Project and functional managers: Coopetition paradox and leadership impact

Ahmad Ibraheem
Abstract

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The coopetition (simultaneous focusing on cooperation and competition) between organizations and within organization has received increasing attention from academia and practice. However, there is no guide on how coopetition can be encouraged. I discuss in how far leadership styles (Transformational, Transactional, laissez-faire, and Autocratic) can be utilized to enable coopetition between the project manager and functional manager and between the project managers as well within a matrix organization. Analyzing 16 semi structured interviews from a company located at Kingdom of Saudi Arabia, I explain that both transformational and transactional together (mixed style) can enhance the coopetition between the managers. Finally, I conclude implications as well as thoroughfares for future research.

Keywords - leadership styles, cooperation, competition, coopetition, Matrix structure, project manager, functional manager.
Popular science summary

The relationship between the project manager (PM) and functional manager (FM) and between the project managers themselves within matrix organization were under deliberation for decades in order to deliver highly successful projects and maintain a sustainable environment. The existing literature indicates that the nature of matrix organization (defined as employees have two bosses) creates ambiguity and unclear responsibility that lead to an unhealthy relationship. The present paper debates the relationship from a different perspective. This paper assumes that the nature of matrix organization may enhance the competition between the managers. Accordingly, the unhealthy relationship can be stimulated from unbalancing between the competition and cooperation. The coopetition (the simultaneous focusing on cooperation and competition) between firms and within firms has received increasing attentions from academia and practice. However the coopetition between individuals (PM-PM and PM-FM) has not.

On other hand, there is no guide on how the coopetition can be enhanced. I investigate in how far leadership styles (transformational, transactional, laissez-faire, and autocratic) can be utilized to enable the coopetition between the managers. The primary objectives of the research are those of identifying the contents of cooperation and competition in order to confirm that the relationship between the managers within matrix context is neither cooperative nor competitive but it is both. Exploring how the cooperation and competition affect the behavior of the managers (silent, cooperative, competitive and coopetitive) and analyzing the leadership styles of the managers to examine the link between the different behavior and different leadership styles. Finally, this work finishes with an implication that may contribute to the development of coopetitive behavior and its potential influence on the efficiency of a matrix organization. A qualitative case study approach with semi-structured interviews with four project managers, four functional managers and eight engineers (who work at the same unit at KSA which is structured in matrix way) are applied to this study in order to gain an in-depth insight of these topics.
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Abbreviation

PM: Project manager
FM: Functional manager
E: Engineer
KSA: Kingdom of Saudi Arabia
UAE: united Arab Emirates
1. Introduction

1.1 Background

Increasingly corporations become cooperative. It is evident that the strategic decisions of these companies are jointly influenced by cooperative and competitive forces in order to meet the rapidly changing of the business environment (Walley, 2007; Yami, 2010). For example, Samsung and Apple, who jointly developed the DRAM chips technology in order to compete for market share, or Tesla and Toyota, who together developed produce several parts of electric cars (Tesla, 2010). This kind of relationship between the firms also holds true for the intra-firm level. For example, Shell had two functional departments that were focused on competing for business within the organization but had to share knowledge in order to achieve higher performance (Luo et al., 2006). Previous arguments hold right too for the interpersonal level. In this paper, the author focuses on the relationship between the project manager and functional manager, and between project managers themselves within a unit of an organization adopted matrix structure as a specific case of the intra-firm level. For instance, Pitagorsky, (1998) indicates that the cooperative relationship between project managers and functional managers and between the project managers is essential in order to deliver high project performance and to the well-being of any organization, on the other hand, they compete with each other for resources and authority. Such competitive and cooperative interactions between managers (FMs and PMs) assumes complex interpersonal relationships that are concerned for both the firm's general manager and the managers themselves. Relationships between social actors, for example, FMs and PMs, have been described as either cooperative or competitive. Hence, much research has been conducted to analyze both cooperation and competition independently (e.g., Chen, 2008). However, the paradox of the interaction of cooperative and competitive forces reveals the notion of coopetition which is defined as simultaneous focusing of cooperation and competition (Brandenburger and Nalebuff, 1996). The main body of existing literature of coopetition are concerned the effects of coopetition between firms on performance outcomes, (Bengtsson and Kock, 2000; Gnyawali and Park, 2009; Ketchen et al., 2004; Peng and Bourne, 2009; Ritala and Hurmelinna-Laukkonen, 2013). However, only a few studies focus on coopetition on the intra-firm level (inter-units level). For example, Tsai (2002) evaluates the effect of competition and organization structure on knowledge sharing. Luo (2005) develops a theoretical model for intra-firm coopetition.
Furthermore, Luo et al. (2006) analyze coopetition between functional areas within a firm and its effects on customer and financial performance. To date, no study concerns the coopetition between the managers within one unit. Therefore this paper considers the coopetition between PM-FM and PM-PM within matrix structure context as a particular case of intra-firm coopetition.

1.2 Problem and purpose

Large projects, rapidly changing markets, and limited resources are all characteristics of the surrounding business environment. Therefore, the matrix structure has been evolved and become the primary organizational structure to cope with dynamics of the surrounding environment (Egelhoff and Wolf, 2017, p. 18).

Due to the nature of matrix structure, dual authority relationships and a power balance between functional and project managers that results from this structure (Sy and Côté, 2004), the conflict between the project manager and functional manager is inherent.

A multi-project environment adds another set of disagreements when project managers compete against each other for the allocation of scarce resources (Payne, 1995; J. K Pinto and Kharbanda, 1995). As a consequence, the conflict can occur between the project managers themselves (J. K Pinto and Kharbanda, 1995).

To date, Most of the studies on the relationship between the project managers within matrix organization are relevant to the conflict. Much research is created to obtain the optimal matrix structure with zero friction. Katz and Allen (1985) found that a balanced locus of influence in a matrix was the best solution, while another research study ascertained the opposite, that an equal balance of power in a matrix led to conflict escalation (Davis and Lawrence, 1977; Larson and Gobeli, 1987). Accordingly, none of the possible matrix forms proved to be the optimal (Katz and Allen, 1985; Larson and Gobeli, 1987). Later, the research tends to develop a various conflict resolution techniques (Jeffrey K Pinto and Kharbanda, 1995; Sitkin and Bies, 1993).
Stuckenbruck (1979) assumes that the reason behind the conflict between the managers within matrix organization is the competition. Accordingly, this paper considers that the main reason for the conflict is due to the unbalancing between the competition and cooperation.

The relationships between the managers within matrix have not received much attention (organization in term of cooperation and competition) so far, although these relationships are known to play an important role, for example, utilization of knowledge in order to complete the projects (Clark and Wheelwright, 1992; Holland et al., 2000; Witt et al., 2001). Pitagorsky (1998) suggests that the relationship between the managers is mainly cooperative. Resources and knowledge sharing may all be means of achieving superiority. Practices within matrix organization show that managers can also compete with one another – for resources or recognition, for responsibilities, for business (Davis and Lawrence, 1978; Mattila et al., 2010; Thomas, 2005).

Various managers deal with different issues and play diverse roles, giving rise to cooperation on some issues, projects, functions, or knowledge development and competition on other matters, projects, power, or markets (Bartlett & Ghoshal, 1993; Ghoshal & Bartlett, 1990). Managers rarely share entirely identical interests in all aspects because of rivalrous pressure deriving from their projects or personal objectives. Accordingly. The unbalancing of cooperation and competition occurs and leads to two different behaviors: cooperative or competitive behavior. However, Managers may also experience a state of coopetition, in which they simultaneously compete and cooperate with their peers (Luo, 2005).

Researchers have tried to distinguish factors impacting intra-organizational coopetition. For example, Luo (2005) explains the internal infrastructure needed to maximize returns from coopetition. This paper focuses on the role of the leadership styles as they have been indicated as a factor play in setting how the department works in term of cooperation and competition (Burke et al., 2006). Sarin and O’Connor (2009) as well, assumes that leaders have a high impact on the frequency of interactions with their peers with other departments. On the other hand, Theriou et al. (2009) argue that the leadership style is one factor of many that form a base of knowledge sharing which is the primary outcome of the interplay of cooperation and competition.
Thus, this paper assumes that leadership styles of project manager and functional manager can play a role in deciding their behavior.

To sum up, matrix organizations face a highly complex task of balancing both cooperation and competition between functional manager and project manager and project managers themselves. This balancing is challenging especially that the sources of competition are many. Thus, the relationship between PM-PM and PM-FM requires a deeper understanding of how these two types of managers interact with each other in term of cooperation and competition and developing our knowledge of the leadership styles that may enhance the coopetition paradox between the managers. However, the existing research leaves gaps to be filled in this context particularly on an interpersonal level.

1.3 Aim

The present paper aims to address the gaps in research through exploring leadership styles of the project and functional managers as organizational factors that may enhance the coopetition behavior between the managers. All existing literature on coopetition, including inter-firms and intra–firms level, suggest an essential role of the coopetition to enhance the knowledge flows between firms and within firms (Lado et al., 1997; Luo, 2005, 2003; Tsai, 2002, 2001). Therefore, the author used knowledge flows to decide the manager`s behavior. This research focuses on three leadership styles— transformational, transactional and laissez-faire — representing the full range leadership model. This paper focused on Bass's (1985) transformational, transactional, and laissez-faire leadership theory because it is one of the most-researched contemporary theories (Antonakis and House, 2014). On the other hand, the literature on knowledge sharing which is the main result of coopetitive behavior suggests a vital role of transformational and transactional styles (Masa’deh et al., 2016). Later the author added autocratic leadership style as it emerged from the empirical data. By analyzing the data collected through semi-structured interviews obtained from four project managers, four functional managers, and eight engineers (All participants work at the same unit of a company located in KSA that adopt matrix structure), this work contributes to existing literature of coopetition in two ways. First, unlike prior research, which has focused mainly on the interfim level, I focus
on the interpersonal level as a specific case of the intra-firm level. Second, this work extends research on Matrix organization by conducting the first study on the coopetition within its context which may lead to the optimal matrix.
2. Literature review and research questions

The theoretical framework is described. Firstly, a description of matrix organizations is presented to orient the reader on the overarching topic of this thesis. Subsequently, a discussion on the literature Project and Functional managers will demonstrate how these two core positions are in constant competition and cooperation. Secondly, the coopetition theory is presented. Four behaviors are identified (Silent, cooperative, competitive, and coopetitive) depending on the way the project managers and functional manager balance the cooperation and competition. Lastly, full range leadership theory (transformational, transactional, and laissez-faire) is described beside the autocratic style which is emerged from the empirical data.

Before presenting the three streams of literature, the unit of analysis of this research has to be clarified. The study of relationships between managers is located at the intra-organizational level. The focus is on what happens between the managers of one unit which has a matrix structure, neither between an organization and its external environment nor between the units of an organization. This paper focuses on the individual level of analysis in the corporate context as a particular case of the intra-organizational level. The relations between firms and within firms are explained mainly by the social relations between individuals. Beside that the human aspects are at the center of the relational process between organizations and within organizations (Geraudel and Salvetat, 2014). Project manager and functional managers – or, more specifically, the relationships between them – are the primary unit of analysis. Figure 1 illustrates the level of analysis.

![Figure 1 Level of analysis](image)

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The above graph not only blueprints the research focus but also suggests that the study of relationships between the managers can borrow elements from both the inter-organizational and the interunit level. In the course of this research, references to these two fields are made wherever this seems appropriate and insightful.

2.1 **Matrix organization, project manager, and functional manager**

Matrix management was developed and born out of the aerospace race in the early 1960s. The matrix structure was a natural evolution of organizational structures in answer to large and very complex programs, projects, and problems, and limited resources. The researchers developed the traditional hierarchical management organization and conventional management theory to produce the matrix structure. This development was necessary because the firms could not help to face the complexity and the massive amount of knowledge of the real world, and conventional management theory was unable in coping these new and unique problems (Stuckenbruck, 1979). Matrix’s term refers to a cross-functional team whose members belong to various functional departments of the hierarchical organization (Stuckenbruck, 1979). Matrix is built around the projects, so it is temporary in nature (Stuckenbruck, 1979). Figure 2 illustrates the simplest form of the matrix structure.

