# Tacit Knowledge Sharing in a Lebanese Family Business: The Influence of Organizational Structure and Tie Strength


## Abstract

Purpose: This study explores the influence of organizational structure on relationship formation and tacit knowledge sharing within a family business context.

Design/methodology/approach: Utilizing a single case study approach, data were collected through interviews and questionnaires from twelve participants at a family-owned advertising and communication firm in Beirut, Lebanon.

Findings: The research highlights the critical role of organizational structure in enhancing organizational effectiveness through knowledge transfer. It underscores how both intra-organizational and inter-organizational ties influence knowledge sharing processes and demonstrates the varying impacts of tie strength on tacit knowledge distribution.

Originality: This paper contributes to the literature by examining the interdependence between organizational structure, tacit knowledge transfer, and tie strength in family businesses. By analyzing these elements across internal and external boundaries, the study offers a fresh perspective on network dynamics. The research highlights that traditional definitions of network ties may not fully capture the unique environment of family firms, where structural nuances impact knowledge sharing and performance. Practically, the findings provide actionable insights for managers to design organizational structures that optimize tacit knowledge flow, fostering innovation and competitiveness. This work challenges existing frameworks and offers guidance for improving knowledge management in family businesses, supporting sustainable growth and success.


**Keywords**: family business, organizational structure, tie strength, knowledge sharing, networks, organizational performance.

## Introduction

Organizational structure in family firms often presents unique dynamics, shaped by the intersection of family and business systems. Definitions of organizational structure typically encompass aspects like the firm's hierarchy, decision-making centers, task division, and relationship formation (Ahmady, Mehrpour, and Nikooravesh 2016). In family businesses, these elements are profoundly influenced by familial relationships, which can either strengthen or complicate the formal structures (Zellweger et al., 2010). Such firms are characterized by distinctive authority relationships, often layered with familial ties that impact the reporting systems (Pryke 2017).

In the context of family firms, human interactions play a pivotal role in determining the firm's success. These interactions can be effectively examined through the lens of social network analysis, which allows for a comprehensive exploration of the flow of resources, such as knowledge, between various actors, including family members and external stakeholders (Lei and Xin, 2011). This approach highlights the intricate web of relationships and interactions that underpin family businesses and emphasizes the importance of both formal and informal communication channels. Knowledge management is particularly crucial in family businesses, as these firms frequently depend on tacit knowledge passed down through generations. This transfer of knowledge significantly affects both the performance and long-term sustainability of the business (Björnberg and Nicholson, 2012). Tacit knowledge, which is deeply embedded in the company's culture and traditions, forms a valuable asset that can be challenging to formalize and communicate. In family firms, effectively managing this knowledge not only facilitates the transfer of ancestral business practices but also enhances problem-solving capabilities. By leveraging the readily available familial and business knowledge, family firms can provide unique insights and solutions to complex issues (Ajmal and Koskinen, 2008; Cabrera-Suárez, De Saá-Pérez, and García-Almeida, 2001). Furthermore, the strong ties and

trust inherent in family relationships create a rich reservoir of social capital. This social capital facilitates knowledge sharing and collaboration, further strengthening the firm's adaptive capacity and resilience in the face of challenges. Family firms can thus leverage their social networks to maintain a competitive edge by continuously innovating and adapting to changing market conditions.

The interplay between organizational structure, tie strength, and knowledge sharing in family firms has been acknowledged but not extensively studied. This research aims to shed light on how the strength of relational ties within family businesses impacts the types of knowledge shared, taking into account the influence of organizational structure (Steiger, Hammou, and Galib, 2014, Botero et al., 2021). We investigate the effects of interpersonal relations within internal and external networks on knowledge sharing, aiming to discern their impact on organizational performance in the context of family firms. By integrating social network analysis with organizational theory, the study seeks to elucidate how familial relationships affect knowledge sharing and decision-making processes. The significance of this research lies in its potential to bridge gaps in existing literature by providing empirical evidence on how relational ties—both familial and non-familial—shape knowledge management practices in family firms. This is particularly important since family firms face challenges such as the balance between preserving traditional knowledge and adapting to modern business practices. A single case study of a family-owned advertising and communication agency in Beirut, Lebanon, is employed to explore these dynamics. The agency, a medium-sized organization with approximately 60 employees, operates in a sector where project-based tasks require robust knowledge sharing and relationship management to meet project demands (Miraglia and Wei 2017; Pryke 2017). The findings reveal a correlation between tie strength and knowledge sharing, emphasizing the need to consider the organizational structure and the role of family and non-family actors in projects when examining these relationships. This

research contributes to the family business literature by illuminating the role of organizational structure in defining tie strength and influencing network capabilities such as relationship formation and resource flows within family-owned businesses.

In this paper, we first define and discuss the concept of organizational structure within a social context, focusing on relationship formation. This aspect is particularly relevant in family businesses, where relational dynamics significantly influence organizational hierarchies and decision-making processes. We then explore how these individual relationships aggregate into networks, examining network characteristics such as tie strength, density, and centrality, which are crucial for understanding resource flow, especially knowledge. The significance of knowledge within an organizational setting is elaborated upon, highlighting its role in enhancing operational efficiency. The unique challenges and advantages of knowledge management in family businesses, where family and business systems intersect, are also discussed. We aim to demonstrate how a deep understanding of knowledge flow, relationship formation, and organizational structure can lead to strategic improvements, such as the implementation of robust knowledge management systems. Following this foundation, we emphasize the importance of examining interpersonal relations within both intra-organizational and inter-organizational contexts, focusing on tie strength and knowledge sharing. This exploration is critical for hypothesizing potential impacts on organizational performance in family businesses. Furthermore, it is critical for assessing the potential impacts on business strategy and performance, ultimately informing practices that can lead to more robust and adaptive organisational structures The paper concludes with the presentation of specific hypotheses that guide our investigation, setting the stage for a detailed analysis of these dynamics.

## Theoretical Discussion and Hypotheses Development

### *Organizational Structure*

In family businesses, organizational structure not only orchestrates work and authority but also intertwines with familial relationships, affecting both governance and operational dynamics (Chua, Chrisman, & Sharma, 2003). Family firms often exhibit structures that reflect both formalized business practices and the informal nuances of family involvement, which influences how tasks are managed, and decisions are made (Zellweger, Eddleston, & Kellermanns, 2010). These structures range from highly centralized, often found in founder-dominated firms, to more decentralized in multi-generational family businesses where power and decision-making responsibilities are spread among family members (Minichilli, Corbetta, & MacMillan, 2010).

Formalization in family firms involves not only standard business policies but also family governance mechanisms, such as family councils, which play a crucial role in mediating between family and business interests (Astrachan, 2010). Centralization is particularly pronounced in family businesses where founders or dominant family leaders exert significant control, impacting the flow of information and the agility of the organization (Haj Youssef et al., 2024; Miller, Le Breton-Miller, & Scholnick, 2008). Complexity arises not only from business operations but also from the layering of family relationships, which adds a unique dimension to interpersonal interactions and resource flows (Basco, 2014).

A key focus in social analysis is the flow of resources, including information and knowledge (Van De Ven, 1976; Lei & Xin, 2011). These flows are either inhibited or facilitated by an organization's structure, which may be hierarchical or flat, impacting control, authority, information flow, and decision-making power (Handy, 1993; Rishipal, 2014). Hierarchies, characterized by multiple layers of authority, often face challenges in knowledge sharing due to centralized power, which may result in a reluctance to share information, fear of speaking up, and reduced visibility between layers (Reitzig & Maciejovsky, 2015; Handy, 1993). In contrast, flat organizations promote decentralization, with power distributed across all levels,

which has been shown to enhance integration and information sharing (Reitzig & Maciejovsky, 2015; Mahmoudsalehi, Moradkhannejad, & Safari, 2012; Willem & Buelens, 2009). Understanding these dynamics is essential for analyzing how organizational structure in family firms impacts business performance and succession planning. The interplay between formal and informal structures, influenced by family governance systems, provides a unique ecosystem for studying tie strength and knowledge sharing in these organizations.

