conceptualized the concept of coopetition that is embedded into two notions i.e., cooperation and competition. The concept has been under extensive exploration for three decades with several extensions and evolution; however, the basic philosophy remained the same that is *“mindset, process, or phenomenon of combining cooperation and competition”* (Raza-Ullah & Bengtsson, 2016).

Coopetition strategy has been usually undertaking direct interactions with the competing organizations to achieve their common goal. However, coopetition is also seen from one angle only i.e., either cooperation or competition. This leads to the voluntary participation of the partners to enable success. Therefore, the contextual range of the phenomena is possible to symbolize that would be inclusive with interdependency. The simultaneous cooperation and competition, thus, work together even with distinct nature. The pure nature of the coopetition as per the theory suggests extreme interlinkage of the participating organizations to achieve the outcomes (Barreta, 2008).

Literature provides a large number of studies that emphasize the cooperative relationships that are dyad, triad, and network and they have been at the forefront of scientific studies. Literature provides abundant examples of inter-organizational relationships. There is an inherent drive to interact in the farmers/micro-businesses that is cooperation among them—and this context is extremely favourable to combine the resources to gain mutual benefits. Moreover, it is important to note that when more and more organizations become part of the alliance it can eventually create threats (Bengtsson, Raza-Ullah, & Kock, 2014).

This study further suggested the coopetition strategy is equally useful for the individuals, for instance, the individual farmers. The simultaneous cooperation and competition among these businesspersons can be a favorable strategy since these farmers produce and sell their yield individually are usually exploited by the market forces. Therefore, the competitive relationship where they cooperate in terms of gaining the price advantage, on the other hand, they can also

compete with each other to gain the maximum yield. The statistical analysis indicated that there is a statistically significant effect of competition on the bargaining power of the farmers. Literature suggested that competition is a zero-sum game that results in win/loss (Brandenburger & Nalebuff, 1996). More formally, competition is *“a dynamic situation that occurs when several actors in a specific area (market) struggle for scarce resources, and/or produce and market very similar products or services that satisfy the same customer need”* (Osarenkhoe, 2010, p. 251). The actual sense of the phenomena remains the same for all types of organizations whether large or small or individuals. The sole object of each competitor is to gain a competitive advantage by offering a unique product or service (Porter, 1991).

Similarly, cooperation highlights the importance of good relationships with competitors to achieve strategic goals (Baker, Simpson, & Siguaw, 1999). Cooperation among any of the parties is a win-win positive sum-game that advances mutual interests such as product demand and market share (Rusko, 2011). On similar lines, cooperation seeks to create collaboration advantage and emphasize the interdependent relationships between firms—these cooperative relationships are often based on mutual agreements (Yoshino & Rangan, 1996). Therefore, the collective benefits and goals lay the basis for the strategic collaborative relationships among different businesses.

In the context of individual framers, they form informal relationships based on mutual trust to pursue exchange relations for information sharing, business, and social exchange is significant in terms of the individual farmers or the micro business. Interestingly, these micro-entrepreneurs may not have enough resources to legalize and execute formal relationships. Therefore, the cooperative relationships assist them to exchange, regulate, and allocate power to each other. Further, the frequency of interaction among the partners builds trust that led to long favourable relationships

Interestingly, competition becomes sever when companies belong to the same sector, industry, or region (Porter, 1990). Besides the involvement of the resources for competition, it challenges the psychological strength of the organization and pushes it to achieve more. Competition not only creates value for companies but also benefits the customers. However, it is generally perceived as acts to pursue self-interests at the expense of others—thus, it leads to negativity (Birkinshaw & Lingblad, 2005). The competition and the perspective of the internal tension suggest that high competition high will be opportunistic behavior—which can

waste resources, problems in control mechanisms, and subsequently weaker relations (Das & Teng, 2000).

This study solely emphasizes the coopetition among individuals; therefore, it has been conceptualized in the context of intra-organizational coopetition such as when individuals or teams from the same organization simultaneously cooperate and compete with each other. On a more abstract level, people working in one organization naturally cooperate and at the same time compete for career advancement. Therefore, individual relationships are not either purely competitive or cooperative instead they are hybrid. Interestingly, coopetition is naturally existing in human relationships and it can be observed. In the case of agricultural farmers (being individuals) already engaged in coopetition, however, the cooperation can further materialize to achieve the common objective.