![Figure 2 Matrix Structure (Stuckenbruck, 1979)](image)

Turner and Müller (2003) define the matrix structure as “an overlap between a functional hierarchy and a project hierarchy.” Larson and Gobeli (1987) define a matrix structure as “a mixed’ organizational form in which a normal hierarchy is overlaid by some form of lateral authority, influence, or communication.” Three types of Matrix structures are recognized by
Larson and Gobeli (1987): functional, balanced, and project. The amount of the authority between functional manager and the project manager is the factor that differs those three types. In a functional matrix, the functional manager possesses control over the people involved in the project. In a balanced matrix, the functional manager and the project manager are both responsible for the resources and the project. In a project matrix, the functional managers assign resources for the project and provide technical backup. Matrix structure had drawn researchers’ attention for decades. Many articles have been published indicating the Pros and Cons of the matrix structure. Anarchy; power struggles; collapse during economic crises; excessive overhead; decision disruptive conflict; unclear roles and responsibilities are the most frequent critiques the matrix structure received (Clymer, 1984; Davis and Lawrence, 1978; Larson and Gobeli, 1987; Mattila et al., 2010; Nicholas et al., 2012; Sy and Côté, 2004; Thomas, 2005; Turner et al., 1998). Despite all above critiques, there has been widespread adoption of the matrix organizational structure (Wolf and Egelhoff, 2013). However, the matrix structure has many advantages too. For example, flexibility; effective resource allocation; increased formal lateral communication (Davis and Lawrence, 1978; Joyce, 1986; Larson and Gobeli, 1987; Mattila et al., 2010; Sy and Côté, 2004; Turner et al., 1998).

**Project Manager** is the person who is in charge of the overall success of projects. The project manager mostly is the primary person who contacts the client and responsible for planning, administration, and management (Tonnquist, 2012, p. 102).

**Functional Manager** or resource manager is responsible for ensuring that the resources are adequately trained, evaluated, and allocated. In some organizations, FMs are accountable for the performance of ongoing operations that are not related to projects. Sometimes FMs are directly responsible for the execution of project tasks, and sometimes they are responsible for providing resources to be directed by project managers (Tonnquist, 2012, p. 106).

The cooperative relationship between project managers and functional managers is essential to deliver adequate project performance and to the well-being of any organization (Pitagorsky, 1998). The cooperation within matrix organization stems from the complex functional interdependencies (Pinto and Pinto, 1991). Project teams consist of individuals with different competencies and from interrelated functional areas (Tonnquist, 2012, p. 103). Project managers and functional managers find that they must work closely to complete a project. On the other
hand, due to the nature of matrix organization, the distributing leadership roles over multiple individuals, ambiguity, and unclear responsibility can create the competition between managers (Reid and Karambayya, 2009). Project managers and functional managers have different objectives and priorities. Conflicts of interests between the project manager and functional managers and between the project managers as well can also be another reason for the competition (Gupta et al., 1986; Leenders and Wierenga, 2008). Consequently, competition and cooperation exist between the project manager and functional manager.

Matrix organizations operate in multi-project environments (Schnetler et al., 2015). A multi-project environment adds another set of competition when project managers compete against each other for the allocation of scarce resources (Payne, 1995; J. K Pinto and Kharbanda, 1995). If some projects initiated concurrently, the resource capacities necessary to guarantee the achievement of one project’s objectives might hinder allocations to other projects and reduce the overall successes of the organization (Kerzner, 2000). As a result, the cooperation and competition within matrix organization are not necessary only to occur between the project manager and functional manager, but it could happen between the different project managers.

Balancing both cooperation and competition between functional manager and project manager and between the project managers is a vital task for the organization, and raises managerial complexity since reasons to cooperate and compete differ (Strese et al., 2016). Unbalanced interactions between the managers lead to high risks of which in turn might reduce potential gains from balancing (Raza-Ullah et al., 2014). Accordingly, the coopetition scholar tries to identify the contents of cooperation and competition in order to explain the coopetition mechanism between involved actors.

On intra-organizational level and more specifically on inter-unit level Luo (2005) identifies technological, operational, organizational, and financial as the contents of cooperation on the intra-organizational level. Technologically is represented by sharing knowledge between involved actors on activities or product in order to advance each other’s competitive advantages and to exploit the process of their project (Zander & Kogut, 1995 cited by Luo (2005). Operationally, Luo explains that operational resources including human resources, materials as
one of the contents of cooperation. Organizationally, the managers may cooperate in developing and sharing a managerial experience such as experience and practice in dealing with the customer and managing local human resources. Financially, sharing experience in managing financial activities can be a part of cooperation.

Hill et al (1992) point out the importance of the competition with the organization in order to achieve the efficiency. Therefore Luo (2005), through his theoretical framework of the coopetition, mentions the contents of competition as follows: Resources, company support, system position, and market expansion. First, they compete for company resources to reduce their reliance on external resources and to a successful project. Technology, equipment, and supplies, and know-how all represent the company resources for which the competition may occur. According to Luo, if the subunit relies on external resources to execute its projects, it may face greater uncertainty and economic exposure (Luo, 2003). However, by utilizing company resources and avoid the external resources, it can reduce the financial risks or transactional costs associated with resource. Competition may occur because the needed resources are limited in quantity, and project priorities play a role key in allocating and deploying them (Bartlett & Ghoshal, 1989; Birkinshaw & Morrison, 1995 cited by Luo 2005). Corporate support can be a source of the competition between subunits. In order to execute the specific or unanticipated tasks with company and customer expectations, this subunit requires the higher management support to get what is needed at no cost to the subunit. Second, system position can be a source of competition, Luo defines system position as the role and position in an organization’s entire system or network. Due to the nature of matrix structure and its drawbacks such unclear responsibility, power strangulation, and ambiguity, competition for an advanced position within the company may be boosted. According to Luo, the competition for system position can be divided into four categories: (a) the competition for the value-chain position that aims to control some primary activities of the projects. Dominating some shared value-chain activities by one actor makes other actors more dependent on the dominant actor. (b) The competition for knowledge flow position aims to either secure more inflows of critical knowledge from other actors in order to achieve the advanced position. (c) the competition for competence excellence position seeks to make the involved actor the center of excellence in specific areas at the entire unit (d) the competition for influencing power position aims to boost a subunit’s authority in
shaping some of the critical decisions on the organizational level. Finally, Luo indicates market expansion as the last source of the competition between involved actors. This type of competition arises when multiple actors are interested in various projects. Such competition can raise the efficiency of the projects (Luo, 2005).

All above contents are debated to be existent between units (intra-organizational level). The analysis of the relationship between the project manager and functional manager and between the project managers is considered as a particular case of the intra-organizational level. Consequently, the above arguments have done hold true on the relationship between the managers. Accordingly, depending on above arguments, the following research question is formulated to get a better understanding of the relationship of PM-PM and PM-FM within a matrix organization and to assure that their relationship has both cooperation and competition in order to apply the coopetition theory:

**RQ1: How do project managers and functional managers trigger acts of cooperation and competition?**
2.2 PMs and FMs behavior

Relationships between actors including organizations, units, or individuals can adopt a variety of different forms. According to Weise (1997a), the essential form of interpersonal behavior is the cooperation and competition. Johanson and Mattsson (1987) conceptualized the interactions between elements of relationships as competition and cooperation. On an inter-organizational level and based on resource-based theory, game theory, and socioeconomic theory, Lado et al. (1997) define four types of organizational behavior including competitive rent-seeking behavior, collaborative rent-seeking behavior, monopolistic rent-seeking behavior and syncretic-seeking behavior. Bengtsson and Kock (1999) follow the same approach by identifying four types of relationships between the actors: competition, cooperation, coopetition, and co-exist. On an interunit level, Luo (2005) identifies four types of subunit: aggressive demander; silent implementer; ardent contributor; network captain. Further parallels can be established to relationships between individuals. The proposed categorization of relationship types among the managers is presented in Figure 3. Along these two axes of cooperation and competition, a manager behavior may reside at: (1) the managers can choose a salient behavior, which is neither competitive nor cooperative. It implies avoiding any competitive or cooperative behavior. (2) choosing the competitive behavior, the manager opts for competitive behavior towards other managers. (3) choosing the cooperative behavior, the manager decides to emphasize cooperation at the expense of competition, and (4) Finally, the manager can choose coopetition behavior, thus exhibiting both competitive and cooperative behaviors.

![Figure 3 relationship types among the managers (developed by the author)](image-url)
Most of the studies on the interaction among social actors (inter-organization, and intra-organization) show the positive impact of this complex interplay of cooperative and competitive forces on performance outcome of the organization through fostering knowledge sharing. Regarding inter-organizational literature, Bengtsson and Kock (2000) reveal the importance of knowledge sharing between the coopeting companies in order to achieve customer satisfaction. Gnyawali and Park (2009) argue that coopetition strategy helps firms to develop their ability to explore technological innovations through several factors, knowledge sharing is one of them. Ritala and Hurmelinna-Laukkanen (2013) describe coopetition as a rewarding relationship in which sharing knowledge is recognized. On intra-organizational level, Tsai (2002) proposes the knowledge sharing as a consequence of coopetition. Ghobadi and D’Ambra (2012a, 2012b) prove that cross-functional cooperation has a positive relationship with active knowledge sharing behaviors. Luo et al. (2006) confirm the positive relation between coopetition and customer/financial performance and this relation is mediated by knowledge sharing. Depending on the above findings of existing literature on coopetition, the knowledge sharing is the primary outcome of the complex interplay of cooperation and competition between PM-PM and PM-FM since this relationship is considered as a particular case of intra-organizational analysis. Consequently, the author focuses mainly on the knowledge flows to decide the behavior of each manager.

Organizations will efficiently respond to changing the environment, and their performance will be improved rapidly through knowledge sharing (Abdul-Jalal et al., 2013). Therefore, organizations tend to encourage their members including individual, and units to share information and knowledge (Zhang et al., 2005). However, Information is power. Thus the information can be stored as an asset to enhance individual status within the organization (Constant et al., 1994). The previous argument represents the notion of cooperative and competitive behavior (Ghobadi and D’Ambra, 2012b).

Argote and Ingram (2000) define the knowledge as the combination of data, skills, facts and experience, values and contextual information, which enables the evaluation and absorption of new experiences and information. Knowledge can be classified into explicit knowledge and tacit knowledge (Nonaka et al., 1996). However, tacit knowledge, considered to be the more
significant one in promoting competitiveness and organizational performance (Ngah and Jusoff, 2009). Knowledge transfer in organizations is the process through which individual is affected by the experience of another (Argote and Ingram, 2000). Within an organization, managers can learn from each other and benefit from new knowledge developed by other managers. Knowledge transfer among organizational managers provides opportunities for mutual learning (Tsai, 2001). Knowledge sharing, knowledge exchange, and knowledge flow sometimes have the same meaning in studies (Schulz, 2001). Whereas knowledge sharing means a reciprocal relationship regarding transfers of knowledge, the term of knowledge flows gives greater accuracy about the directionality of the knowledge being transferred (Mom et al., 2007). Gupta and Govindarajan, (2000) indicate that the knowledge sharing consists of two terms outflow and inflow. They define the knowledge outflows as the knowledge associated with a giver providing a recipient with knowledge, and knowledge inflows are associated with a recipient acquiring knowledge from a donor. A manager may receive or gather knowledge from his peers though using many communication channels as conceptualized in this study, for instance, by telephone, e-mail, through formal meetings, and informal face-to-face contacts.

To sum up, individual’s tendency including project manager and functional manager regarding information sharing may interact with competition and cooperation that either prevent or boost knowledge flow.

2.2.1 Competitive behavior

Competition between the units of an organization can be regarded as a particular case of inter-organizational competition (Maurer, 2011, p. 25). The same rationale can be applied, the competition between the managers within one unit can be regarded as for the particular case of the intra-organizational competition.

Competition between the units of an organization can be regarded as a particular case of inter-organizational competition (Maurer, 2011, p. 25). The same rationale can be applied to interpersonal level. So the competition between the managers within one unit can be regarded as a particular case of the intra-organizational competition. Many of the reasoning developed in an intra-organizational context can be reasonably applied to the competition between the managers.
According to Bengtsson and Kock (1999), the competition is a zero-sum game. Therefore aggressive behavior (characterized by high competition and low cooperation) characterizes a behavior that maximizes the outcome of one manager at the expense of another manager. The involved actors with zero-sum game tend to get the most significant piece of the pie (Lange and Dreu, 2002). The individual goals are more important than common ones (Lewis, 1944). A manager who adopts competing behavior tends to achieve a position of superior performance over other managers by manipulating all available opportunities to his advantage (Porter, 1980, 1985). Bengston and Kock (2000) debate that the competition stimulate actors to upgrade their competitive advantage by gaining new knowledge. Tsai (2002) shed light on the possibility of the positive impacts of the competition on knowledge inflows behaviors. He argues that the competing actors often have strong tendency to communicate to understand their competitors and discover what they think and know. This understanding allows them to learn from their competitors. Depending on above arguments the competitive behavior is characterized by high information inflows and low information outflows. Gupta and Govindarajan (1991) indicate that the actor who characterized by high inflows and low outflows engages with a little knowledge creation of its own and he relies heavily on knowledge inflows from peers.