*Forming Networks*

Organizations, particularly family businesses, are inherently social entities. They are comprised of interrelated divisions with complex linkages that rely heavily on the flow of information and decision-making processes (Mintzberg, 1979). Within these organizations, individuals establish numerous relationships, forming networks of actors or nodes through which they acquire and share project information (Pryke, 2017; Borgatti & Halgin, 2011). These connections, often described as 'pipes,' are critical channels for the flow of resources. Their effectiveness is characterized by speed, volume, and quality, which are crucial factors in understanding how knowledge moves within a network of relationships. Family businesses are particularly noteworthy for their dense networks of relations, both among family members and with external stakeholders. This unique configuration offers a valuable perspective for examining network dynamics at both the intra-organizational and inter-organizational levels (Palmer, 1996). In this context, network theory provides insights into the mechanisms that influence network structures and the outcomes of resource sharing within these complex familial and business intersections. The ties within these networks vary in strength, from strong ties, which indicate close, trust-based relationships with extensive communication, to weak ties, which are more distant and involve less frequent interaction (Borgatti & Halgin, 2011; Levin & Cross, 2004). Granovetter (1977) underscores the importance of not only the strength of these ties but also their presence, as both are foundational to network efficacy. Strong ties

facilitate substantial knowledge transfer and provide redundancy, which can enhance stability and reliability in knowledge exchange. In contrast, weak ties serve as bridges to new and diverse information, introducing novel and innovative knowledge into the network. Both strong and weak ties are instrumental in determining the nature of knowledge transferred and are crucial for assessing network performance in organizational settings, including family firms (Levin & Cross, 2004; Borgatti & Halgin, 2011; Phelps, Heidl & Wadhwa, 2012). By leveraging these varied connections, family businesses can optimize their network structures to balance stability with innovation, ensuring they remain competitive and adaptable in a dynamic business environment.

Additional factors such as network density and actor centrality also influence network structure. Network density, which reflects the closeness of connections within the network, can mirror the organization's non-hierarchical structure and impact how information is exchanged (Pryke, 2017; Daniel, McCalla & Schwier, 2008). Moreover, actor centrality—the number of links an actor has—enables them to significantly influence network dynamics. A high centrality indicates extensive connections with other actors, enhancing their potential to impact information flow (Pryke, 2017). In family businesses, these network characteristics are often influenced by the project context, external threats, the level of interdependence between actors, and the individual roles within the organization. The strength of ties, density, and centrality are not only critical to how information is shared but also to how the family and business systems coalesce to influence organizational performance. Therefore, understanding these elements is essential for analyzing the efficacy of networks in family business settings, where personal relationships and business operations are deeply intertwined.

*Knowledge and Its Use in an Organizational Setting*

Understanding the flow of knowledge among actors is crucial for family firms, as their ability to leverage unique family-generated knowledge can provide a significant competitive

advantage (Zheng, Yang, & Mclean, 2010). In family businesses, individuals often acquire knowledge through engagement in specific tasks and subsequently utilize this knowledge in future activities. Knowledge can thus be viewed both as an outcome of specific activities and as a medium to facilitate those activities (Mueller, 2015).

Knowledge is typically categorized into two forms: explicit and tacit. Explicit knowledge is documented, structured, and easily shared, encompassing procedural and process-related information. In contrast, tacit knowledge is subjective, skill-based, and challenging to articulate, often deeply embedded in individual experiences. In family firms, tacit knowledge is particularly prevalent due to its transmission through generations (Daniel, McCalla, & Schwier, 2008). Knowledge management within family businesses involves strategies to ensure that crucial knowledge is accessible to the right actors at the right time, thereby facilitating operational effectiveness (Mahmoudsalehi, Moradkhannejad, & Safari, 2012). Sharing knowledge fosters innovation, organizational learning, and performance enhancement, necessitating active social engagement among actors (Mueller, 2015). The acquisition and dissemination of knowledge within a network are influenced by the nature of relationships between actors and knowledge sources (Levin & Cross, 2004).

Szulanski (1996) and Daniel, McCalla, and Schwier (2008) emphasize that effective knowledge transfer, particularly of tacit knowledge, requires a network of interrelated and coordinated relationships. Strong ties within family businesses are adept at transferring tacit knowledge due to the deep, trust-based relationships often existing between family members. These relationships facilitate the seamless exchange of complex, nuanced information that might otherwise be difficult to communicate. Conversely, weak ties, though less effective at transferring tacit knowledge, are crucial for accessing novel and innovative insights, thereby contributing to knowledge creation (Phelps, Heidl, & Wadhwa, 2012). Weak ties play a pivotal role in knowledge diffusion, acting as bridges that connect disparate actors within and across

organizations. These connections broaden the network's reach and enhance its complexity, allowing for the introduction of new ideas and perspectives (Huang et al., 2016).

Recognizing the role of these bridges is vital for understanding their impact on organizational networks. Without such connections, networks within family businesses could become insular, limiting their access to external ideas and innovations (Granovetter, 1977). Therefore, identifying and nurturing both strong and weak ties and understanding their unique roles are essential for managing knowledge in family firms, where the overlap of personal and professional spheres can uniquely affect knowledge dynamics.

*The Importance of Knowledge Management and the Role of Organizational Structure*

As previously discussed, knowledge generation occurs through interactions and is systematically organized via knowledge management processes, which are deeply influenced by both the relational and organizational structures (Ajmal & Koskinen, 2008; Mahmoudsalehi, Moradkhannejad & Safari, 2012). The structure of an organization not only facilitates or impedes the flow of knowledge but also shapes the patterns of communication and innovation. It plays a crucial role in establishing and coordinating organizational knowledge and integrating this knowledge into work practices (Zheng, Yang & Mclean, 2010). In family businesses, where organizational structures often blend formal and informal elements, the configuration of these structures can significantly affect knowledge sharing capabilities. This impact is particularly pronounced due to the overlapping roles of family members who may hold key positions within the firm. The structure can either foster an environment conducive to knowledge exchange or create barriers that compartmentalize information within certain branches of the family (Willem & Buelens, 2009; Mueller, 2015).

Moreover, the continuous improvement necessary for sustaining competitive advantage in the market is fundamentally linked to a firm’s ability to effectively manage and transfer knowledge internally (Szulanski, 1996). The manner in which knowledge is embedded within

an organization profoundly influences its performance and goal achievement capabilities. Effective knowledge management is positively correlated with organizational effectiveness and is essential for developing solutions to project challenges (Ajmal & Koskinen, 2008). By enhancing processes, transferring knowledge also improves efficiency, facilitates learning from past experiences, and minimizes the recurrence of errors (Miraglia & Wei, 2017). Additionally, the understanding of relationships between actors within networks enriches our comprehension of organizational effectiveness, particularly in how these relationships mediate between the structural dimensions of the organization and the dynamic capabilities of knowledge management (Pryke, 2017). For these processes to be effective, organizations, especially family firms, must leverage both internal and external relationships. These connections extend beyond the firm's boundaries, encompassing interactions with individuals across different organizations, which enhances the diversity and richness of the knowledge accessed and shared (Tsai, 2001). This study aims to delve deeper into how interpersonal tie strength influences knowledge transfer across organizational boundaries, exploring a spectrum of relations from intra-organizational to inter-organizational contexts, with a particular focus on the unique dynamics within family businesses.