Digital companies are the most appropriate example of inter-individual coopetition because of their focus on virtual platforms using laboratory experiments. The findings of these studies indicated increase creativity in all situations. Moreover, the coopetition in individuals suggests mixed results that are based on the different attitudes of the participating individuals—for instance, some individuals find a way to simultaneously compete and cooperate with each, however, some opt for one element either competition or cooperation. It is pertinent to note that this study has brought interesting insight in which the inter-individual competition is balanced because coopetition has a significant effect on the bargaining power of the farmers. Therefore, the farmers are indeed convincing that simultaneous cooperation and competition help their common goals.

Besides the findings of inter-individual coopetition in farmers where the employees do not have enough freedom to make their own decisions might produce different results. The inter-individual coopetition in the context of independent farmers—who have full authority to make his/her decisions and open negotiations. Therefore, the risks associated with inter-individual coopetition are less in independent individuals compared to those employed. For instance, coopetition in an intra-organizational setting creates suspicion, an unhealthy environment, and tensions. Furthermore, the conflict of interests can harm the performance of the organization. The collective intelligence can be better organized using inter-individual coopetition (Rusko, 2011).

The characteristics of the farmers' personalities are also a considerable factor in the context of inter-individual linkage that forms the coopetitive relationship. Moreover, access to information further enhances the performance of that relationship (Borgatti, 2005). For example, individuals carrying farming activities in a certain geographical region know each other very well such as Baghdad, Iraq. Not only this, they live in almost the same social norms and values. Therefore, psychically proximity and alike personalities increase the adaptation of coopetition. Mutual trust and the same problems can quickly materialize the relationship—it is interesting to note that the trust level is always higher in individual interactions compare to inter-organizational relationships.

The findings of the study indicated that the coopetitive relationship among the farmers can take the form of a network since there are hundreds of farmers in the same geography. The level of analysis was at the individual level; however, it takes the form of a network of individual farmers who come to gather to safeguard their common goals. The potential cooperation among the farmers in specific geography refers to a network of dozens of individual farmers. The individual farmers cooperate on the bargaining power while they compete on the market share and productivity. The context and the network approach are also justified because it requires a high level of social integration (Poulymenakou & Klein, 2006). The trust, commitment, and identification of mutual benefits facilitate the partners to manage the capabilities. These characteristics are relatively natural in individual relationships to compare to the organizations; therefore, it is easy to share the values to achieve the common goals.

The findings based on literature and statistical analysis indicated that the external environment set the boundaries of membership individual farmers that also establish the conditions for coopetitive relationships. The interaction of farmers in the context of coopetition is a complex process, however, it is the prerequisite for the interactions at the individual and network level. Scholars consider these interactions more than the market exchange since generally the relationships are considered from the perspective of pure economics (Hakansson et al., 2009).

The coopetitive interactions and the relationship-building has associated costs, similarly, it also provides benefits in terms of resource sharing, access to information, and human resources. It is interesting to note that in the individual context (farmers), there are the least costs associated with interactions due to their proximity, easiness to approach each other, and

limited or no administrative issues. Therefore, the initial level of interactions among farmers to gaining bargaining power may potentially be formalized at the later stages. For instance, the formation of cooperative is an emerging phenomenon that is also context-specific—a mutual trust among the partners in the same sector leads to coopetition. The results of the study proved that the competition and the subsequent formalization of the coopetitive relationship indeed help to achieve the common goals for farmers.

The explicit interactions are the most suitable for the individuals since all the partners are aware of the interactions and the subsequent consequences—such as these interactions are likely to be kind and responsive. However, the implicit interactions remain unaware or deliberately ignore the context that negatively impacts their businesses. Therefore, the interaction objectives define the behaviour of the organization—that is to prepare the agenda for the benefits before going into the discussion with the other organization. Moreover, it is necessary to understand the goals and the time to exploit the maximum from the coopetitive relationship. Therefore, the context (available resources and activities) is vital for inter-individual coopetition.

4.6 THEORETICAL CONTRIBUTIONS

The development of the theoretical framework for coopetition and bargaining power of farmers: the mediating role of analytical capability, this study contributed in several ways. First, the study has extended the application of coopetition theory on the individual level analysis and bring insights into how individual farmers intend to cooperate to achieve the common goals i.e., bargaining power. The study provided a nuanced understanding of how coopetition can be a favourable strategy for individual farmers or micro-level produces who depend on the market forces such as wholesale buyers. The study indicated that farmers can form coopetitive relationships to increase their negotiation power on price.

Second, the study also contributes to highlighting the importance of the context that plays a significant role in inducing coopetition among individuals or organizations. It is pertinent to note that context, external, and internal environment are the most important drivers of coopetition. Similarly, the role of analytical capability is paramount since if individuals cannot able to analyse the context or the prevailing situation—then it might be possible for them to achieve the common goal. The results also indicated that analytical capability indeed mediates the relationship between coopetition and bargaining power of the farmers.