Birkinshaw and Lingblad (2005) define the intra-firm competition as "the extent of overlap between the charters of two or more business units in a single organization" the same logic can be applied to the competition between the managers (interpersonal level). For example, two managers within a unit of an organization can share same resources or try to solve the same problem. As a result, the existence of overlapping activities between the managers fosters the competition.

The competition has pros as well as cons. Competitive behavior enables individuals to achieve more significant productive efficiency (Kilduff et al., 2010). Indeed the competition motivates individual for increased effort and enables higher performance (Scott and Cherrington, 1974). For example, when a manager needs resources held by another manager PM or FM, a competitive struggle often results in which only the manager that has or controls critical resources "wins" or gains control over the other manager. If two or more managers engage in different projects, the dynamics can be entirely different. Then the managers may be compared to
each other through efficiency. Bengtsson and Kock (2000) have a same previous argument on
the inter-units level. Lado et al. (1997) indicate that the competition can enhance the knowledge
and growth. The competition can offer a functional role in the conflict between the managers (J.
K Pinto and Kharbanda, 1995). For example, functional conflict can help to clear the line
authority between different managers (J. K Pinto and Kharbanda, 1995). On the other hand,
Competitive behavior has drawbacks too. It can involve significant costs. For example, the
competitive behavior may encourage manager to establish barriers to their distinctive
competencies and resources. This behavior forces another manager to rely on external recourse
and increase the cost. Luo (2005) has similar debates on the inter-unit level. Furthermore, the
actor who adopts aggressive behavior can tend to behave opportunistically toward others
(Griesinger, 1990; Williamson, 1985) which leads to dysfunctional conflicts through focusing on
personal issues at the expense of organizational goal (J. K Pinto and Kharbanda, 1995). By
concentrating on zero-sum options, individuals may be blinded to opportunities for realizing
positive-sum benefits through effective collaboration (Kanter, 1994). Finally, conflicting
interests can reduce the frequency of interaction between (Bengtsson and Kock, 2000).

2.2.2 Cooperative behavior

Hillebrand and Biemans (2003) divide the research on the cooperation into two broad
categories: cooperation between organization and cooperation within organizations. Again
cooperation between the managers within one unit constitutes a particular case of the cooperation
within the organization.

In the contrast of competition, the cooperation (characterized by high cooperation and low
competition) maximizes the outcome of all involved actors (Lange and Dreu, 2002). The goal,
through the cooperation, is to increase the pie (Weise, 1997b). The piece of the pie of involved
actors can be enhanced by helping one another or by gathering strengths in order to achieve a
common goal (Homans, 1973). One actor's actions may represent a satisfactory alternative to
another actor's actions (Lewis, 1944). The process of interacting and forming relationships to
achieve mutual gain represents the most definitions of cooperation (Maurer, 2011, p. 26).

When an actor makes unilateral commitments to his peer, the cooperative relationship is initiated
(Gulati.R et al., 1994). Luo (2005) describes the ardent contributor (cooperative unit) as the unit
that possesses many capabilities that are shared and used by another unit. According to Luo, the cooperative actors already have a pool of unique knowledge, so they do not need to compete with their peers. They are centers of excellence. Their practices, resources, and knowledge can be applied by other actors (Luo, 2005). According to Lado et al. (1997), the altruism, trust, and unilateral commitments are the main characteristics of the cooperative behavior. Depending on above argument the knowledge flow of cooperative behaviors can be characterized by high information outflows and low inflows. Gupta and Govindarajan (1991) describe the actor who marked by high outflow and low inflow as a fountainhead of the knowledge.

Like the competition, the cooperation has pros and cons. Bengtsson and Kock (2000) find that the cooperation allows the cooperating organizations to get access to scarce resources. Luo (2005) finds the same for units of one organization. The previous findings on the inter-organizational and intra-organization level can be applied to the relationship between the managers within one organization too. According to Lado et al. (1997), the cooperation between the organizations can enhance the quality of the products and the process through developing and utilizing knowledge. This holds true for the cooperation between the managers. For example, when managers including functional managers and project managers share their knowledge and experience, the effectiveness of their projects will be enhanced. Furthermore, according to social theory, the prestige can be considered as one of the benefits of a cooperative behavior, primarily if it is recognized by the company (Henrich et al., 2015). By working together, managers can gain time and share costs. This argument depends on the finding of Bengtsson and Kock (2000) who argue the same between firms. Cooperation may reduce costs that result from procuring resources from the outside (McKern, 2003).

Most of the writing on cooperation tends to have a very positive tone. However, cooperation among individuals, groups, and organizations can have harmful consequences for others and performance. Conformity may prevent fruitful initiatives (Wimmer and Neuberger, 1982). Wagner (1995) suggests that cooperation can lead to exhaustion and other problems associated with collectivist tendencies. It would be unfavorable if involved actors relied too heavily on each other, tried to free-ride their peers' competencies or became inert (McAllister, 1995). Studies of Japanese culture have described how its excessive emphasis on cooperation has led to problems
of bias, bullying, conformity to the detriment of various groups in that country (Smith et al., 1995).

2.2.3 Coopetitive behavior

The coopetition term was first used by Ray Noorda, founder of Novell in the 1980s (Walley, 2007). The mainstream of coopetition literature focused on the relationship between firms. Initial studies in the business literature investigated the effects of coopetition between firms on the performance (Bengtsson and Kock, 2000; Gnyawali and Park, 2009; Ketchen et al., 2004; Peng and Bourne, 2009; Ritala and Hurmelinna-Laukkanen, 2013). However, only a few studies focus on coopetition on the intra-firm level. Tsai (2002) evaluates the effect of competition and organization structure on knowledge sharing in a multiunit organization. Luo (2005) develops a theoretical model for intra-firm coopetition. Luo et al. (2006) analyze coopetition between functional areas within a firm and its effects on customer and financial performance. To date, no any study investigates the coopetition between the managers of one unit. Therefore this paper considers the coopetition between PM-FM and PM-PM as a particular case of intra-firm coopetition.

Coopetition (characterized high competition and high cooperation) is defined as "a mindset, process or phenomenon of combining cooperation and competition" (Luo, 2005). By reconciling the cooperation and competition concepts, coopetition means cooperating to enlarge a business pie, while competition means to split it (Luo, 2004). The coopetition can be indicated as a third relationship, neither cooperation nor competition. It is a simultaneous occurrence of competition and cooperation (Bengtsson and Kock, 2000). The relationship between involved actors has to contain both cooperation and competition in order to get the coopetition (Bengtsson and Kock, 2000). This is true for the relationship between the project manager and functional manager and between the project managers themselves and that what it was indicated in section 2.2.

Accordingly, Knowledge flows are a common form of the coopetition (Tsai, 2002). Simultaneous cooperation and competition may stimulate greater knowledge sharing, technological progress, and market expansion (Lado et al., 1997). Even if competition prevails, the motive to cooperate can be knowledge sharing, and the outcome is learning (Dahl, 2014). As
the term of coopetition is a reconciliation of both concepts the cooperation and competition. Consequently, the notion of coopetitive knowledge flows merges the best of cooperative and competitive knowledge flows. The cooperative aspect of such knowledge sharing refers to the collective use of shared knowledge to pursue common interests (Khanna et al., 1998). The competitive element relates to the use of shared knowledge to make private gains in an attempt to outperform the other managers (Khanna et al., 1998). As a result, the competitive knowledge flows is characterized by high knowledge inflows and high knowledge outflows. Gupta and Govindarajan, (1991) indicate that the role of this actor is similar to cooperative behavior except his knowledge is not sufficient to fulfill his needs.

The functional manager and project manager may want to merge the best of both cooperation and competition in coopetition. Coopetition can generate greater knowledge sharing, market expansion, and resource utilization than is achieved when cooperation or competition is dominated (Bengtsson and Kock, 2000; Lado et al., 1997).

2.2.4 Silent behavior

Silent behavior (characterized low cooperation and low competition) is the case that actors belong to the same network but stay unaffected by each other (Maurer, 2011, p. 28). Depending on previous arguments of cooperative and competitive behavior, the silent behavior may be emerged due to no overlaps in activities between actors or due to independent goals (Axelsson and Easton, 1992).

The fear of being classified as a troublemaker, retaliation, and punishment, and conflicting with others the main revealed reasons for silent behavior between individuals. Furthermore, the individuals do not want to stay silent, but they do so because they think that what they do will not make a difference because of the organizational factors (Kish-Gephart et al., 2009; Milliken et al., 2003; Vakola and Bouradas, 2005). The most basic reason underlying these reasons can be regarded as either lack of confidence (Nikolaou et al., 2008) or seeking quiet life (Lado et al., 1997).
On the inter-organizational level, Lado et al. (1997) describe this behavior as monopolistic behavior in which the actor may try to bring policies and regulations that prevent potential firms from entering an industry or ruling market power to inhibit competitive rivalry. The Lado’s argument does not fit the interpersonal level because they do not have the autonomy. According to Hennart (1993), the concept of autonomy does not quite fit in with either competition or cooperation because it is related to the position of decision making. However, the quiet life which is the advantage of this behavior may fit the individual. Hicks (1935) notes that “The best of all monopoly profits is the quiet life.” For example, a manager may avoid the interaction with his peers to get a quiet life.

On the intra-organizational level, Luo (2005) describes this behavior as silent implementer: “silent implementer is a subunit that independently and reactively executes its role as the parent firm’s satellite in a relatively isolated, constrained, or unimportant national market, maintaining both low competition and low cooperation with other subunits.” Depending on above arguments, the project manager and functional manager may exhibit such behavior when they are assigned to unimportant projects or unimportant activities. As aforementioned, such behavior may be advantageous to a manager who adapts it in the short term (quiet life), but ultimately it reduces the long-run viability of the manager. Therefore, all existent literature at all levels indicates that the silent behavior may not be a necessary or sufficient condition for sustained business performance. Depending on above arguments the actors who involved in the silent behavior are unaffected by each other (Maurer, 2011, p. 28). According to Luo (2005), Knowledge sharing is minimal in this situations. Accordingly, the silent behavior is characterized by low knowledge inflows and low knowledge outflows.

Depending on above argument regarding the characteristics of the four behaviors the following research question is formulated:

**RQ2: How do the cooperation and competition affect the behavior of the project managers and functional managers?**
2.3 Leadership

Burke et al. (2006) shed light on the role of the leaders that they play in setting how the department works in term of cooperation and competition. Sarin and O’Connor (2009) highlight the impact of leaders on the frequency of interactions with their peers with other departments. For example, Leaders may offer more opportunities for informal interactions with other leaders within the firm (e.g., via joint social events, informal face-to-face meeting). On the other hand, Theriou et al. (2009) argue that the leadership style is one factor of many that form a base of knowledge sharing. The proper leadership style makes the knowledge flows more efficient through encouraging the open environment for example. Storey and Barnett (2000) point out the role of leadership style as part of a learning process through carrying out day-to-day responsibilities. Thus, it is reasonable to assume that leadership styles of project manager and functional manager play a role key in deciding their behavior.

There is no consensuses among scholars around the definition of leadership. Because it is defined according to individual perspective (Yukl, 2012, p. 20). Traits, behaviors, influence, interaction patterns, role relationships, and occupation of an administrative position are terms according to them the leadership is perceived (Yukl, 2012, p. 20). For instance, Yukl (2012, p30) states that "Leadership is the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individuals and collective efforts to accomplish shared objectives."

Furthermore, Manning and Robertson (2011) state ‘leadership is a process of transformative change both individually and as a team’. Finally, Leadership is "the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organization." (House et al" 1999, pg. 184 cited by (Yukl, 2012, p. 21)). Accordingly, there is no agreement of leadership style that leaders need to perform adequately. Therefore the author focuses on three types of leadership style, transformational, transactional, and laissez-faire, and autocratic. Bass's (1985) transformational, transactional, and laissez-faire leadership theory is one of the most-researched contemporary theories (Antonakis and House, 2014). In addition to the autocratic style which emerged from empirical data.
Existent Studies exhibit a substantial effect of leadership styles on cooperation and competition. Lado et al. (1997) indicate the importance of the beliefs, values, and actions of leaders in creating an environment that enhances the coopetition. Strese et al. (2016) find that both consideration and participation as leadership styles have a positive effect on coopetition. Osarenkhoe (2010) shows that managerial leadership and trust are the critical success factors of coopetition strategy. Geraudel and Salvetat (2014) analyze the tendency of managers to compete and to cooperate as a function of their personality traits.