*Interpersonal Relations and Knowledge Transfer in Intra-Organizational and Inter-organizational Networks*

Understanding intra-organizational networks through a structuralist approach highlights the interplay between human actions and their positions within a social structure. Intra-organizational networks consist of formal and informal relations where formal relationships define lines of authority and informal ones are rooted in personal interactions and ties between individuals (Witteck, 2014). These interpersonal relations are crucial for knowledge transfer as they facilitate the acquisition and dissemination of knowledge, enhancing awareness and education among individuals (Wasim et al., 2024; Yang and Maxwell, 2011).

To better understand how resources flow within networks, analyzing tie strength is instrumental. Strong ties foster significant socialization and knowledge transfer, enhancing familiarity among individuals and clarifying where to seek knowledge. However, these ties may limit diversity in the information exchanged, as they tend to reinforce existing perspectives and knowledge bases (Phelps, Heidl, and Wadhwa, 2012). Research by Chen and Huang (2007) has demonstrated that interpersonal linkages are crucial for knowledge utilization, emphasizing that effective knowledge management goes beyond mere access to resources and encompasses their diffusion and application within the organization. Their findings suggest that reducing centralization and formalization in organizational structures can promote increased social interactions and knowledge sharing. While access to knowledge is essential, its effective utilization within an organization is equally critical. Networks should therefore be examined holistically to explore how interpersonal relations across different firms can be accessed and effectively diffused within a single firm. Inter-organizational relations, often interpersonal in nature, are fundamental for resource transfer and knowledge acquisition (Palmer, 1996; Pryke, 2017). Strong ties between individuals in these contexts often reflect enduring partnerships based on trust, facilitating further resource exchange and collaboration (Phelps, Heidl, and Wadhwa, 2012; Huang et al., 2016).

Bridges, representing connections between external and internal environments, are typically considered weak ties that offer access to diverse resources (Granovetter, 1977). Local bridges, in particular, expedite resource transfer by shortening paths between otherwise unconnected actors. Individuals with numerous weak ties can share novel knowledge more broadly and exert greater influence, which is critical when examining networks that traverse internal and external boundaries. These bridges warrant further investigation as they play a key role in enabling knowledge spillover and innovation (Schilling and Phelps, 2007; Borgatti and Halgin, 2011). However, the effectiveness of inter-organizational links depends on appropriate

communication and governance, ensuring that knowledge is not only usable within organizations but also properly classified and delivered (Bocquet and Mothe, 2010). The nature of the relationship and its management determines whether the information received is redundant or innovative. Without effective governance, the potential for development and problem-solving is compromised, reducing organizational effectiveness. Thus, fostering both strong and weak ties, while implementing effective governance structures, is crucial for optimizing knowledge flow and enhancing organizational performance.

*The need to study Intra-organizational and Inter-organizational Ties for Knowledge Transfer and Utilization*

Family businesses are characterized by their intricate networks of relationships, which blend professional and personal interactions. These networks can blur traditional organizational boundaries, making the study of both internal and external relationships crucial for understanding how family firms manage and utilize knowledge (Distelberg & Sorenson, 2009). When assessing inter-organizational knowledge transfer in family firms, it is essential to recognize that information might be acquired through both familial internal channels and external collaborations (Zahra, 2010). In family businesses, the diffusion of expert knowledge across organizational boundaries often relies on informal coordination through strong personal relationships. These relationships not only facilitate the transfer of specialized information but also support the effective application of intra-organizational knowledge, which is critical given the overlap between family and business domains (Chirico & Salvato, 2008). The development of these relationships is influenced by the organizational capabilities typical of family firms, such as long-term orientation, trust-based authority flow, and the informal processes typical in familial interactions (Basco, 2014).

Additionally, the structure of networks within family firms—defined by factors like density, centrality, and tie strength—significantly affects how knowledge is transferred and

utilized. Although exploring all aspects of these networks is beyond the scope of this paper, the existing literature suggests a gap in comprehensive studies that consider both interpersonal and organizational levels, especially within family business contexts (Sharma, 2008). This paper addresses the critical question: 'How does the strength of interpersonal ties at both intra-organizational and inter-firm levels affect the ability to transfer and utilize tacit knowledge effectively within family businesses?' Based on the discussed literature, we propose the following hypotheses:

H1: The extent of tacit knowledge transfer increases in family firms with strong interpersonal ties.

H2: The extent of tacit knowledge transfer increases between actors in different firms with strong interpersonal ties.

H3: The role of bridges helps increase the extent of tacit knowledge transfer within family firms.

These hypotheses reflect the intertwined nature of relationship formation, organizational structure, and knowledge sharing in family businesses, impacting overall organizational performance. By exploring both internal and external networks, this research seeks to provide a comprehensive understanding of how tacit knowledge is shared in family firms, emphasizing the unique role of tie strength.

**Methodology**

To address the research question and investigate the validity of the proposed hypotheses, we employ a single case study methodology. This approach enables an extensive investigation into an organization through exploratory research, allowing for a deep understanding of the specific business context (Quinlan and Zikmund, 2015). Our study focuses on a family-owned communication agency in Beirut, Lebanon, specializing in marketing and advertising strategies. The agency's project-based work, dynamic environment, and reliance on the

exchange of tacit knowledge within creative processes make it an ideal setting for examining the formation and dynamics of relationships. Focusing on a single case study facilitates an in-depth exploration of the development and nature of relationships within the communication agency. This exploratory examination can illuminate the nuanced processes associated with relationship formation in contexts characterized by a significant reliance on collaboration and tacit knowledge transfer. We analyze interactions both between organizational members and individuals from external firms, such as partners and suppliers, acknowledging the firm's dependence on these relationships.

By studying a firm within the creative industry, we aim to gain insights into the specific challenges and dynamics of tacit knowledge sharing, which are critical for innovation and success. The creative industry provides a unique context where the fluid exchange of ideas and collaborative problem-solving are essential, making it a rich ground for exploring the intricacies of knowledge management. We employ a social network analysis (SNA) technique. SNA is a mathematical method that studies interactions among individuals within relationships and networks (Daniel, McCalla, and Schwier, 2008). It is a beneficial approach for understanding how links are formed and how resources are exchanged, providing a visual and analytical representation of the network's structure and dynamics. SNA enables us to identify key actors, measure tie strength, and understand the flow of knowledge within the organization. However, like most statistical research methods, SNA faces criticisms, such as its inability to prove causality and the complexity of the analysis. To address these limitations, we complement SNA with qualitative data from interviews and observations, providing a richer, more comprehensive understanding of the organizational dynamics. This mixed-methods approach allows us to triangulate findings, enhancing the validity and reliability of our conclusions. By integrating quantitative and qualitative insights, this study aims to provide a holistic view of relationship dynamics and knowledge flow within the chosen case, offering

valuable contributions to the understanding of family businesses in the creative sector. Pryke (2017) counterargues the criticism of social network analysis (SNA) by emphasizing the importance of combining SNA with qualitative information to effectively study human interactions. Accordingly, this research employs a mixed-methods approach, using questionnaires as a basis for interviews, which allows for follow-up questions and deeper insights. This approach combines both qualitative and quantitative techniques, providing a more comprehensive understanding of the research problem. The integration of these methods enhances the validity of findings by allowing for cross-validation through both qualitative and quantitative data (Johnson & Onwuegbuzie, 2004). Quantitative data helps reveal trends and patterns, while qualitative data provides context and explanations for these trends (Creswell & Plano Clark, 2017). Additionally, integrating both methods yields richer data and insights, helping to overcome the limitations of using a single method (Bryman, 2006; Plano Clark & Creswell, 2008).

The use of questionnaires serves as a primary source of data collection. These structured interviews consist of predefined questions following a consistent procedure, ensuring the standardization of responses (Mazhae et al., 2021). The use of questionnaires helps extract information from individuals who work closely together, allowing researchers to gather standardized, quantifiable data from respondents. Additionally, data from questionnaires can be easily analyzed, facilitating the identification of trends and patterns among groups. Each interview took approximately forty minutes to one hour, ensuring ample time for informative discussions. This duration allowed interviewers to probe deeper into responses, capturing the nuances of interpersonal interactions and knowledge exchange within the organization. Participants included heads of departments and team members who collaborate on projects, ensuring a comprehensive perspective on the dynamics of knowledge sharing and relationship formation within the agency.