4.7 PRACTICAL CONTRIBUTIONS

This study is extremely significant in terms of practical contributions because it addresses the real problem of the individual farmers. The exploitation of individual farmers based on yield price is an old practice that prevails everywhere. Therefore, the insights from the farmers in Baghdad, Iraq about how coopetition can effect on their bargaining power are indeed important to induce a practical coopetitive network. The results of this study proved that coopetition among the individual farmers will provide them the opportunity to safeguard their rights.

Secondly, the study also provokes the thoughtfulness of non-governmental organizations (NGOs) and the government to help the farmers to form coopetitive relationships to face the market forces. State-led coopetition in the agriculture sector of Taiwan to promote place-based marketing and potential collective competitive advantage (Chien, 2016). Thus, farmers based on the results of this study indicated the need for coopetitive alliances.

5 CONCLUSIONS, LIMITATIONS, AND FUTURE DIRECTIONS

To conclude, this study has contributed to form and test a theoretical framework that expounds on the nature of coopetition in individuals and the achievement of their common goals. The study has suggested that coopetition strategy in individual farmers emerges from the external factors and the context that lead to coopetitive relationships among farmers. Moreover, the study also suggested the formation and formalization of the coopetitive relationships positively affect the bargaining power of the individuals. The study suggested that the internal drivers come from the inside of the individuals and internal environment that may refer to be open and conducive to consider the coopetitive relationships among individuals. Moreover, the ambitions of top management to gain access to critical resources and capabilities. The pressures from the external environment push individuals to search for strategic choices, opportunities, and the right partnerships. Moreover, the goodwill of the company coupled with the attractiveness, mindset, and experience triggers the formation of coopetitive relationships.

The study has also highlighted how important are the external divers that normally related to the external environment such as characteristics of the market, sector, and industry, and power of the stakeholders. The characteristics of industry refer to the context of coopetition in concentrated industries such as a large number of companies, scarcity of resources, and unification by-laws. The nature of agriculture is diverse not in terms of the production of hundreds of items but the level of the farmers also ranges from large companies to individual farmers. The structure of the market and industry gives more power to large producers at all levels, for instance, a wholesale buyer is a large actor in the context. Thus, growth patterns of the industry, uncertain circumstances of the industry, and structure push companies to simultaneously cooperate and compete.

A powerful customer (wholesale buyer or a company) might force individual farmers to cooperate. However, state-led coopetition in the agriculture sector to promote place-based marketing and potential collective competitive advantage is a solution to safeguard the individual farmers. Therefore, governments can impose the coopetition using policy changes/introduction, reforms, incentives of different types, and subsidies. Interestingly, a powerful buyer can force individuals to form a coopetitive alliance to serve their needs.

This study also suggested that informal individual relationships lead to the formation of networks. It helps them to develop inter-dependent relationships to form governance structures, style of management, and potential objectives in the network. As it has been discussed all the cooperative relationships are based on cooperation and competition—therefore, the network relationships are also following the same to achieve the common interests. The concept of cooperation is context-dependent, thus, there can be several forms and shapes of the networks. The nature and operations of the network are possible to understand using nodes and the respective connections—two ways determine the relationships in a network (i) direct communication between the partners (ii) an indirect way that indicates an individual in a leadership role.

The direct communication between the individuals is reciprocal in the terms of the mutual agreement. In the network relationship, the mutual ties in the network highlight the relationships, however, how strong are the ties is vital for an organization to establish the identity. Therefore, the strength of the mutual ties between organizations determines the stability, regularity in communication, and intensely emotional—which in turn ensure the continuity of the cooperative relationship. On the contrary, the weaker ties i.e., irregular exchanges, momentary interactions, and casual connections will lead to weak ties.

The role of power relations is significant as if a party can have the power to just take or leave the offer in an extreme situation. Accordingly, the bargaining power of farmers increases if they can substitute the contractor or find a new market. In that case, the threats of contractors/market actors to find farmers' production or alternative farmers will be less effective. Therefore, the cooperation in farmers can provide them with stronger bargaining power that subsequently increases profitability. It is then reasonable to say that the position of the farmers in the supply chain not only depends on the production but also on how farmers perceive their strengths (cooperation among farmers) against the contractors and the market.

Similarly, the analytical capability provides farmers with a unique perspective to scan the context, internal environment, and external environment to identify the opportunities for cooperation. Moreover, it also helps to identify, choose, and make relationships with the appropriate partners at a right time. Further, the analytical capability also provides an opportunity to establish long-term relationships and achieve mutual objectives. Moreover,

farmers can credibly recognize the partners and the particular areas for cooperation and competition using analytical capability.