2.3.1 Transformational leadership style

Transformational leadership styles emphasize on team-building, motivation, and cooperation with other employees to accomplish the overall goal of the organization. Transformational leaders define goals and incentives to raise the performance of other employees to higher levels and provide opportunities for growth for each one. Burns is the first researcher who put this leadership style on the primacy of leadership research (Bass and Avolio, 2004). Later, Bass (1985) began developing this style to produce first formal theoretical presentation through his book “leadership and performance beyond the expectation.” Bass´ s research recognizes both leaders and followers, and the way they worked together to lift the level of motivation towards organizational goal. In defining transformational leadership, Burns define transforming leadership as “a leader appeals to the moral values of followers in an attempt to raise their consciousness about ethical issues and to mobilize their energy and resources to reform institutions”(Yukl, 2012, p. 263). Bass’s definition is “The process by which leaders appeal to followers' values and emotions is a central feature in current theories of transformational and visionary leadership in organizations”(Bass 1985 cited by (Yukl, 2012, p. 264).

According to Bass and Avolio (2004) the transformational leaders are characterized as follows:
- Trying to leverage the level of awareness, among employees, of the importance of achieving valued outcomes. Trying to encourage others to surpass their self-interest for the sake of the organization.
- Trying to recognize and develop the needs of others to higher levels which can be related to work or not.
- Transformational leadership consists of four types. They include idealized influence, Inspirational motivation, Intellectual stimulation, and Individualized consideration (Bass, 1985; Conger, 1999).

Idealized influence refers to a leader who represents a charismatic model, power, and confidence, takes effective decisions, and behaves according to his/her values (Bruch and Walter, 2007). Idealized influence tightens on trust, values, and ethics (Guay, 2013). Furthermore, this leader sacrifices his/her gains for the gain of others (Limsila and Ogunlana, 2008). Inspirational motivation indicates the leader's optimism in creating a vision for the future among followers (Bi et al., 2012). The leader of this type motivates others mainly through communication of high expectations and provide meaning for the task at hand (Bacha, 2014). Intellectual stimulation points out the leader that helps others to become more creative by questioning assumptions, reforming problems, and approaching old situations in new ways (Erkutlu, 2008). Individualized consideration reflects the degree which the leader considers the others' abilities that decide their needs for future development (Bi et al., 2012). Each type of identified transformational leadership styles may be related to a specific situation (Yukl, 1999).

Regarding existing literature, there is a gap in research that examine leadership styles as organizational factors that enable the management of an organization favoring coopetition. Strese et al (2016) find that the consideration and participation leadership styles are positively correlated to coopetition. Theoretically, consideration aspect appears to be adequately met individualized consideration aspect (Antonakis and House, 2014). On the other hand, there is much research indicating the positive impact of transformational leadership on knowledge sharing (Li et al., 2014; Liu and DeFrank, 2013; Masa’deh et al., 2016; Shao et al., 2012).

2.3.2 Transactional leadership style

Transactional leadership style is involved in maintaining the normal flow of activities. It can be described as “keeping the ship afloat.” Transactional leaders use disciplinary power and an array of incentives to induce employees to achieve their best. In other words, the transactional aspect refers to leaders who inherently motivates others by exchanging rewards for performance. A transactional leader is often concerned with making sure everything flows smoothly today, instead of looking ahead to long-run strategy.
As aforementioned, Burns (1978) was the first one who sheds light on this type of leadership (Bass & Avolio, 2004). His view is based on making a mutually beneficial arrangement with others (Khanin, 2007). Bass (1985) contrasts transformational leaders with transactional leaders. He defines the transactional leaders as allocating punishments and rewards as central of any admirations (Khanin, 2007). Bass (1985) and Burns (1978) indicate that the transactional leader is the one who works within an existing structure or system, and he/she does not try to change the policies. They describe the transactional leaders following:

- Trying to meet the needs of the employees by emphasizing on exchange and reward behavior.
- Working closely with the employees and paying attention to errors and deviations, and taking the necessary action.
- Transactional leaders often prefer to avoid risk-taking and are very concern about time and efficiency (Bass, 1985). Therefore this type of leadership help to enhance organizational performance (Masa’deh et al., 2016; Shah and Ab. Hamid, 2015).

There are two types of transactional leaders: contingent reward and management by exception. In contingent reward, the leader explains to the others what needs to be done in order to be rewarded for the effort (Erkutlu, 2008). Accordingly, the contingent reward is based on an exchange system where the leader explains expectations to others, and they both agree on achieving organizational goals, and the leader offers recognition and rewards to them when goals are accomplished (Limsila and Ogunlana, 2008). Camps and Torres (2011) point out that the contingent reward is considered as constructive behavior. Management by exception refers to the approach in which the leader assures that the situations are perfect for employees to carry out their tasks successfully. The leader also monitors the work carefully and takes corrective action when things go wrong (Limsila and Ogunlana, 2008). This is why the transactional leader has full control of the entire operation. Management by exception can also take another form: passive management by exception. In this form, the leader only intervenes when objectives have not been met or after problems have become severe (Birasnav, 2014). Consequently, the passive leaders fail to explain expectations to be done, in fact, they get involved after the problems occur. This style does not react to problems and takes a wait and see stance where problems are awaited before taking (Erkutlu, 2008, Limsila and Ogunlana, 2008).
Unfortunately, there is not literature describe or indicate the relation between the coopetition and transactional leadership. However, a considerable body of research mentions that transactional leadership style could impact knowledge sharing. For example, Bryant (2003) finds that the transactional leadership is more effective at exploiting knowledge while transformational leadership can be more effective at creating and sharing knowledge.

2.3.3 Laissez-faire leadership style

Not organized, inefficient, avoid the critical decision making, and frustrate subordinates all are the characteristics of Laissez-faire leadership style (Goleman, 2000). This leader usually cannot take the responsibility to lead his team in order to achieve the goals, objectives, and vision of the company or organization (Eagly et al., 2003). This type of leadership can result in employees getting little or no training, employees act according to their own will, and poor organizational performance (Bass et al., 1990).

Bass and Avolio (2004) describe this style as “the absence of leadership, the avoidance of intervention or both. Decisions are often delayed, feedback, rewards, and involvement are absent, and there is no attempt to motivate followers or to recognize and satisfy their needs.” To sum up, leaders are hands-off and allow others to make the decisions. Furthermore, Laissez-faire leadership style leads to the lowest productivity among group members.

2.3.4 Mixed leadership style

Bass et al. (1990) argue that the same leader could apply different styles depending on the circumstances. Thus it does not necessarily mean that the transactional and transformational are unrelated (Hartog et al., 1997). Although Burns (1978) think that the two styles are entirely contrasting, Bass (1985) suggests that the best leaders are those who show both styles. The presence of transformational leadership does not necessarily ban the presence of transactional leadership. Bass and Avolio (1994) explain this relationship: “The transformational leader may provide a new strategy or vision to structure the way to tackle a problem. The transactional leader may clarify the “right” way of doing things. Likewise, consideration for a subordinate’s current needs and self-interests is likely to be transactional, while consideration for a
Dixon (1998) believe that when the transactional leadership is enhanced by transformational leadership, can result in most effective leadership. According to Bass & Avolio (2004), both leadership styles build trust, respect, and a desire to work collaboratively and collectively for a common goal. These two styles of leadership form a basis for organizational success (McGuire and Kennerly, 2006).

2.3.5 Autocratic leadership style

Autocratic leadership focuses on power more than the people. Van Vugt et al. (2004) describe the autocratic leadership style or the authoritarian leadership as the one who is characterized by individual control over all decisions and little input from group members. The leader practices all decision-making authority including determining policies, procedures, tasks, reward, and punishment (Van Vugt et al. 2004). The autocratic leader assumes that all employees are lazy, untrustworthy. Furthermore, he/she supposes leaving the functions of planning, organizing, and controlling to employees may lead to fruitless results. Therefore such functions should be done by the leader without any involvement (Fiaz et al., 2017). Authority, power, control, and manipulation are all the tools that autocratic leader uses in order to get the job done (Puni et al., 2014).

To sum up, the autocratic leadership is characterized as follows:

- Little input from team members.
- All decisions are made by a leader without involvement.
- The leader decides all work tasks and processes.
- Team members are likely untrusted.
- Rules are clearly outlined and communicated.
2.3.6 Changing leadership style

Leadership plays a significant role within organizations in order to cope with modern challenges. However, it is difficult to find studies related to project and functional managers and the changing of their leadership styles over time. Researchers of leadership have differing opinions about the efficacy of changing leadership styles. Some researchers think that a leading style is inherent while others believe a leadership style changes through the influence of many outside factors. The employees from different cultures are mixed in the workplace, creating more culturally diverse. In today's work environment, with the added pressures of economic uncertainty, one style of leadership cannot fit all situations. Leaders learn to adapt their leadership styles to meet the needs of various conditions (“The changing face of leadership,” 2010). Rosenbach et al. (2012) recognized that no single style is best for all situations. For instance, Sims et al. (2009) explain that the medical doctors change their styles depending on the situation. They adopt a directive leadership style when dealing critically ill patients, and empowering leadership style when the dealing with less acute situations.

Accordingly, the project and functional managers may not adopt one style (transformational, transactional, laissez-faire, and autocratic). However, they may shift from one to another. Depending on above arguments the third research question is formulated:

**RQ 3: How do leadership styles affect the project and functional manager’s behavior?**
3. Methodology

The Methodology chapter is describing the procedure of the theoretical concepts with the purpose to capture the research phenomenon. This chapter will address the research approach and research design, followed by a presentation of the case company, and the techniques used in the data collection. This section will also go into detail of data collection procedure, instruments, the constraints facing validity and reliability, and briefly introduce the background of the case company.

3.1 Theory and research

Bryman and Bell (2015, p. 23) explain the factors that are considered in the relationship between theory and research. They indicate three types of factors: deductive, inductive and abductive. When I started the thesis, I did not have any background on the notion of coopetition. Hence I initiated deep surfing through the existent literature on the relationship between the project manager and functional manager within matrix context in order to gain knowledge. I composed a theoretical framework in advance of the formulation of the research question and data collection. According to the deductive definition which Bryman and Bell (2015, p. 25), explain it as following: theory $\rightarrow$ finding.

The deductive approach has been adopted by the author. However, it could be argued that the inductive approach influenced the research precisely when the leadership framework has been affected by empirical data. As a result, the leadership theory has been extended to involve the autocratic leadership style which emerged from empirical data.

3.2 Research design

This paper aims to get a better understanding of the relationship between the project manager and functional manager and between the project managers within matrix context through exploring the contents of cooperation and competition in order to apply the coopetition theory. Further, examine the behavior of all managers in term of cooperation and competition, and the leadership style in order to explain the relationship between both the behavior and leadership style. Within this frame research questions have been identified to help the researcher fulfilling the aim:
RQ1: How do project managers and functional managers trigger acts of cooperation and competition?
RQ2: How do the cooperation and competition affect the behavior of the project managers and functional managers?
RQ3: How do leadership styles affect the project and functional manager’s behavior?

The access to limited data had played a role key in deciding the research design. The author had access to data sources represented by one unit of an organization located at KSA. This situation formed a bounded system which is the main characteristic of the case study that distinguishes it from other research design (Bryman and Bell, 2015, p. 68). On the other hand, there is a need to obtain an in-depth understanding of coopetition phenomenon in its real-life context (Crowe et al., 2011). Furthermore, the case study can provide answers to what and how questions although these type of questions tend to be related to survey research (Saunders et al., 2009, p. 146). Accordingly, a case study has been chosen by the researcher. According to Robson (2002), a case study is “a strategy which involves an empirical investigation of a particular contemporary phenomenon within its real-life context using multiple sources of evidence.” According to Bryman and Bell (2015, p. 68), case study tends to be associated with the qualitative research. Although the qualitative research is related to inductive approach, many researchers debate that the qualitative research can have significant role in deductive approach (Bryman and Bell, 2015, p. 398).

3.3 Method of data collection

The concept of methods indicates the appropriate techniques of data collection and analysis (Prasad, 2015). In case of studies design, data collection technique is multifaceted using qualitative methods such as interviews, observation, documentary analysis, or even questionnaires (Bryman and Bell, 2015, p. 68). As the aim of this study focuses on explanatory of managers’ behavior, the author selected interviewing as the mean of data collection. Since coopetition behavior and leadership styles are assumed to be unfamiliar concepts to the participants, data were collected by semi-structured interviews. Semi-structured interviews are based on an open framework and a list of questions on some specific themes, which allows a flexible interview process (Bryman and Bell, 2015). The
sequences of questions or questions may vary in the interview process depending on the conversation flow. The questions that will be asked are involved the nature of the behavior, contents of competition and cooperation, and leadership style. A list of interview questions is given in Appendix 2.

It is important to get many sources of data, also known as triangulation, as a tool to assure comprehensive results that represent the participants’ understandings. Triangulation is important to perform a case study reliably (Yin, 2009). Therefore the author thickened the data with additional data points: each participant had been asked about his behavior and other manager’s behavior. As a result, the source of each manager’s behavior came from his response, his peer's response and the response of the engineers worked for him.