By employing a mixed-methods approach, this research capitalizes on the strengths of both quantitative and qualitative data, providing a holistic view of the complex social networks within the family-owned communication agency. This approach not only strengthens the reliability of the findings but also offers valuable insights into the intricate processes of tacit knowledge transfer and relationship development in a creative industry setting.

*Measures*

The independent variable is tie strength, and the dependent variable is tacit knowledge sharing. Tie strength can be represented mathematically and approximated by the following weighted average formula: TS A-B = f A-B x i A-B, which aims to study the tie strength between nodes A and B (Pryke 2017). This formula is suitable for investigating the topic and addressing the hypotheses due to its inclusion of specific elements. F represents the frequency of communication (e.g., daily, weekly, monthly interactions), and I represents the importance of the resource in the mind of the receiver, as judged on a scale. To measure tie strength, participants respond to a questionnaire adapted from Pryke (2012). Questions explore their role, frequency of interaction, type of information exchanged, and the perceived importance of that information. Likert scales are used to quantify these elements. Tacit knowledge sharing, the dependent variable, is inherently complex to measure. Following Willem and Buelens (2009), we use proxies such as the time spent sharing or explaining knowledge as indicators of its tacit nature. A second questionnaire assesses these proxies, with questions adapted to capture the time and effort involved in knowledge transfer. Likert scales are used to quantify these perceptions. To gain a deeper understanding of tacit knowledge flows, we examine the role of intermediaries. Follow-up interview questions aim to identify individuals acting as bridges within the network, facilitating knowledge transfer even in the absence of direct ties. This aspect of the study further supports the investigation of how tie strength may relate to tacit knowledge sharing. Both questionnaires address tie strength and tacit knowledge sharing from

the perspectives of sender and receiver to provide a more comprehensive picture. Data is collected to examine both intra-organizational and inter-organizational networks. For intra-organizational ties, we map the network of connections among all participants to illustrate relationships within the firm. Inter-organizational relationships are explored through interviews with individuals within the case study firm. While time and access constraints limit triangulation of network data, this approach provides valuable insights. Important to note that none of the participants were family members.

*Procedure*

The interviews were initiated by asking general questions about the actor's job description and role, the nature of the organization's work, the organization's structure, the industry catered to, and what they consider their competitive advantage. These initial questions provided insights into the organizational environment and helped us understand how relationships are formed within the firm. Following this, participants completed a questionnaire on tie strength to obtain numerical values quantifying their relationships. This was complemented by follow-up questions to explore whether factors such as trust, time, and organizational structure impact relationship formation. Additionally, a questionnaire on tacit knowledge was administered to establish the prevalence of tacit knowledge within the organization. Subsequent questions aimed to draw connections between knowledge, structure, relationships, and overall performance in terms of client satisfaction and value delivery.

To interpret the information, a statistical analysis was conducted to measure the correlation. Second, results from the questionnaires are converted into a socio-matrix, which contains numerical data in a table made up of rows (actor i) and columns (actor j), and the point of intersection (ijth), defining their relationship. Results are then mapped into a sociogram which is a graphical representation of the socio-matrix, where actors are placed and ties are shown to help visualize the social network (Busch and Richards, 2005). Additional information

attained outside the questionnaire are presented in a table including the most relevant findings and used to support the results for analytical purposes.

**Results**

The results of our study, displayed in (Table 1)(Table, 2), and (Table 3) for quantitative data and (Table 8) for qualitative data, illustrate the dynamics of knowledge sharing within the organization. The sociomatrix and sociogram, presented in (Table 4) and Figure 1 respectively, delineate the network of relationships identified within the organization. Hypotheses 1 and 2 received support, indicating a positive relationship between interpersonal ties and tacit knowledge sharing in both intra-organizational and inter-organizational contexts. Hypothesis 3 was not supported as no relevant bridges were identified in the case study.

*Quantitative Findings*

To analyze the data collected from the questionnaires, we employed the Pearson correlation coefficient (r), a method well-suited for examining the variables in network analysis, especially when quantifying tie strength as opposed to merely indicating the presence of a relationship (Hanneman and Riddle, 2005). Our dataset included multiple entries, with each actor within the organization providing individual results related to tie strength and the type of knowledge shared. To compute the overall correlation coefficient for the organization, we first calculated r for each actor, labeled from A to L. Due to the statistical complexity involved, we could not simply average these individual r values. Instead, we used the Fisher z transformation to convert each r value to a z' score. This approach allowed us to average the z' scores across all actors, mitigating potential biases and overestimations inherent in direct averaging of correlation coefficients. The averaged z' score was then transformed back to an r value, representing the mean correlation between tie strength and knowledge sharing across the organization. This method, particularly effective for small sample sizes, ensures a more accurate estimation of the correlation (Silver and Dunlap, 1987). For internal actors, the

described methodology was applied to aggregate data from various sources within the organization. For external actors, the correlation coefficient r was calculated directly due to the presence of a singular dataset for this group. The resulting correlations provide insights into the dynamics of knowledge sharing within and across the boundaries of the organization, highlighting the significant role of interpersonal ties. The detailed findings from this analysis are presented in the tables below, which encapsulate the relationship between tie strength and knowledge sharing for both internal and external actors.

Hypotheses 1 and 2: There is a positive correlation between tacit knowledge sharing and tie strength in both internal and external settings. For Hypothesis 1 regarding intra-organizational interpersonal ties, the obtained correlation was r=0.44, representing a moderate positive relation. Hypothesis 2 was confirmed with a correlation of r=0.68, signifying a strong positive correlation in interpersonal inter-organizational ties.

*Please insert table 1 here*

*(*Table 1) shows the mean tie strength and mean type of knowledge for each actor which were used to compute the r and z values, also present in the table.

*Please insert table 2 here*

(Table 2) contains the overall correlation between the two variables of tie strength and tacit knowledge sharing. The table displays the average of the r and z displayed in (Table 1) in addition to the transformation from r to z. Results present internal actors with r= 0.44 and external actors with r=0.65.

*Please insert table 3 here*

*(*Table 3) contains values of the average percentage of both strong ties and tacit knowledge being examined representing their significance in this organization.

*Please insert table 4 here*

*Please insert table 5 here*

The findings regarding tie strength and the type of knowledge shared among actors are summarized in (Tables 4) and (Table 5). Tie strength was quantified using the formula TS A-B = f A-B x i A-B, where 'f' represents the frequency of interactions and 'i' denotes the importance of information exchanged, both rated on a Likert scale ranging from 1 to 9. Consequently, the maximum possible tie strength is 81 (99), and the minimum is 1 (11). For simplicity in analysis, tie strengths equal to or greater than 40.5 were classified as strong, and those below 40.5 were considered weak. Regarding the type of knowledge shared, participants rated the level of tacit knowledge on a Likert scale from 1 to 5. Knowledge was categorized as tacit if the rating was 3 or higher, and as non-tacit if the rating was 2 or lower. The results of these categorizations are detailed in the respective tables and visually represented in the sociogram below. To further clarify the relationships within the network, we utilized a color-coded legend to denote four distinct categories:

- Strong Tie (ST) and Tacit Knowledge (TK)
- Strong Tie (ST) and Non-Tacit Knowledge (NTK)
- Weak Tie (WT) and Tacit Knowledge (TK)
- Weak Tie (WT) and Non-Tacit Knowledge (NTK)

Each type of relationship is assigned a specific color, as shown in the legend accompanying the sociogram. This method of representation ensures that relationships are not overly simplified and that the nuances between different types of connections—whether they are strong or weak and whether they involve tacit or non-tacit knowledge—are clearly understood. Importantly, relationships were calculated bi-directionally and depicted individually for each actor pair, allowing for a comprehensive view of the network's interconnections and the strength of each specific relationship (Pryke, 2017). This approach allows us to gain deeper

insights into how knowledge is shared within the network and how tie strength influences the type of knowledge transferred, providing a robust basis for understanding the dynamics within the studied organization.