5.1 LIMITATIONS

The study has few limitations that are as follows:

- The study has particularly focused on the individual farmers from the same geographical location.
- The study has not used any moderators.
- The study has not taken the opinion of the wholesale buyers or the market actors to compare the effectiveness of the coopetition strategy for individual farmers.

5.2 FUTURE DIRECTIONS

The study offers interesting suggestions for future research directions.

- A diverse sample from different geographical locations can provide a basis for generalization.
- The nature of the market in the context or the buyers as a moderator may affect the relationship between coopetition and bargaining power.
- Future research can use the analytical capability as a moderator to explore how a high and low analytical capability impacts the relationship between coopetition and bargaining power.

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7 APPENDIX 1

Factor Loadings

Items	Initial	Loadings
I understand why it is beneficial to both cooperate and compete	1.000	0.571
I identify the suitable areas of cooperation and competition	1.000	0.594
I quickly determine which factors can cause relationship instability	1.000	0.502
I acknowledge the constructive nature of contradictory forces	1.000	0.600
I identify and select the right firm to engage in such relationships	1.000	0.604
To start a collaboration with a competitor, it is enough that I see benefits	1.000	0.616
To start a collaboration with a competitor it is enough that partners are strategically fit	1.000	0.534
My trust in a competitor encourages me to collaborate with him/her	1.000	0.538
The general collaboration willingness in my community encourages me to collaborate with my competitor	1.000	0.547
My prior experience of collaboration with competitors encourages me to collaborate with other competitors	1.000	0.484
How easy would it be for you to find a substitute for your production deliveries	1.000	0.770
How easy would it be for your contractor to find a substitute for your production purchases	1.000	0.760
The fact that my competitor is well recognized in the local community* encourages me to collaborate with her/him	1.000	0.365
Me being a member of a local partnering network/organization encourages me to collaborate with a competitor who is also a member	1.000	0.357
Extraction Method: Principal Component Analysis.		

Frequency distribution of age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40.00	19	9.1	9.1	9.1
	41.00	12	5.8	5.8	14.9
	30.00	11	5.3	5.3	20.2
	35.00	11	5.3	5.3	25.5
	36.00	11	5.3	5.3	30.8
	37.00	11	5.3	5.3	36.1
	33.00	10	4.8	4.8	40.9
	39.00	10	4.8	4.8	45.7
	27.00	9	4.3	4.3	50.0
	32.00	9	4.3	4.3	54.3
	31.00	8	3.8	3.8	58.2
	42.00	8	3.8	3.8	62.0
	45.00	8	3.8	3.8	65.9
	28.00	7	3.4	3.4	69.2
	34.00	7	3.4	3.4	72.6
	38.00	7	3.4	3.4	76.0
	43.00	6	2.9	2.9	78.8
	29.00	5	2.4	2.4	81.3

	44.00	4	1.9	1.9	83.2
	46.00	4	1.9	1.9	85.1
	47.00	4	1.9	1.9	87.0
	48.00	4	1.9	1.9	88.9
	25.00	3	1.4	1.4	90.4
	26.00	3	1.4	1.4	91.8
	49.00	3	1.4	1.4	93.3
	51.00	3	1.4	1.4	94.7
	52.00	3	1.4	1.4	96.2
	53.00	3	1.4	1.4	97.6
	50.00	2	1.0	1.0	98.6
	55.00	2	1.0	1.0	99.5
	54.00	1	.5	.5	100.0
	Total	208	100.0	100.0	

Frequency distribution of experience

Experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	24	11.5	11.5	11.5
	9.00	19	9.1	9.1	20.7
	12.00	18	8.7	8.7	29.3
	10.00	16	7.7	7.7	37.0
	2.00	15	7.2	7.2	44.2
	13.00	14	6.7	6.7	51.0
	3.00	13	6.3	6.3	57.2
	4.00	12	5.8	5.8	63.0
	14.00	11	5.3	5.3	68.3
	8.00	10	4.8	4.8	73.1
	15.00	9	4.3	4.3	77.4
	11.00	8	3.8	3.8	81.3
	23.00	7	3.4	3.4	84.6
	5.00	6	2.9	2.9	87.5
	6.00	6	2.9	2.9	90.4
	7.00	5	2.4	2.4	92.8
	19.00	5	2.4	2.4	95.2
	16.00	3	1.4	1.4	96.6

	20.00	2	1.0	1.0	97.6
	17.00	1	.5	.5	98.1
	18.00	1	.5	.5	98.6
	21.00	1	.5	.5	99.0
	22.00	1	.5	.5	99.5
	25.00	1	.5	.5	100.0
	Total	208	100.0	100.0	