A pilot-test had been conducted on one project manager with the aim at verifying the appropriateness of questions and the type of answers provided. Thus, the unclear questions were avoided or reformulated. Company contacts had been provided by personal initiatives as the author worked for same company for more than ten years within the same unit. Before conducting the interviews, an introduction letter had been emailed to the all participants to explain the research purpose and methods, as well as issues of confidentiality. A letter is given in Appendix 1. The interviews had been carried out via mobile phones and are of 1-2 hours long. Notes had been taking during the interviews to complement the recorded data. Participants had to agree on the recording process at the start of the interviews. Later, the interviews had been transcribed and sent to the interviewees for clarification and adjustments.

### 3.4 Population and sample

“Sampling in case study research involves decisions that the researchers make regarding sampling strategies, the number of case studies, and the definition of the unit of analysis. It is central to theory-building and -testing through case study research” (“Sampling,” 2010). Fixed purposive sampling (Palinkas et al., 2015) was used in order to select project managers and functional managers who work at same unit of an organization that is structured in a matrix way for personal interviews. Project managers and functional managers represented unit of analysis that allowed the research question to be answered. Maxwell (2005) recommends selecting
particular settings, individuals, or activities that can provide the information that is needed to answer the research questions and address the research objectives. This sampling technique is applied when the sample size is rather small like in case study (Saunders et al., 2009). Selecting project managers and functional managers who worked all together to be interviewed for this study was purposeful, in that they would understand the relationship with regard cooperation and competition. In order to achieve a thick, rich descriptive for the case (Esterberg, 2002), it was essential to include engineers who worked with the same project managers and functional managers. Four project managers, four functional managers, and eight engineers may enable the author to make a detailed analysis. In total 16 participants (PM1, PM2…PM5) (FM1, FM2…FM5), (E1, E2…E10) have been interviewed.

3.5 Method of data analysis

A deductive based analytical procedure had been utilized to analyze the collected data. Yin (2003) indicates that deductive perspective is particularly applicable to qualitative analysis (Saunders et al., 2009, p. 500). The existing theory was used to formulate the research questions. The author set the dependent variables (silent, cooperative, competitive and coopetitive behaviors) where he suggests the likely outcomes arising from independent variable (transformational, transactional and Laissez-faire leadership style). Accordingly predicting a pattern of findings was based on a theoretical framework to explain what the author expected to find (Yin (2003) cited by Saunders et al., 2009, p. 500). This outline assisted in arranging and carrying out data analysis. The Strauss and Corbin (1994) state that the qualitative research consists of the continuous interplay between data analysis and data collection. Based on the previous argument, data analysis of this work had been started after the first interview in order to identify patterns and to facilitate subsequent data collections (Strauss and Corbin, 1998). The notes during the interview had been a useful complementary source of information to assist the analysis, as the gap in time between the interviews, transcribing, and analysis could result in memory bias regarding nonverbal that might affect the interpretation of data.

3.6 Ethical consideration

Ethical considerations are critical in every research process involving human subjects, but they take on added significance in case study approach where researchers often work closely with
research participants over a period and frequently in the face-to-face mode (where researcher-
participant relationships play an essential role in the research outcomes). Therefore the author
tries efficiently communicate the confidential nature of the research and takes extra precautions
to ensure participants’ right to privacy. For this reason, the author follows the following steps:

- An introduction letter will be emailed to the participants to explain the research purpose
  and methods, as well as issues of confidentiality. Especially each manager will be asked
  on other managers, so the confidentiality is very critical in research.
- Participants have to agree on the recording process at the start of the interviews.
- Transcription will be sent to the interviewees for clarification and adjustments.
- Participants will be coded as PM(1..4), FM(1..4) and E(1..8) and no one will know his
  code.
- The researcher will avoid leading the interviewee's answers based on personal
  experience.

3.7 Quality criteria (trustworthiness)

Lincoln and Guba (1985) proposed primary criteria for assessing the quality of qualitative
research: trustworthiness which is made up of four principles:

1) Credibility, which parallels internal validity, addresses the integrity of the conclusions drawn
   from research. 2) Transferability, which parallels external validity, discusses the generalization
   of the result beyond the specific research context. 3) Dependability, which parallels reliability,
   addresses the repetition of the results of the study. 4) Confirmability, which parallels objectivity,
   addresses bias of the researcher.

Construct the credibility

The author adopted the respondent validation technique suggested by Bryman and Bell (2015) to
construct the credibility:

- The researcher provided each participant with an account he said to the author in an
  interview.
- The author sent his finding to participants.
- Using multiple sources of evidence. The author relied on three sources of the collected
data (project manager, functional manager, and the engineers). Each participant had been
  asked to describe his behavior and his peer's behavior.
Construct the transferability
The author applied thick description technique that suggested by Geertz (1973). Thick description technique is rich accounts of the details of culture. The company and managers will be described in next section. This technique will provide other researchers with the context for making judgments about the possibility of transfer the results to another setting (Lincoln and Guba, 1985).

Construct the Dependability
The dependability or reliability of this thesis was hard to determine since it was conducted in a setting of a single case company, and the results are hard to replicate as the given situation might differ in other companies (Bryman & Bell, 2015). Due to the fact that this study took the perspective of leadership behaviors as an enabling factor to coopetition behavior, it was important to acknowledge other factors such as culture, to make this study more reliable. That has to do with the commonly known fact that culture has an effect on the behaviors of the individuals in an organization and this study strived to investigate the behavior of the leadership at Company X unit Y. Therefore, a problem the author will face when concluding in regards to leadership behaviors was that all company situations, environments and managers culture differ and that other factors are influencing the managers’ view on their behavior toward each other.

Three leadership styles are considered in this research. Therefore, this study is less reliable in the sense that three leadership styles of many categories used.

The author adopted auditing technique which is suggested by Lincoln and Guba (1985) in order, to establish the merit of the research, and increase its dependability. This technique entails ensuring that complete records are kept for all phases of the research process. Therefore the following activates had been followed:

- Interviews were recorded to avoid loss of data.
- Interviews took the form of the semi-structured type ensuring that all relevant topics are covered.
- All collected data were archived in electronic form.
Construct the confirmability (BIAS)

The role of the researcher in qualitative research plays a critical factor in the process. He is the principal means for data collection and analysis. Qualitative research assumes that the researcher’s biases and values impact the outcome of any study because complete objectivity is impossible (Bryman and Bell, 2015). Therefore Bryman and Bell (2015) indicate that the researcher has to show that he/she has acted in good faith. Accordingly, it is vital for the researcher to consider his/her own biases throughout all phases of the research including data collection, analysis, interpretation, and the reporting phases of the process. For this study, in the interest of full disclosure and of guarding against unintentional influences of the author, here are some of them the author thinks that the bias stems out:

- Interviewer bias: the author worked for the same company and with same project managers and functional managers for more than seven years. Therefore the author had strong relationships with them. Moreover, the author had a perception of their behavior and leadership styles. However, this bias is unavoidable.
- Biased questions. The author overcame this type of bias by conducting a pilot test interview before formulating a final interview guide.
- Bias in data analysis. The author tried to overcome this bias by sending the findings to the participants for review and using the triangulation technique.

3.8 The company and informants

The study focused on a geographical unit of multinational company which is configured in a matrix structure and based in Saudi Arabia. This unit is responsible for engineering, manufacturing, and execution of all telecom and SCADA projects in that country. Each time the company wins a contract, the project is initiated formally including all operational activities. The unit has a matrix structure with four functional departments (see figure 4).
Each one represents a significant technical activity within telecom and SCADA systems. Each of the departments employs 4-7 engineers and technicians who provide the company with necessary competencies within one activity. The Project managers are responsible for the execution and management of all the contracted projects at the unit. It has four project managers. When a project is initiated, the operation manager assigns the project manager, and then together notifies the functional managers. In turn, they allocated necessary resources (i.e., engineers and tools) for the project according to the plan. In principle, the project managers do not have any stuff of their own. Thus, the projects constituted a cross-functional organizational structure. Usually, everybody on the project team is engaged in several projects at the same time. While the project manager is responsible for managerial activities including meeting the project requirements, the plan, and the cost, the functional managers are responsible for the technical solutions and to provide enough resources to perform the operational activities. In practice, the functional
hierarchy and the project hierarchy are mediated by assigned engineers, who usually be appointed to design, integrate, or test the project. The assigned engineers and project managers are the ones who, together with coordinate the everyday operations activities. However, there are frequent interactions between the project managers and the functional managers. On average, the Project managers handle 25 projects simultaneously. The size of the projects varied; in budget between US$ 100,000 and US$ 10,000,000; in duration between one and two years; and in content from minor improvements of existing equipment designs to deliveries of entirely new, complete SCADA and telecom systems on turnkey basis. The project managers have the formal responsibility to initiate, coordinate, and control the project work within the scope. Almost all the project managers are responsible for several projects at the same time.

Project managers, functional managers, and engineers will be interviewed. All participants are considered as experienced in their field. Informants have more than four years’ experience, which entails a deep knowledge about the company’s structure and processes. Official titles of the informants were: project managers, design manager, commissioning manager, integration manager, design engineer, commissioning engineer, integration engineer. Table 1 set out the demographic background of each interviewee who participated in this research.
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</table>
3.9 Limitation

While this study has provided a useful and vital addition to the body of literature concerning coopetition and Matrix organization, it is not without limitations.

- The scope of this study is limited to research at only one unit in one company located at KSA.

- Secondly, gender imbalance, the author took into consideration a sample of male managers without focusing on gender behavior. Therefore it was not possible to highlight trends among female managers.

- Thirdly, the leadership styles were investigated within an organizational context without considering other elements such societal or psychological factors influencing leadership styles.

- Fourthly, this study is limited to three forms of leadership.

- Lastly, the authors acknowledged that one of the limitations of this study was the size of the interviewee sample, as the amount was small regarding the scale of the company.
4. Data analysis

An analysis was conducted to explore:

- The content of cooperation and competition between the projects managers and functional managers and between the project managers as well.
- The behavior tendencies of all managers in term of cooperation and competition.
- The leadership style of each manager.

Accordingly, the responses from the interviewees were combined under three areas: contents of cooperation and competition, FMs and PMs Behavior, and PMs and FMs leadership style.

4.1 The contents of cooperation and competition

4.1.1 Content of cooperation

All participants indicated the needed resources as a primary and only source of cooperation between the project manager and functional manager. When the project starts, project managers plan, control, and coordinate the projects based on a commitment made by functional managers to provide all required resources within time, cost, and quality constraints.

“When the project is initiated I start preparing a project plan according to project milestones. This information is my output to all functional managers. In turn, they will allocate the required resources to execute the project. For example, design manager will decide which engineer will work on my project. The same thing for commissioning manager and integration manager we cooperate to deliver a successful project.”

Stated by PM1

“When a project manager is assigned by operation manager to a new project I receive a plan including all milestones of the project. Immediately I allocate one engineer or two depending on the scope to handle this project. This engineer will act as mediate between the project manager and me. Of course, the man-days is another thing we try to cooperate about.”

Stated by FM1
The same things have been revealed regarding the cooperation between the project managers. All PMs agreed that they have limited resources and they have to cooperate for it

“We are a small unit and the small team, but we have more than 40 ongoing projects. So the resources are limited.”

Stated by PM2

Accordingly, they found that they must work closely with other project managers to assure the availability of resources if it is needed.

“Sometimes due to the logistic problem the materials get delayed. To meet the schedule, I ask the other project managers for their materials, of course, it will be at the expense of their project. We all have the same type of projects, so we use same materials.”

Stated by PM3

As it is clear from previous extracts the test tools and human resources are one of the source of cooperation between the project manager and functional manager and between the project managers. This finding is in line with Luo theoretical framework which indicates the operational elements as a one of cooperation to deliver successful projects.

The project managers and functional managers pointed out the budget as a further source of cooperation between them. Sometimes, the functional manager estimation for required resources lacks accuracy. Therefore, during the project execution, the Functional manager asks project manager extra budget to meet the additional man-days of his team.

“When I receive the plan and the budget from the project managers at project starter, the MAN-DAYS of each activity is already decided. Usually, it is less than the actual. Therefore during project execution, I often ask the project managers for extra man-days.”

Stated by FM2
Out of literature review, the knowledge sharing is a further source of cooperation (Luo, 2005). Luo represents the knowledge sharing through technological, organizational and financial elements in which the managers can share their experience, skills or know-how to improve the performance of all managers. All participants confirmed the above aspect through indicating that they learn from each other or they can ask their peers information regarding their project process and customer. For example, PM4 developed a solution for a logistic problem related to his project. Later he shared the solution with others to avoid the same problem.

“You know, when you develop a practical solution to an issue, I share it to allow other managers to use it in all future situations.”