*Please insert figure 1 here*

The above figure represents the sociogram of the firm's internal and external actors. Internal actors are illustrated by white circles while externals in red. Relationships are colour coded and shown in lines. Their meaning in terms of strength and type of knowledge shared can be seen in the legend below.

*Please insert table 6 here*

*Please insert table 7 here*

*Qualitative Findings*

*Please insert table 8 here*

The qualitative data gathered provides profound insights into the organizational environment, including aspects such as culture, structure, performance, and the dynamics of relationship formation and knowledge flow. Notably, 75% of participants characterized the organizational structure as a blend between flat and hierarchical models. On the operational level, the structure is perceived as flat, facilitating open communication and collaboration among team members. However, a hierarchical element persists at the top management level, where ultimate decision-making authority resides. Despite this, participants uniformly reported the ability to directly engage with top management, reflecting a culture that supports openness and accessibility. Participants emphasized the strength and closeness of interpersonal relationships within the organization, attributing this to an open, friendly culture that is conducive to forming and maintaining strong bonds. Operating in a creative industry, the reliance on tacit knowledge is particularly pronounced, necessitating high levels of knowledge sharing that inherently

promote stronger interpersonal relationships. These findings align with and support Hypotheses 1 and 2, which posited a positive correlation between strong interpersonal ties and the sharing of tacit knowledge within both intra-organizational and inter-organizational settings, evidenced by correlations of r=0.44 and r=0.68, respectively. Hypothesis 3, concerning the role of bridges in facilitating knowledge transfer, was not supported as no relevant data emerged to validate this hypothesis. Further qualitative insights underscore the significant impact of organizational structure on both relationship formation and knowledge sharing, with a unanimous response rate affirming these influences. Additional feedback highlighted the organizational structure's effect on performance, particularly in enhancing value and facilitating the assimilation of lessons learned. These results not only substantiate the established hypotheses but also lay the groundwork for the forthcoming analysis sections, which will delve deeper into how these dynamics influence overall organizational efficacy and strategic orientation.

**Discussion of Findings:**

Our work reveals a high interdependence among various organizational factors. Specifically, the structure influences relationship formation and tie strength, which in turn affect the type of knowledge shared. Supported by qualitative data, the organizational structure was found to significantly contribute to the observed quantitative results. Additional factors such as the actors' roles within projects also impacted these correlations. Utilizing literature, we justify these results and use qualitative findings to rationalize variances and similarities.

*Organizational Structure*

The structure of the firm is a key determinant in the formation of its relationships. Two main structural features stand out: First, the physical environment, particularly the open office layout, facilitates direct access among individuals, promoting ease of interaction. Second, at the operational level, the company's team composition—consisting of creative, digital, and

client servicing professionals working together—differs from traditional advertising agencies. This integrated team structure helps mitigate fragmentation and enhances collaboration across different project stages. The company's distinctive operational approach is complemented by its unique overall structure, featuring specialized units for different client types or project executions, such as a health department and an event department. This '360' operational model allows these units to function independently in execution but remain interconnected for overall organizational workflow, as depicted in the sociogram with actors I, J, G, H positioned on the edges.

The firm's organizational structure can be evaluated along three dimensions suggested by Van de Ven (1976) and Ortega, Sáez, and Cortés (2010): It is non-formalized, as indicated by the lenient policies and protocols; somewhat centralized, with decision-making power still residing at the top management level; and complex, due to the nature of work requiring various interrelated factors. This structure has enabled employees to avoid common information sharing problems, fostering an environment where they can freely express ideas and feel valued, which enhances motivation, commitment, and involvement (Reitzig and Maciejovsky, 2015). However, the open and flat organizational structure also presents challenges. The lack of formalization can sometimes lead to inefficiencies, as noted by actors H and I, who mentioned that the ability to contact anyone in the organization occasionally leads to time wastage and protocol being overlooked. Despite these challenges, the overall culture is highly valued by the employees, who appreciate the supportive environment but recognize the need for some level of structured formalization to enhance effectiveness. In sum, the firm's structure significantly influences how relationships are formed and knowledge is shared, facilitating an environment conducive to collaboration yet requiring careful management to prevent potential drawbacks. This complex interplay of structure, culture, and operational practices provides a

rich context for understanding the dynamics of knowledge sharing in organizations, particularly those in creative industries like advertising.

*Tie Strength*

The study confirmed the hypothesized positive correlations between interpersonal ties and tacit knowledge transfer at both intra-organizational and inter-organizational levels, albeit with some nuances. At the intra-organizational level, the positive correlation observed was moderate rather than strong. This variance might be attributed to the diverse roles of the participants involved in the study, ranging from operational staff to department heads and partners, which likely influenced the overall correlation values. For instance, Actor D, the head of digital, exhibited a lower correlation ($r = 0.34$) due to their role predominantly involving delegation rather than direct involvement in task execution. In contrast, Actor B, who engages directly in hands-on tasks, showed a higher correlation ($r = 0.84$). Additionally, supporting actors such as I and L, who assist in projects without direct execution involvement, showed minimal ($r = 0.04$) and negative correlations ($r = -0.18$), respectively. These findings suggest that the nature of an individual's involvement in project execution significantly impacts their ability to form strong ties that facilitate tacit knowledge sharing.

Conversely, the correlation for external actors was robust ($r = 0.65$), indicating strong tie strength in inter-organizational relationships. The literature and our findings suggest that such strength in external relationships is largely dependent on trust, which fosters long-lasting connections crucial for successful project delivery (Phelps, Heidl, and Wadhwa, 2012). Interviewees highlighted a heavy reliance on external parties, such as suppliers and collaborators, underscoring the necessity of maintaining close relationships for effective project outcomes. Furthermore, while the literature posits that strong ties depend on both time and trust (Borgatti and Halgin, 2011; Levin and Cross, 2004), our findings diverge slightly regarding the role of time. Participants indicated that trust was paramount, whereas time was

not a significant factor. This divergence might be attributed to the culturally specific working environment in Lebanon, where a relaxed approach to work and the ability to integrate smoothly with colleagues are valued. Actor C noted that individuals from more reserved cultural backgrounds often find it challenging to adapt to this open and direct communication style, which indirectly impacts the formation and strength of interpersonal ties within the organization. Our work indicates that while the strength of interpersonal ties is influenced by role involvement and cultural context, trust remains a critical factor in facilitating effective tacit knowledge transfer. This underscores the importance of fostering trust-rich environments both within and beyond organizational boundaries to enhance knowledge-sharing capabilities and drive organizational success.

*Knowledge*

The organizational structure significantly facilitates tacit knowledge sharing, supported by the informal nature of relationships within the firm (Daniel, McCalla, and Schwier, 2008). The depth of personal relationships among colleagues fosters a natural inclination towards knowledge sharing, driven not by obligation but by a genuine desire to support each other's work. This phenomenon is further enriched by the presence of mentors within the organization who actively engage in educating and enhancing the learning experiences of their peers (Yang and Maxwell, 2011). Actor L highlighted how swiftly relationships are established on a personal level, particularly with new members, which enhances their integration and provides immediate access to necessary knowledge. This high level of socialization not only increases familiarity among team members but also builds a foundation of trust, crucial for effective knowledge sharing. For instance, Actor C emphasized trust-based knowledge exchanges within the team, where members know precisely whom to approach for reliable information.