Stated by PM4

A further example, PM3 is a new project manager who always tries to learn from others

“I newly joined the company, so I need to learn from the others everything. I have an outstanding experience, but you know each company has a different process.”

Stated by PM3

4.1.2 Content of competition

Out of empirical data, the resources are revealed to be one of the elements of the competition between the managers. Accordingly, these findings meet Luo (2005) suggestion when he mentions the parent resources as one of the competition sources between the subunit. All functional managers and projects managers indicted competition over resources as a source of the conflicts. Project managers usually attempt to obtain needed resources (tools, human resources) to meet any unanticipated activities. At times, the project managers try to get the resources externally to achieve customer satisfaction in spite of the high cost. In contrast, functional managers oppose that and usually reject the project managers’ attempts to outsource work because of possible negative impact on the functional manager.
“It is the resources especially when I request extra resources or extra test tools for my projects at the expense of other projects. That will lead to a conflict with other managers especially project managers if I do not get the required resources I will outsource the activity but that will lead to big conflict with functional managers.”

Stated by PM3

On the other hand, The conventional way to project management considers projects as being independent of each other (Laslo and Goldberg, 2008). However, in the matrix organization, the vast majority of the projects compete for resources with other projects (Laslo and Goldberg, 2008). Competition emerges because the resources are limited, and allocating and deploying them have to depend on the project's priorities (Barker et al., 1988; Birkinshaw and Morrison, 1995). All project managers confirmed the previous arguments by indicating that they always try to get the best resources from functional managers before their peers do.

“I always try to get the best for my project including the best materials, the calibrated tools and the talented engineers before they are obtained by another project manager.”

Stated by PM1

The second source was uncovered when most of the participants mentioned that they always try to call the higher management support in order to execute specific tasks which raised due to particular circumstances in order to assure that the projects are performed efficiently, and with customer expectations with no cost. Luo (2005) indicated the higher parent support as a source of competition between the units which try to obtain in order to execute their project smoothly.

“Sometimes when I request something from functional managers they reject due to their reasons. I cannot sit and watch I have customer, projects, and activities to be performed. Therefore I ask the operation manager directly to interfere and push the functional manager. Of course I reasonable person I prepare strong case when I discuss with the higher management.”

Stated by PM1
With executive support, the project manager or functional manager has an ally. Executives can reallocate budgets and people, bring stakeholders together to encourage quicker decision-making and ensure information and attention are given to the entire organization.

“Many times I receive an instruction from the higher management to allocate extra resources to one project at the expense of another project. One of the PM is supported by higher management.”

Stated by FM1

The third element of competition is uncovered when the project and functional managers pointed out that they compete for authority and power. Matrix literature shows that power struggle between the project manager and the functional manager and between the project managers is one of the main drawbacks of matrix organization (Larson and Gobeli, 1987). The interviews revealed that the competition between project managers and functional managers and between the project managers is to occupy an advanced position in a unit’s entire system. Luo (2005) defines this source as a part of a competition between two units of one organization. The collected data revealed three types of power to be in line with Luo (2005):

The value-chain position
Only one project manager indicated the value-chain position. on the interunit level, Luo (2005), explains the value-chain position that it aims to dominate some significant primary activities (e.g., service). Accordingly, governing some critical value-chain activities makes other managers that share the same activities more dependent on that manager. PM1 succeeded to occupy the training service of all project. PM1 has the solid technical background and strong relationship with a customer who in turn approved PM1 to be a trainer of all projects in KSA. Accordingly, every other project manager has to coordinate with PM1 to deliver their projects. This dominance helped PM1 to promote his or her reputation, influence, and position within the company community (Luo, 2005).

“I have the strong technical background, I speak three languages, and I have a foreign education from prestigious school. According to the scope of all projects, we have to deliver training to the customer, onshore and offshore. In our cost, we considered local trainer I mean a trainer for the company. All other project managers, engineers, and functional managers tried to get this activity, but they failed because when they send their CV to the client to
approve it, they reject it. Outsourcing option is impossible. It will cost a lot. I had a long discussion with the
customer for a long time, and I convinced him to be the trainer. Moreover, here I am. I am the trainer. Now everyone
needs me and rely on me.”

Stated by PM1

And enhanced the bargaining power of PM1 with another manager especially when he needed
important resources and thus his priority in utilizing company resources.

“If other managers reject my request I can easily delay their project by postponing their training”

Stated by PM1

Intangible resources (Knowledge)

As it was mentioned before, the resource is a part of cooperation and competition. It holds true
for intangible resources (knowledge) as well. Tow project managers and one functional manager
indicated that they did not share knowledge with their peers especially the knowledge that offers
benefits and unique positions within the unit that might be lost by sharing. On the other hand,
most of the project managers admitted that they tried to seek knowledge from their peers to boost
the performance of their project. Luo (2005) indicates the knowledge sharing as a source of the
competition. The following extracts of the interviews explain the opinion of PM1, PM2, and
FM4:

“Every project manager trying to get information on the progress of other project managers and try to achieve more
than what is expected. That will be reflected positively on my reputation not only in the local unit but the whole
company.”

“ I have a solid technical background. Therefore, the other functional managers, project managers, and the engineers
ask me information how to design this how to test that and so on. Although it is not my business, I share with them
what they request.”

Stated by PM1

“I do not know if it is the competition behind this behavior, many times I ask other project managers for knowledge
but they hide it. If anybody asks me something, I will not hesitate to tell him.”

Stated by PM2
“I newly joined the company as functional manager for the central area, so I have to know everything about current projects to manager my team. Therefore I keep asking the managers details, but they seem not like that.”

Stated by FM4

Influencing power position
Luo (2005) describes the influencing power position that it aims to boost a manager’s power in participating in some of the critical decisions that impact the unit’s operations. The higher management can take a strategic decision after consulting with the project and functional managers. By exerting influencing power, a manager can direct the decision toward his/her interests and gains. PM1 indicated that they tried to sew the company decision to achieve his personal goals. Following extracts describes his opinion:

“You know the head office is located in the western area. Managing the projects of the central area from Jeddah was impossible. That was the case which I discussed with higher management to be moved to Riyadh. In that way, I was the first project manager in the central area. Then I had a long discussion with higher management to get my team there. I do not want each time to discuss the functional managers who are based in Jeddah on resources. Consequently, I convinced the higher management to assign one design engineer and two commissioning engineers to work on my projects. After that, I start acting as the operational manager here in the central area. No one can do anything without my permission. Even the new project manager here in the central area is reporting to me. Of course not official.”

Stated by PM1

“The PM1 is everything here. As I told you, he washed the brain of the operation manager. He controls everything. I cannot work like that.”

Stated by FM4

The fourth element of competition is the market expansion. This type of competition was detected only between project managers. Many project managers compete with each other to be assigned to multiple new projects in which various managers are interested. Through organizational structure, higher management typically decides the projects served by each manager. However, the project managers tried to affect the higher management decision in order
to get more projects to meet his purposes. For example, PM1 and PM2 indicated that they were interested in any new projects to guarantee that they have enough workload. Luo (2005) identifies this source as a part of the competition between the units, and he suggests that allowing such competition will improve the efficiency of these projects. The following quotes are the PM1 and PM2 response regarding this source:

“Since I have been moved to the central area. All contracted projects which are located in the central area they will automatically come to me. Moreover, all projects contracted in the western area will automatically go to the western team. However few projects in the pipelines are located in the southern area. I will do whatever I can to take it. You know Saudi market is down, and I want to assure that I have running projects for next five years.”

Stated by PM1

“I was a functional manager. I hate that position. I fight to be a project manager. To prove myself as a successful project manager I had to get the trust of higher management to be assigned to as many projects as I can.”

“This company easy to hire, easy to fire. So I want to make sure that I am assigned to many projects.”

Stated by PM2
4.1.3 Summary

The participants through their responses offer a variety of themes when describing the contents of cooperation and competition. There was a consensus among all participants that resources including tangible resources (personal and materials) and intangible resources (knowledge) are the primary source of the cooperation and competition between project managers and functional managers and between the project managers as well. On the other hand, most of the managers, particularly the project managers, indicated the higher management support, power and market expansion as underpinnings of competition. Table 2 illustrate the revealed contents.

Table 2 contents of cooperation and competition between PM-PM and PM-FM

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4.2 PMs and FMs behavior

4.2.1 Functional managers’ behavior

FM1 and FM4 showed competitive and silent behavior. The competitive behavior was dominated for a while specifically when FM1 and FM4 joined the company. As a functional manager, FM1 tried to control his resources, and he did not allow any project manager to neither take nor share decisions with him. On the other hand, FM4 was assigned as functional manager in the central area. The competition was very high between him and PM1. FM4 tried to seek the power through aggressively manipulating his resources following extracts of the interviews describes FM1:

“When I receive any request from PMs regarding extra resources. It is tough to decide. Because my decision will be at the expense of other project managers, therefore, I ask the operation manager to decide.”

Stated by FM1

“When FM1 joined the company he tried to control his engineering. I mean each time I requested his engineers to do some important activities they had to check back with him. Sometimes it is urgent I cannot wait therefore I discussed the higher management, and I convinced them to have full control over all engineers in my area. Since then the interaction with him very rare. Except when I need extra resources.”

Stated by PM1

Following extracts describes the FM4:

“Most of the power is held by the project manager. The project manager has a full-time project management administrative staff under him and controls everything. I have a very limited role. Of course in such environment, I will not cooperate with anyone. When I joined the company, I tried to control my resources it is my responsibility. However, I could not. So I sent my resignation.”

Stated by FM4
Most of the participants mentioned that FM1 and FM4 tried to get information from his team and other project managers. The requested information by both managers was represented by daily reporting, customers information, budget, and getting involved in the planning. Following quotes represent FM1 and FM4 behavior regarding knowledge:

“FM1 was too active he kept asking information about my plan and my decision. Once he tried to change my plan. Of course, I had a conflict with him.”

Stated by PM2

FM4 tried to be the boss, but I think he faced a high competition. At that time he was checking everything, asking details and following up. In return when I asked him anything he would say check with PMs.”

Stated by E1

On the other hand, both managers secured their knowledge and avoided sharing with anyone. FM1 was the customer before he joined the company as a functional manager. So he has a lot of information about customer standard and needs which was not evident in the project specification. According to the participants, FM1 did not release his knowledge when it is requested by other project managers.

“FM1 was our customer. So I think, he knowledgeable person. However when we ask him anything he avoided the answer.”

Stated by PM4

PM1 and PM3 have a new project in the exceptional area. FM4 was hired due to his experience in that area. However, he blocked his knowledge and did not share with anybody even with his team. Following extract describes his behavior:

“FM4 has experience for more than 20 years, but he did not want to share anything with anyone.”

Stated by PM1
FM1 and FM4 tried to achieve a superior position, and power over other managers through manipulating his unique knowledge resources. According to the participants, FM1 released his knowledge only during the official meetings and when the higher management is there.

“During the meeting with operation manager and country manager, I shocked when FM1 shared his information and solved the problem.”

**Stated by PM4**

Accordingly, the FM1 and FM4 were characterized as low knowledge outflows and high knowledge inflows. FM1 and FM4 had many conflicts with other PMs. Especially with PM1. After resolving the conflicts. Later they tended to be isolated and stopped seeking any information from anyone.

“When the project has started I deal only with the project manager of that project. I do not have any things to do with the functional manager. Of course, my vacation, evaluation, and objectives have to be approved by him. Few times I checked technical issues with him, but I did not get any answer he is powerful technically though. Anyway, I prefer to check with my colleagues first.”

**Stated by E4**

“I work on PM2 and PM4 Projects. I can manage everything by myself except the issues that require a decision. When I ask FM1 to take the decision, Most of the time he will ask me to do it by myself and keep him updated through email.

**Stated by E5**

“FM4 is already resigned. Currently, there is no interaction with him. Before he sent his resignation.”

**Stated by E1**

Consequently, their knowledge inflows became low as well as the outflows to resides at silent behavior.
FM2 and FM3 showed consistent behavior over time. The silent behavior was dominated. All participants including the project manager, functional managers, and their team describe the FM2 and FM3 behavior as inactive. They did not get involved with anything. When the project managers request extra activities, they manage it by themselves. The team of these two managers confirmed that they cannot get any information or solution from them. Following extracts of the interviews explain the behavior of FM2:

“I trust in my team they can manage everything they coordinate with everyone including PMs and the customer too.”  

Stated by FM2

“When I was a functional manager, FM2 was reporting to me. He is a hard worker. However, his management skills need to be proved. Therefore I keep in touch with his team.”  

Stated by PM2

“For technical issues, I go back to the PM1 he is technically very strong. On the other hand, my functional manager is busy in western area projects. I coordinate everything with PM1 AND PM3.”  

Stated by E2

Following extract explains the behavior of FM3:

“the activities are standardized. When I face a problem, I report it directly to the project managers to take a decision. That is the main interaction with the project managers. We cooperate to achieve the planned milestones.”  

Stated by FM3

When the participants have been asked about the underlying reasons behind their behavior. All of them confirmed Lado et al. (1997) arguments that related to seeking quiet life through their behavior. Following extracts reflect the previous findings:

“FM2 has seven kids. FM2 as a functional manager is earning a high salary which will not be able to get it outside this company.”  

Stated by E7
4.2.2 Project managers’ behavior

Through the interviews, it was found that the PM1 showed a high intensity of interaction with other project managers and engineers. The outflow and inflow of knowledge are very high comparing with other project managers. Frequently, he tried to follow everything to be aware of all activities regarding his projects, his peer’s projects, and company´s strategic decisions. Therefore he usually asked others for information. On the other hand, due to his strong technical background and his advanced social position in the unit´s network, he is considered as a knowledge repository and had never secured his knowledge when he was asked. Thus, PM1 tended to show coopetitive behavior. PM1 used to deliver very successful projects within time, budget and high quality. On the other hand, he successfully maintained a very strong relationship with everyone in the company. With the passage of time and absence of the motivations and competition, the knowledge inflows were reduced to be very low comparing to outflows. Consequently, PM1 moved to a cooperative area. Following extracts from interviews describes the PM1 behavior as well:

“To be able to deliver a successful project and to take a decision faster I need my team next to me not working remotely. Of course, I need to be updated with all activities. That will help me to take decision faster. Therefore I follow everything. On the other hand, I always try to get information about the process of other projects that will help me to be superior.”

“Of course if anyone asks me the technical support I will not hesitate to help him. I think it is not ethical to hide technical information. As I told you, I have a strong technical background. Even when I am asked about the progress of my projects, I will tell.”

“I would say, I am in a cooperation phase, it is right that there are many things to compete, but now I am in a situation, in which my experience, my skills, and my knowledge are saturated. Moreover, I have reached the maximum of this position. I feel I can give more than this position requires.”

Stated by PM1

“as I told you, I have joined the company recently. I work on central area project with PM1. So He supports me 100%. He is a very cooperative manager.”

Stated by PM3
“When I need anything, I call PM1. He is a very cooperative manager. Moreover, decision maker. On the other hand, he asks me information about his projects as well as other projects. He is not easy. He knows when has to cooperate and when he has to compete. I think his approach is working”  

Stated by E1

PM2 exhibited a competitive behavior with other project managers. This behavior was ruled since he became a project manager. The interaction with PM4 is very high as both are located in the same area. However, his interaction with PM1 is relatively high too. The inflow of knowledge was extremely high. He always attempts to obtain all required information to deliver a successful project and prove himself as a project manager notably he was a functional manager and did a lot to be a project manager. Some participants indicated that sometimes, he was aggressive when he asked something. Market expansion, resources including knowledge and higher management backing were the sources of the competition with other PMs. On the contrary, the knowledge outflows were low. The avoidance of knowledge transfer was his focal character. PM2 get used to delivering efficient projects. However, his relationship with his peers was affected by his behavior which they started avoiding him and stop telling him any information. Following extracts explain the PM2 behavior:

“I used to ask other project managers information about the progress of their project, but they hide it. Of course, if anybody asks me I will tell him.”  
“I was a functional manager. I hate that position. I fought to be a project manager and I did. To prove myself as a successful project manager I have to get the trust of higher management to be assigned to as many projects as I can.”  
“I always try to develop myself to be superior to others. I got MBA certificate. I am the only one in the office who had it.”  

Stated by PM2

“He used to ask me many things regarding managerial activities such as how to reduce the risk, controlling the cash flow and so on. However, I have never asked him anything.”  

Stated by PM4
“I have to think many times before asking PM2 anything. However, if it is urgent, such resources, I call him directly, and if he refused, I would ask the operation manager to push him. That is the only thing I may request him. If I asked him anything else, he would try to avoid the answer.”

Stated by PM1

“PM2 always asks me daily reports, activity progress, statues and so on. Sometimes asks information about projects not belong to him. I check with him only when I face a problem which needs clarification by the customer or to arrange my vacation.”

Stated by E4

“PM2 sits next to me in the same office so when he has any questions he asks me directly. However, he asks many questions he wants to know everything. Sometimes he is annoying.”

Stated by E5

PM3 joined the company before one year. PM1 controlled him. Therefore he tended to exhibit a silent behavior toward everyone. Most of his interaction with other FMs, PMs, and team are done through PM1. Although PM1 is not his manager, he acts as it is. Some participants indicated that PM3 does not want to have any conflict with PM1 because he looks for a quiet life in KSA. Following extracts of the interviews:

“I and PM1 work in the same area. So I can say that PM1 and I work on the same projects. When I face any problem related to the resources, PM1 will solve it because he has a strong relationship with operation manager and regional engineering manager.”

“ I have joined the company recently. I work on central area project with him. So PM1 support me 100%. He is a very cooperative manager.”

Stated by PM3

“I know PM2 since a long time he is very gentle. One time told me that he wants to spend a happy life with this company.”

Stated by E2
PM4 tends to show a highly cooperative behavior. The outflow is very high compared with the inflow. PM4 has experience for more than 20 years in management field. He had the confidence and knowledge. Everyone in the office relied on his managerial skills and the background. He does not hesitate to share his knowledge and resources with anyone. On the other hand, he was not interested in any competition within the company. Even he could not mention any source of competition during the interview. He did not try to acquire any information related to other projects, company strategy or power. However, through this behavior, he had a negative impact on his projects. Most of his project got a delay. On the other side, he has a strong relationship with everyone. Figure 12, as well as the following quotes from the interviews, clarifies the PM4 behavior:

“I am a cooperative manager. As I told you before there is nothing to compete with other project managers and functional managers except the resources which can be managed through discussing and prioritize overall company strategy.”

**Stated by PM4**

“He has substantial experience in the management field. When I ask him any information, he will share. For example, one time I asked him his targets which he had to achieve. He immediately shared with me. He is a very cooperative person. His questions are limited to technical things, but he seldom asks.”

**Stated by PM1**

“He is the best. He will be there when I ask help. He helped me a lot when I became a project manager. On the other hand, he has never asked me anything.”

**Stated by PM2**

“He is a very supportive person. When anyone asks him anything, he will share immediately. He always thinks as a group. I remember once, PM2 asked him to release his resource because his project was urgent. He immediately did. Later the project of PM4 got a delay because of that.”

**Stated by E4**
4.2.3 Summary

The data generated from the interviews indicate that all functional managers tend to show a silent behavior. All functional managers had a necessary interaction with projects managers at project starter. Later, after locating all required resources, they became isolated and performed minor activities. The functional team played the leading role in the project execution behalf of the functional managers. FM1 and FM4 tried for a while to behave competitively through controlling their resources and continuously asking PMs information and feedback. However, they moved to the silent behavior after they were not capable of maintaining a good relationship with other project managers and higher management. Figure 5 illustrates the functional manager's behaviors. On the contrary of Functional managers, the interviews point out that behavior of project managers varied from one to other. Figure 6 illustrates the project managers behaviors.

![Figure 5 FMs behavior (developed by author)](image1)

![Figure 6 PMs Behavior (developed by author)](image2)
4.3 Leadership style

4.3.1 The leadership style of functional managers

FM1 and FM4 show two different leadership styles over time, Autocratic and laissez-faire styles. Out of empirical data, FM1 and FM4 controlled all the decisions related to their resources and projects activities and took minimal inputs from other members including the project managers. According to the participants, they made decisions based on their own beliefs and did not involve others in their suggestion or advice. The previous finding is in line with an identified autocratic style which is described by Van Vugt et al. (2004) as the one who is characterized by individual control over all decisions and little input from group members Later they showed non-leadership style. The following extracts of the interview explain FM1 and FM4 leadership style:

“When FM1 joined the company he tried to control his engines. I mean each time I requested his engineers to do some important activities they had to check back with him. we don’t work like that. On the other hand, he assigned the resources without involving us in the discussion.”

Stated by PM1

“The same story with FM4, he wanted to be the boss here in the central area. Sometimes I surprised that my project activities are freeze without informing me.”

Stated by PM1

“FM1, when he joined the company he did not trust anyone. He created a terrible environment to work here in the west area.”

Stated by PM2

“FM4 has strong experience, and he is old compared with other. I think he tried to be the boss.”

Stated by E1

“FM4 was a dictator. He did not accept any advice.”

Stated by E2
Both FM1 and FM4 had many conflicts with the other project managers specifically with PM1. The actual lines of authority within the organization had been understood clearly by everyone after conflict resolution. Of course this one benefit of the conflict within matrix organization (J. K Pinto and Kharbanda, 1995). FM4 stated describing his relationship with PM1 after the conflict:

“Most of the power is held by the project manager. The project manager has a full-time project management administrative staff under him and controls everything. I have an insufficient role. Of course in such environment. I will not cooperate with anyone. When I joined the company, I tried to control my resources it is my responsibility. However, I could not. So I sent my resignation.”

Stated by FM4

Consequently, both managers adopted a style that characterized as not organized, inefficient, avoid the critical decision making, and frustrate subordinates. According to Bass and Avolio (2004) it is Laissez-faire leadership. They gave up the authority and responsibility, and avoid decision making entirely. Following extracts of interviews explain the leadership style of FM1 and FM4:

There are two FM1. First one before the conflict with the PM1 and the other one is after. Before, he was controlling and monitoring everything. Now when the project starts, I do not hear from him.”

Stated by E4

“These days, FM1 tries to maintain the status quo. Before, he believed the decisions were up to him. He always avoids the decision for example, once I asked him to decide on a modification. He asked me to take the decision through an email and keep him in the copy.”

Stated by E5

In contrast to the FM1 and FM4, FM2, and FM3 adopted one leadership style over time which is laissez-faire. All participants agreed that they made decisions regarding their activities and they solve problems without any guidance from FM2 and FM3. FM2 and FM3 were inefficient because they are not able to do anything. Everything was done by project managers and their employees. The following extracts explain the FM2 and FM3 behavior:
“FM2 is a nice person but as a manager no way.”

Stated by PM1

“FM2 always tries to avoid a decision. He always says check with PMs. Even when I need training, vacation, my objectives, evaluation. I have to check with the PMs.”

Stated by E2

“I remember once FM3 did everything according to the design. Unfortunately, there was an obvious mistake in the design. However, he continued the work according to design and did not pay attention to the problem. The project got delayed due to this problem. When I blame him, he said it is not business.”

Stated by PM2

4.3.2 The leadership style of project managers

PM1 showed a kind of leadership based on the assumption that each situation is different, and each requires a unique combination of leadership situations.

“ I am a rational person. I act and behave depending on the situation.”

Stated by PM1

Out of empirical data, the leadership style of PM1 varied from one individual to another, depending on the employee, and the task. Sometimes he was transactional. He used to define the job requirements, establishes the rewards, such as bonuses, and communicates the rules. PM1 had the authority to supervise the employee’s actions and evaluate his performance. All previous findings are confirmed that PM1 adopted a transactional style (Limsila and Ogunlana, 2008). The empirical data indicated that PM1 adopted transactional style along with standard projects and with the team who used to work with. These findings confirmed Bryant (2003) arguments that suggest the transactional leadership is more effective at exploiting knowledge. Following extracts indicate the transactional style of PM1:

“When I have a highly skilled team, then I allow the team to work independently after providing them with all needed resources and instructions.”

Stated by PM1
“My objective which is linked to the bonus is formulated by PM1. It usually related to project progress.”

Stated by E1

On the other hand, PM1 exhibited transformational leadership style through encouraging the employees to explore new ways to solve the new problem, offering support and encouragement to an individual especially the new employees who lack the experience and building the trust and respect relationship with everyone. Accordingly, PM1 met the characteristics of transformational leadership style that were represented by intellectual stimulation, individualized consideration and idealized influence (Bass and Avolio, 2004; Bass, 1985; Conger, 1999). Following extract describes the transformational leadership style of PM1:

“When I have an engineer that lack efficiency and productivity I keep supporting him till he is able to exploit the process.”

Stated By PM1

“As I said, I newly joined the company. PM1 is very supportive. He is helping me to understand the process of the company faster. I entirely rely upon and trust him. He is very skilled and knowledgeable manager. He always suggests excellent ideas to me, and I adopt it.”

Stated by PM3

“He showed real honesty, trust, and respect for others. He always supports me. Sometimes he fights with my functional manager to get training and improve my skills. I get all information when the project starts. Then I do not hear from him, except when he gets complains from the customer. At urgent situation, he tries to be close to me and support me. I am pleased working with him.”