The credibility of knowledge, as noted by Phelps, Heidl, and Wadhwa (2012), plays a critical role in effective knowledge sharing. The validity perceived in the knowledge shared is

often assessed based on its relevance to the project and the expertise of the individual providing it. This underscores the importance of both the relational and structural aspects of the organization in facilitating effective knowledge application. The organization's emphasis on creativity and innovation, crucial in their industry, is reflected in their structural practices. Regularly rotating teams is a strategic approach to stimulate fresh ideas and ensure a dynamic flow of knowledge across projects. This practice not only diversifies the creative output but also enhances the scope of knowledge exchange, ensuring that different perspectives are continually integrated into the workflow. Overall, the structure of the organization and the quality of interpersonal relationships are fundamental to facilitating knowledge sharing. These elements create an environment where tacit knowledge is shared freely and continuously enriched through innovative structural practices. The findings align with those of Chen and Huang (2007), confirming that organizational structure and interpersonal relationships are pivotal in both the dissemination and practical application of knowledge. In conclusion, the firm’s strategic emphasis on fostering informal relationships, coupled with a flexible organizational structure, effectively enhances tacit knowledge sharing. By nurturing a culture of trust and encouraging mentorship, the organization not only supports its employees' professional growth but also ensures a continual infusion of creativity and innovation into its operations.

*The Role of Tie Strength and Tacit Knowledge Sharing*

Research indicates that while strong ties often lead to information redundancy, weak ties are likely to bring forth innovative knowledge (Borgatti and Halgin, 2011; Levin and Cross, 2004). However, findings from our case study suggest a more nuanced interaction between tie strength and knowledge type. Despite the prevalence of weak ties at both intra-organizational and inter-organizational levels, the strong ties also held a significant presence.( Table 3) shows that the average percentage of internal strong ties was around 43.2%, with external strong ties at 42.8%.

Meanwhile, the percentages of tacit knowledge sharing were 68.9% internally and 71.4% externally. These figures indicate that both strong and weak ties contributed to tacit knowledge sharing, challenging the idea that tie strength alone dictates knowledge type. This complexity is reflected in the support for Hypotheses 1 and 2, which confirmed positive correlations between tie strength and tacit knowledge sharing. For instance, Actor D described how external collaborators add unique insights to projects, suggesting that weak ties play a critical role in introducing innovative ideas. However, the diverse nature of ties in this case—where Actor C to D is a weak tie with tacit knowledge and D to C is a strong tie with tacit knowledge—illustrates that tacit knowledge can be shared through various tie strengths, validating Granovetter's (1977) emphasis on the significance of the presence of ties over their strength. While no internal bridges were identified due to the direct nature of most relationships, the presence of intermediaries between internal and external members was notable. Actors such as A, B, and K in client servicing act as conduits for knowledge between external partners and internal creatives. These actors, especially B with weak ties to external actor BA, function as potential bridges, underscoring Granovetter's assertion about the critical role of weak ties in bridging different parts of a network. The absence of direct external relationships for some actors like C—who rely on others to bridge these gaps—highlights how organizational structure may obscure the origins of knowledge, making it appear internally sourced when it may, in fact, come from external interactions. This analysis confirms the importance of both strong and weak ties in knowledge sharing within complex organizational structures and underscores the pivotal role of bridges in enhancing network connectivity and reducing fragmentation. Such insights are invaluable for understanding how knowledge flows in organizational settings and for designing structures that foster effective communication and innovation.

*Sociogram Analysis*

The sociogram effectively illustrates the types of relationships and knowledge shared within the organization, offering valuable insights into the dynamics underpinning the observed results. It highlights how the roles of actors significantly influence the ties they establish within the network. For instance, Actors A, B, and K, who belong to client servicing, do not always work in tandem despite their collective focus on interfacing with creatives. This variability in collaboration is reflected in their ties: Actor B to A shows a strong tie with tacit knowledge (ST+TK) due to frequent, direct interactions about shared projects, whereas A to B displays a weak tie with tacit knowledge (WT+TK), suggesting less frequent but still significant knowledge exchange. Central figures like Actors C and D, who head departments and mentor others, and Actor H, responsible for production, display varied relationship strengths and knowledge types based on their interaction frequencies and roles. Actor H's strong ties (ST+TK) with project leaders (Actors A, B, C, D) are underscored by the necessity of frequent collaboration and creativity in task execution. Conversely, their relationships with Actors E, F, and G, who are less directly involved in production, are characterized by weak ties with tacit knowledge (WT+TK), indicating less frequent but still knowledge-rich interactions.

Additionally, Actor J's role as head of the politics department entails cyclical work patterns, resulting in predominantly weak ties with non-tacit knowledge (WT+NTK) due to the episodic nature of political campaigns. These internal dynamics are mirrored at the inter-organizational level, illustrating the scalability of intra-organizational relationships. For example, the relationship between Actor AA (a mentor and client) and Actor A is marked by strong ties with tacit knowledge (ST+TK), driven by high levels of interaction and project involvement. In contrast, the connection between Actor L and external Actor LA is characterized by weak ties with tacit knowledge (WT+TK), reflecting less frequent advisory interactions. These findings underscore the critical influence of an actor's role on the strength and type of relationships formed, aligning with Granovetter's (1977) theory that the presence

of ties—regardless of their strength—plays a pivotal role in organizational networks. This is especially pertinent considering the diverse reasons for relationships, such as knowledge sharing, project collaboration, or advisory roles, which vary significantly across different stages of a project's lifecycle. Pryke (2017) emphasizes the importance of understanding these varied factors when analyzing organizational networks, suggesting that the structural and relational dynamics within a firm can significantly affect knowledge transfer and collaboration efficiency. The sociogram analysis provides a nuanced understanding of how organizational roles and relationships impact knowledge flow. It highlights the necessity of fostering both strong and weak ties to ensure effective knowledge transfer and collaboration, which are crucial for organizational success and adaptability in dynamic environments.

*Organizational Performance and Knowledge Management*

Accessibility to knowledge is largely facilitated by direct contact rather than through a formal knowledge management system. The open structure of the organization ensures short paths to knowledge acquisition, enabling staff to learn from past experiences and avoid repeating mistakes. However, the absence of a structured knowledge management system presents significant drawbacks. For instance, Actor L highlighted that without a recorded system of knowledge, the organization becomes vulnerable to losing highly skilled staff to competitors, particularly large multinational corporations that can capitalize on their trained expertise. Implementing a formal knowledge management system could address these vulnerabilities by institutionalizing knowledge within the organization, thereby reducing dependency on individual memory and potentially curtailing staff poaching. Such a system would enhance organizational performance by ensuring that accurate and relevant information is readily available to the right person at the right time, thereby improving decision-making and problem-solving capabilities (Mahmoudsalehi, Moradkhannejad, and Safari, 2012; Zheng, Yang, and Mclean, 2010; Ajmal and Koskinen, 2008). Furthermore, governance within such a system

would guarantee that knowledge is not only shared but also effectively utilized, particularly in evaluating the diffusion of external expert knowledge through organizational bridges (Bocquet and Mothe, 2010; Granovetter, 1977). For example, if Actor A could record and reference the expert knowledge received from Actor AA, a major client, it would create a permanent resource for the organization, enhancing value delivery for all clients by retaining critical knowledge and improving the organizational learning curve. However, the implementation of such a system requires significant investment, which might be challenging for a small organization with limited resources. Despite these potential hurdles, the strategic importance of a knowledge management system should not be underestimated, and its feasibility should be carefully evaluated for future implementation (Carrillo et al., 2004). The analysis of this case study reveals that while tie strength is correlated with the type of knowledge shared, other factors such as the actor's role, level of dependence, and the timing within the project life cycle also significantly influence interaction frequencies. Therefore, tie strength alone provides an incomplete picture of knowledge dynamics. Instead, the presence of ties—regardless of their strength—is more critical, supporting Granovetter's (1977) emphasis on the importance of tie presence. This perspective is crucial in understanding how project environments and interdependencies impact knowledge sharing. In conclusion, while some literature suggests that tie strength directly dictates the type of knowledge shared (Phelps, Heidl, and Wadhwa, 2012; Borgatti and Halgin, 2011), this study argues that such a view is an oversimplification. Instead, the organizational structure should be seen as a primary influencer of tie strength, which in turn affects knowledge sharing. These findings contribute to the literature by elucidating the role organizational structure plays in shaping network capabilities, with a renewed focus on the presence of ties rather than their mere strength (Pryke, 2017).

**Conclusion**

This research paper investigated the impact of organizational structure on the formation of relationships and the ability to share tacit knowledge within the context of a family business. By analyzing data from a single case study, we gained a deeper understanding of the interdependence and correlation among organizational structure, tie strength, and tacit knowledge. The organization examined can be considered seamless, adept at forming external links essential for internal functions (Palmer, 1996). Our findings align with previous research, suggesting that structure acts as a medium of exchange, facilitating the formation of strong relationships through which resources such as knowledge flow effectively (Van De Ven, 1976; Ahmady, Mehrpour, and Nikooravesh, 2016). Consistent with Chen and Huang (2007), our study found that interpersonal linkages facilitated by the organization's structure—characterized by low formalization and moderate centralization—enhance the diffusion of knowledge. This is particularly significant in family businesses where relational dynamics are often more pronounced and can influence business processes and knowledge sharing (Chirico & Salvato, 2008).

While Hypotheses 1 and 2 were supported, showing a positive correlation between strong ties and tacit knowledge, the analysis revealed that this result is not exhaustive. The organization held a greater number of weak ties, which also facilitated high levels of tacit knowledge sharing, thus diminishing the exclusive importance of tie strength. This observation supports the findings of Levin and Cross (2004) and Borgatti and Halgin (2011) that weak ties can foster innovative knowledge. However, the diverse roles and project stages affected the perceived strength of these ties, emphasizing the need to define tie strength more flexibly within family business contexts. The findings challenge the traditional view that strong ties inherently involve more frequent communication and knowledge transfer, supporting Granovetter's (1977) assertion about the importance of the presence of ties rather than their strength. This is particularly relevant in family businesses, where the informal and often fluid

organizational structures can redefine traditional network dynamics, influencing how knowledge is shared and utilized.

While some literature suggests that tie strength directly dictates the type of knowledge shared, our study argues that this view is an oversimplification. Instead, the organizational structure should be seen as a primary influencer of tie strength, which in turn affects knowledge sharing. This case study demonstrates that both weak and strong ties can facilitate the diffusion of knowledge, enhancing organizational performance, which can be further supported by the implementation of formal knowledge management systems (Mahmoudsalehi, Moradkhannejad, and Safari, 2012). Organizations should design their knowledge management systems in line with their structure. Understanding the roles of both weak and strong ties can lead to more effective knowledge flows. In this context, internal and external communication channels can be established to bridge gaps between weak and strong ties. Furthermore, organizations can amend and improve their structure to support knowledge flows through team-building exercises, workshops, and events.

The findings have both social and theoretical implications. Socially, organizational culture can improve through better knowledge management, stronger employee engagement, and enhanced family business dynamics. Theoretically, models of tie strength and network theory should be refined to include organizational structure as a fundamental component. Additionally, knowledge management frameworks should pay closer attention to weak ties and not overlook their impact on the flow of knowledge within an organization. Future research should continue to explore these dynamics in other family business settings, especially involving family actors, to ascertain if these findings hold across different contexts and actors. Further exploration is needed to understand how organizational structure influences network behavior. Expanding the study to include multiple family businesses could provide more generalizable insights and contribute to a richer understanding of the strategic management of

ties and knowledge in family enterprises. Moreover, incorporating advanced methodologies, such as network analysis and mixed-method approaches, would yield more comprehensive findings.

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*Table 1: Mean tie strength, mean type of knowledge, Pearson coefficient (r) and Fisher z transformation coefficient (z)*

| Actors | Mean Tie Strength | Mean Type of Knowledge | r | z |
|---|---|---|---|---|
| A | 32.73 | 2.82 | 0.65 | 0.78 |
| B | 38.18 | 2.45 | 0.684 | 0.84 |
| C | 37.18 | 2.27 | 0.27 | 0.28 |
| D | 34.73 | 1.55 | 0.34 | 0.36 |
| E | 38.55 | 3.91 | -0.41 | -0.44 |
| F | 27.18 | 4.00 | 0.77 | 1.01 |
| G | 24.36 | 2.64 | 0.88 | 1.39 |
| H | 49.73 | 4.00 | 0.39 | 0.42 |
| I | 48.09 | 2.27 | 0.04 | 0.04 |
| J | 28.55 | 1.73 | 0.34 | 0.35 |
| K | 46.45 | 2.64 | 0.67 | 0.82 |
| L | 23.73 | 3.09 | -0.18 | -0.18 |

Source: Authors own creation

*Table 2: Averages of individual r and z values, overall r for internal actors, overall r for external actors*

| | |
|---|---|
| Average of individual r (internal actors) | 0.37 |
| Average individual z (internal actors) | 0.47 |
| Transformation of z to r(internal actors) | 0.44 |
| External r | 0.65 |

Source: Authors own creation

*Table 3: Average percentage of strong ties and tacit knowledge*

| Network | Average percentage of strong ties | Average percentage of tacit knowledge |
|---|---|---|
| Internal | 43.18 | 68.99 |
| External | 43.86 | 71.43 |

Source: Authors own creation

*Table 4: Socio-matrix of internal actors representing the combination of tie strength and tacit knowledge shared.*

| | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | WT +TK | ST+TK | ST+TK | WT+NTK | WT+TK | WT+TK | WT+TK | ST+NTK | WT+TK | WT+NTK | WT+NTK |
| B | ST+TK | | ST+TK | ST+TK | WT+NTK | ST+NTK | WT+TK | ST+NTK | WT+TK | ST+NTK | WT+NTK | WT+NTK |
| C | ST+NTK | ST+NTK | | WT+TK | WT+NTK | WT+NTK | ST+TK | WT+NTK | ST+NTK | WT+TK | ST+NTK | WT+NTK |
| D | ST + NTK | ST + NTK | ST + TK | | WT + NTK | WT + NTK | ST + NTK | WT+ NTK | ST + NTK | WT + TK | ST + NTK | WT + NTK |
| E | WT + NTK | ST + TK | WT + TK | ST + TK | | WT + TK | WT + TK | ST + TK | ST+ TK | ST + TK | ST +TK | WT+ TK |
| F | ST+TK | ST+TK | WT+TK | WT+TK | WT+TK | | WT+NTK | WT+NTK | WT+TK | WT+TK | ST+TK | WT+NTK |
| G | WT + NTK | WT+ NTK | ST+ TK | ST + TK | WT +NTK | WT+ TK | | WT +TK | ST+TK | WT+NTK | WT+NTK | ST+TK |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H | ST+TK | ST+TK | ST+TK | ST+TK | | WT+TK | WT+TK | | ST+TK | ST+TK | ST+TK | ST+TK |
| I | ST+TK | ST+TK | ST+NTK | ST+NTK | WT+TK | WT+NTK | ST+TK | ST+NTK | | WT+NTK | WT+NTK | ST+NTK |
| J | WT+NTK | WT+NTK | WT+NTK | ST+TK | WT+NTK | WT+TK | WT+NTK | WT+NTK | ST+NTK | | WT+NTK | WT+TK |
| K | WT+NTK | ST+TK | ST+TK | ST+TK | WT+TK | ST+TK | WT+NTK | WT+NTK | ST+NTK | ST+TK | | WT+NTK |
| L | WT+TK | WT+TK | WT+TK | WT+TK | WT+TK | WT+TK | WT+TK | WT+TK | ST+TK | WT+TK | WT+TK | |