Stated by E1

To sum up, PM1 possessed mixed style consists of transformational and transactional traits confirming Bass (1985) arguments that the best leaders are those who show both styles. Through the interviews, PM1 tended to show purely transformational styles through emphasizing only on Idealized Influence and the charisma due to the absence of motivations.
“I achieved everything regarding this position, I have more than this position is required. These days I do not care for project activities. However, I always try to maintain the trust between me and other. Of course, I am still the leader number 1 I have the charisma.”

Stated by PM1

In contrast to PM1, PM2 showed one leadership style over time. He possessed a transactional in his leadership roles as he always mentioned the importance of results, deadlines, procedures, standards, and performance of his projects. He focused on making sure that his team is performing at full capacity. Sometimes, he waited for things to go wrong before taking action. According to the participant, PM2 preferred exchange relationship systems with employees. He motivated the team through rewards and punishment. Accordingly, PM2 met the definition of transactional style indicated by Bass (1985). Following extracts describes leadership style of PM2 :

“ the deadline is very important. It is the criteria that measure my performance. Therefore I request the team for a daily report. This approach keeps me updated. I can see the benefits are there, i.e., successful projects, satisfied customers, engaged staff.”

Stated by PM2

“PM2 always asks me daily reports, activity progress, statues and so on.”

Stated by E4

“I think he is a very practical manager. However, what I do not like about him when he links my vacation with task achievement. I think it is not fair.”

Stated by E6

“what I like about him that when I achieve a very important task, he recognizes that and sends an email to everyone thanking me. Unfortunately, the bonus is not related to my objectives.”

Stated by E7
Through the interviews, it was found that the PM3 entirely relied on PM1 in coordinating and delivering his projects. He could not take any decision without informing PM1. PM3 was dominated and manipulated by PM1. Thus PM3 was laissez-faire in his leadership roles. Following quotes explained PM3 behavior:

"as I told you, I have joined the company recently. I work on central area project with PM1. So He supports me 100%. He is a very cooperative manager."

“We have our team here in the central area, so I do not ask the FM1 anything. When I need, I request it from PM1, and he will manage.”

“PM2 is in a different area, and I am new in the company if he needs anything or if I need anything from him, PM1 will manage.”

“I and PM1 work in the same area. So I can say that PM1 and I work on the same projects. When I face any problem related to the resources, PM1 will solve it because he has a strong relationship with operation manager and regional engineering manager.”

Stated by PM3

Finally, the empirical data concluded that the PM4 tended to be transformational in his leadership style. He has experienced person within management field, confident and charismatic. He showed a transformational leadership style through building respect and mutual trust between him and the other employees. Everyone was happy to work with him. His office was open for everyone for his advice and experience. He always tries to create a new idea and shares it with everyone. These findings are in line with Bryant (2003) who finds that transformational leadership can be more effective at creating and sharing knowledge. The participants admired PM4. Following extracts explains the PM4 behavior:

“I have experience for more than 20 years so I have many stories that I can tell my team. It may inspire them to solve their problem.”

Stated by PM4

“As I told you before he is the best. He will be there when I ask help. He helped me a lot when I became a project manager.”

Stated by PM2
“I trust and respect him because he consistently chooses to do the right thing, rather than the merely expedient. I remember we received the equipment just one day before FAT with the client. Due to manufacturer malfunction, the equipment did not work. The commissioning engineer solved the problem. It was a temporary solution by which he will be able to do the FAT. PM4 did not accept to do the FAT because it is not ethical. His project got a delay. ”

Stated by E4

4.3.3 Summary

Based on the interpretation of the interviews, it is noteworthy to point out the fact that the functional managers tend to show laissez-faire style except FM1 and FM4. FM1 and FM4 showed autocratic style for a while, but ultimately they moved to laissez-faire style. All FMs were inactive, indifferent, uninfluential, and inattentive and, above all, typically absent when needed. On the contrary of FMs, the project managers adopted different styles. PM1 showed mixed leadership style. PM2 exhibited a transactional form. Laissez-Faire was the leadership style of PM3. Transformational leadership style was dominated the PM4 behavior. Table 3 breves the leadership style of each manager.

Table 3 PMs and FMs leadership style

<table>
<thead>
<tr>
<th>Leadership style</th>
<th>Autocratic</th>
<th>Mixed</th>
<th>Transactional</th>
<th>Transformational</th>
<th>Lazier-faire</th>
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5. Discussion and implications

The present work explores leadership styles of the project manager and functional managers in order to enable the organization favoring the co-opetition behavior between the managers. The inter-firm level has been mainly received attention by the researchers, whereas only a few studies have been created on the intra-firm level. So far, the existing studies on the co-opetition on intra-firm level centered on outcomes such as organizational learning. In this paper, the author focuses on the relationship between the managers within a unit of an organization adopted matrix structure as a specific case of the intra-firm level. This work has a twofold contribution to existing literature. First, it extends the intra-firm literature since the author focuses on the interpersonal level as a specific case of the intra-firm level. Second, it extends research on matrix organization by conducting the first study on the co-opetition within its context which may lead to the optimal matrix.

Traditionally the relationships between project managers and functional managers and among project managers in matrix organization have been based on cooperation (Pitagorsky, 1998). The literature about the relationship between individual has provided new insights into a competition between managers (Steinhage et al., 2017). The empirical findings from interviews showed that the relationships between project managers and functional managers and between the project managers have both elements of competition and cooperation. These findings shed light on the importance of balancing cooperation and competition to achieve optimal matrix organization. Instead of focusing on conflict resolution techniques, and blaming the nature of matrix organization, more focusing has to be placed on how balancing cooperation and competition. This work contributes to the literature on Matrix organization that highlighted the matrix organizations design that actually works (Galbraith, 2009).

To draw the conclusion on our first research question: the presence of two elements; competition and cooperation lead to assume that the co-opetition theory can be applied. This work contributes to the literature on intra-firm and interpersonal co-opetition that highlighted the importance of balancing both cooperation and competition (Bengtsson and Kock, 2014, 2000, 1999; Ghobadi and D’Ambra, 2012a; Lado et al., 1997; Luo et al., 2006; Luo, 2004; Osarenkhoe, 2010; Walley, 2007; Yami, 2010).
I found that the different leadership style has different effects on the behavior of the project manager and functional manager. This finding contributes to coopetition research that has indicated the importance of leader’s skills to enhance the coopetition (Lado et al., 1997). Each manager may lose or win from the complex interplay between the cooperation and competition. I debate that leadership styles of managers represent characteristics that enable them to cooperate and compete effectively. Furthermore, this result confirms Lado et al. (1997) discussion which indicates the importance of the values and actions of managers in creating an environment that enhances both cooperation and competition. Our findings reveal the critical role of the leadership style of project manager and functional manager for firms that aim to cope with the difficulties in balancing cooperative and competitive forces.

A mixed leadership style (the manager who combines transformational and transactional leadership styles) promotes trust, respect, and a desire to work collaboratively and collectively for a common goal at the workplace (Bass & Avolio, 2004). Accordingly, the manager who adopts resilience style tends to stimulate previous work environment through driving the cooperative, and competitive abilities to absorb and transform the knowledge acquired between the managers.

Autocratic leadership style enhances the inflexible environment, untrusted and less creativity among employees (Fiaz et al., 2017) through making all decisions with little input from others and considering the laziness as the primary trait of the other. The manager tends to stimulate the previous environment by adopting the autocratic style and driving only the competitive abilities through absorbing the knowledge without transferring. Although Transactional leadership style does not foster such environment (Sanda and Arthur, 2017). This paper finds that the manager who posses a transactional style tends to stimulate a competitive behavior.

Transformational leadership style strengthens the ability to transfer the knowledge to another manager as well as the intensity of interactions by fostering commitment of all employees (Chen & Tjosvold, 2006; Song & Thieme, 2006). On another hand, the transformational leadership style encourages the other to depend on the transformational leader and decrease the creativity
which leads to free-riding (Eisenbeiß and Boerner, 2013). Consequently, I find the manager who adopts transformational style tend to enhance the cooperative behavior.

The not organized, inefficient, avoid the critical decision making and frustrate subordinates all are the characteristics of Laissez-faire leadership style (Goleman, 2000). I find that the manager who adopts Laissez-faire style tends to stimulate silent behavior through avoiding the cooperative, and competitive abilities.

This work has particular sense and importance to project managers and functional managers who work at matrix organizations. The research aimed to determine if a specific leadership style had been adopted by the project manager and functional manager which may enhance the coopetitive behavior. About the research questions and the conclusions generated by the semi-structured interviews with four project managers, four functional managers and eight engineers the following recommendations could facilitate project and functional manager’s careers:

- The company has to take into its consideration the leadership styles of project managers and functional managers at the hiring stage.
- Consider the mixed leadership style when PMs are hired because of its revealed linkage with the coopetitive behavior and knowledge flows as well.
- Consider the specific developmental needs of the mixed-style managers at any stage of their career to avoid adopting another behavior, for example, PM1.
- Laissez-Faire style can work and survive along with other PMs at this company especially with the expert team, but it can affect the learning of the company and job satisfaction for example FM4.
- Autocratic style does not work along with the mixed style PMs. As a result, the autocratic leaders tend to move to a silent behavior creating the unsustainable environment.
6. Future Research

First, we limited our analysis to four particular forms of leadership. It would be worthwhile to extend our research by examining further leadership styles, such as authentic leadership. Authentic leadership required for successful alliance projects in which the companies cooperate and compete at the same time (Lloyd-Walker and Walker, 2011).

Second, since coordination is pivotal to generating returns from intra-firm coopetition (Luo, 2005; Tsai, 2002). On another side, through the collected data, it is important to note that type of matrix structure might have an impact on manager behaviors. For example, all participants confirmed that the project manager has much power than the functional manager. This means that the organization has adopted a strong matrix structure which might be another factor besides the leadership style that affects the manager's behavior. Accordingly, another question arises on coopetition between the managers: what are the organizational structures (strong, balance, weak) foster the coopetition between managers?

Third, since the coopetition behavior between the managers relies on informal communication which might decide complex coopetition activities (Tsai, 2002), a deeper understanding of lateral interactions might be an area for further research.

Fourth, our analyses are based on a single case study. Future studies might rely on multiple case studies to improve data quality and to limit common method bias. For instance, it could be interesting to interview project managers and functional managers of different departments, to get a more accurate estimate coopetition behavior.

Fifth, the results of our study are based on male participants. It would be worthwhile to extend our research by examining gender factor.
References


Steinhage, A., Dan, C., Duncan, W., 2017. The Pros and Cons of Competition Among Employees.


Appendix One: Invite Letter to Semi-Structured Interview

Project and functional manager: coopetition paradox and leadership impact

Dear

I am writing to confirm your agreement to participate in a semi-structured interview regarding the above topic. The interview will take place on (DATE), at (TIME) via mobile phone. As previously discussed I am currently completing my final year master in industrial management and innovation dissertation regarding the nature of the relationship between you and other manager and how Leadership style influences your behavior, as such the results of this interview may be used within the findings section of the final master submission.

The interview will last approximately 120 minutes and will be recorded with your permission. I will also take notes throughout to ensure I capture all of your responses. Please note that all responses will be anonymized and treated in the strictest confidence. In addition all transcripts and notes following the semi-structured interview will be destroyed on submission of the final master dissertation. Please note that you retain the right to refuse to answer any question and can terminate the interview at any time.

If you require any further information please do not hesitate to contact me on 0046725653705 or email: ibraheem.eng@gmail.com

Yours sincerely,

Ahmad IBRAHEEM
Appendix Two Interview Guide

General questions
1- Could you please tell about yourself?

Contents of cooperation
2- Could you please tell me the subjects that you cooperate with functional managers (FM1, FM2, FM3, and FM4)? Why?
3- Could you please tell me the subjects that you cooperate with project managers (PM1, PM2, PM3, and PM4)? Why?

Note when the informant is Functional manager, he will be asked only about the project managers.

Contents of competition
4- Could you please tell me the subjects that you compete with functional managers (FM1, FM2, FM3, and FM4)? Why?
5- Could you please tell me the subjects that you compete with project managers (PM1, PM2, PM3, and PM4)? Why?

The manger behavior
6- How do you describe your behavior toward other project managers in terms of cooperation and competition? Could you please explain in examples?
7- Why do you behave like that?
8- What are the consequences of your behavior?
9- Have you changed your behavior toward him over time? Why/Why not?
10- Could you please describe the behavior of other managers toward you?
11- What are the consequences of his behavior?
12- Have he changed his behavior toward you over time? Why/Why not?

Leadership style
13- How would you describe your leadership style in your current position/job?
14- Why do you apply this leadership style, do you think it works? Could you illustrate the leadership style with some examples/example situation?
15- How would you describe the leadership style of other PM? Could you illustrate the leadership style with some examples/example situation?
16- Have you changed your leadership styles over time? Why/Why not?