Source: Authors own creation

*Table 5: Tie strength and type of knowledge for identified external actors.*

| | |
|---|---|
| GA | ST+TK |
| BA | WT+NTK |
| JA | WT+NTK |
| KA | ST+NTK |
| BB | WT+NTK |
| IA | WT+NTK |
| HA | ST+TK |
| HB | ST+TK |
| HC | ST+TK |
| LA | WT+TK |
| DA | WT+TK |
| DB | WT+TK |
| DC | WT+TK |
| AA | ST+TK |

Source: Authors own creation

*Table 6: Sociogram Legend*

| | |
|---|---|
| ST+TK | Red |
| ST+NTK | Green |
| WT+TK | Blue |
| WT+NTK | Yellow |

Source: Authors own creation

*Table 7: Key to actor references*

| Actor Ref | Role |
|---|---|
| A | Client Servicing/ Marketing |
| B | Client Servicing |
| C | Creative Director |
| D | Digital Manager |
| E | Events Department Manager |
| F | Partner for Stories Department |
| G | Partner for Health Department |
| H | Production Officer |
| I | Traffic Manager |
| J | Partner for Politics Department |
| K | Senior Account Executive |
| L | Chief Accountant |

| | |
|---|---|
| AA | Managing Director for one of their biggest accounts / Advisories |
| BB | Project Manager of Media Buying Agency |
| DA | Web Developer |
| DB | Media |
| DC | Media |
| GA | Physician/ Surgeon and Medical Director |
| HA | Digital Supplier |
| HB | Offset Printing Supplier |
| HC | Offset Printing Supplier |
| IA | IT Support |
| LA | Financial Consultant/Advisory |
| X | Head of Media Buying Agency |

Source: Authors own creation

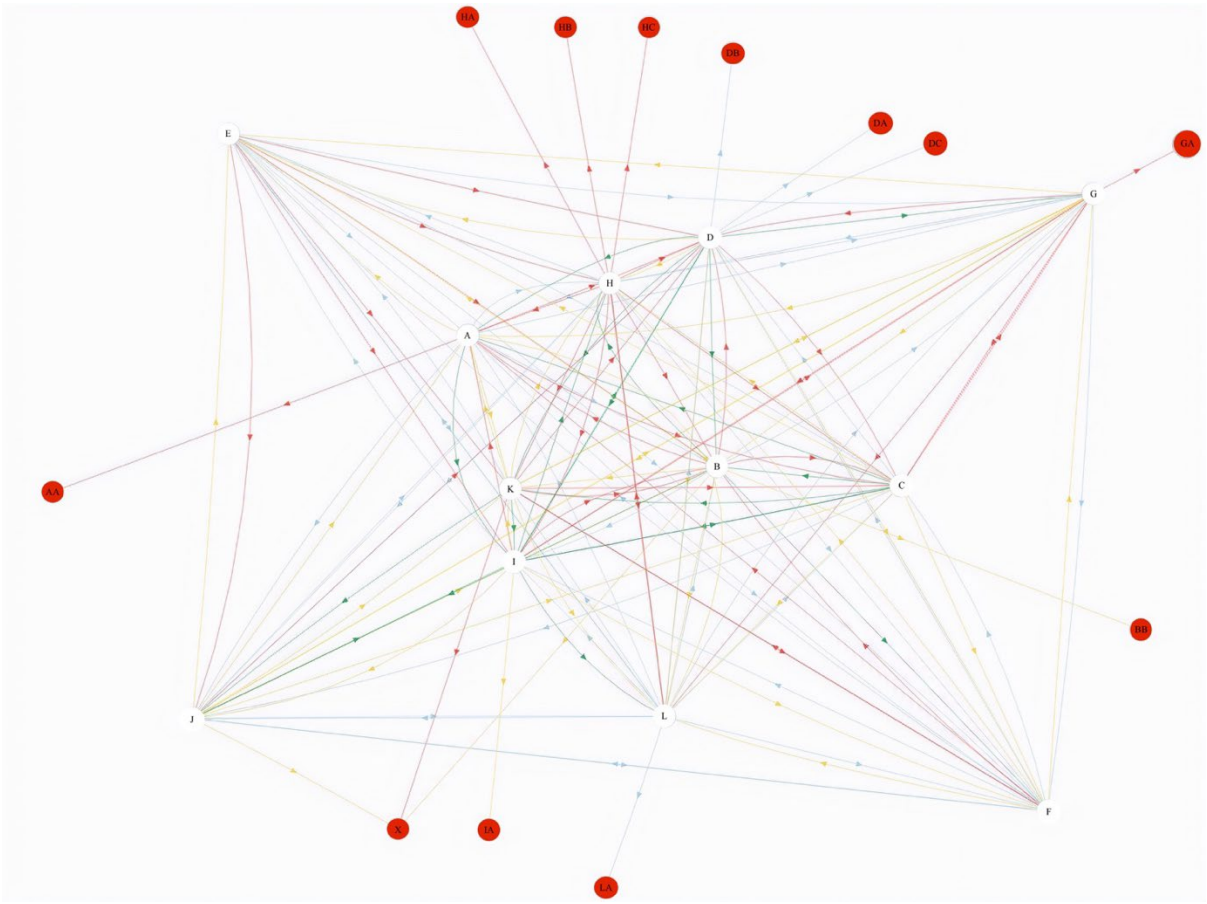
*Table 8:Qualitative findings from general and follow up questions.*

| **Organization** | |
|---|---|
| **What type of structure would you say your organization has?** | 75% said that the structure is more of a flat organization, but hierarchy in terms of top management and decision making exists |
| **How would you describe the culture of your organization?** | 75 % of respondents stated that the environment is: very friendly having an open culture, all of which makes them feel valued |
| **What would you say your organization has as a competitive advantage over other communication agencies?** | 58% mentioned their unique structure and knowledgeable human capital. |
| **Factors affecting relation formation** | |
| **Would you say trust affects the type of relationship you have with those around you?** | 100% of the participants responded that trust heavily impacts relationship formation and affects their ability to work in terms of depending on one another |
| **Do you think the organizations' structure impacts the type of relationships you from?** | 100 % agreed that their open space and their flat structure allows relationship formation |
| **In terms of creating these relationships, would you consider time as an important factor?** | 75 % responded that time was not an apparent factor. 100% said it depends on the person the relationship is being formed with |
| **Do the relationships you hold impact the ability to perform your work?** | 83% confirmed that the relationships they hold impacts their ability to work. |
| **Factors affecting knowledge transfer** | |
| **Do you think the organizations' structure impacts the ability to share knowledge with others?** | 100% stated that the organizations' structure allows for sharing due to their open space and ability to contact anyone |
| **Tacit knowledge** | |

| | |
|---|---|
| **Does the type of relationship you have with individuals around you affect whether you share knowledge with them or not?** | 83% stated that they share knowledge regardless of the strength of relationship and for the purpose of improving performance |
| **Do you think you have access to knowledge in the firm? If so, where do you find this knowledge?** | 92% expressed their access to knowledge within the firm, with particular reference to the relations they have. |
| **What type of knowledge does your work depend on? Tacit or non- tacit?** | 58% work depends on tacit knowledge |
| **In terms of improving project performance which source of knowledge received has additional value? that obtained internally or externally?** | 37% stated that internal knowledge adds more value, 37% said it was that of external and the remaining 26% agreed that both internal and external knowledge add value to their work. |
| **Has knowledge sharing allowed you to improve project performance in terms of client satisfaction and value enhancement?** | 100% confirmed that knowledge sharing has improved project performance |
| **Has knowledge sharing allowed you to learn from previous mistakes or avoid their repetition?** | 92% revealed that their ability to share knowledge has allowed for lessons learned and decreased in repeated mistakes |

Source: Authors own creation

Figure 1: Sociogram




Source: Authors own creation