MARKETS, HIERARCHIES AND FAMILIES:

TOWARD A TRANSACTION COST THEORY OF THE FAMILY FIRM

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Abstract

Why do family businesses exist? What factors explain their versatility, limitations and success within and across different industrial and geographic contexts? We develop a transaction cost framework that addresses these questions. In doing so, we identify a class of assets we term generic non-tradeables (GNTs), that are *firm-specific, but generic in application*. While many types of firms may possess such assets we reason that family firm governance provides relative advantages in developing, sustaining, and appropriating value from GNTs through combinations with other types of assets. We propose that these advantages as well as some concomitant disadvantages explain the versatility, limitations and success of family business enterprise.

INTRODUCTION

Why do family businesses exist? What factors explain their versatility, limitations and success within and across different industrial and geographic contexts? While there are both theories that focus on the relative advantages (e.g. Chrisman, Chua, & Kellermans, 2009; Miller, Le Breton-Miller, & Scholnick, 2008) and disadvantages (Morck, Wolfenzon, & Yeung, 2005; Schulze, Lubatkin, Dino, & Buchholtz, 2001) of the family business enterprise, the literature currently lacks a unified theoretical framework addressing these fundamental questions about the family firm as a form of business enterprise.

We propose that while transaction cost theory has not yet been directly applied to these questions, it can be usefully applied to such a task because it provides a framework for understanding the comparative efficiency of alternative forms of organizations (Williamson, 1996). In this paper, we begin to develop a transaction cost theory of the family firm. To do so, we identify and discuss a class of assets we term generic non-tradeables (GNTs) that are sticky, or *specific to the firm* in which they are developed, but at the same time are *broadly applicable* with similar effectiveness for a variety of purposes. In developing our arguments, we describe the basic characteristics of GNTs and discuss specific types of these assets and their potential for value creation. We reason that the governance characteristics of family firms provide these firms with relative advantages in developing, sustaining and appropriating value from GNTs. We propose that these advantages as well as some concomitant disadvantages explain the versatility, limitations and success of family business enterprise.

THE COMPARATIVE ANALYSIS OF DISCRETE STRUCTURAL ALTERNATIVES

In his seminal paper, *The Nature of the Firm*, Ronald Coase (1937) asks and explores a profoundly simple question - why do firms exist? In doing so, he offers two insights that provide

the foundations for modern transaction cost theory. The first insight is that market based transactions between arm's length actors and vertically integrated hierarchies are two alternative ways of assembling resources and organizing economic activities. The second insight is that while market based transactions and vertically integrated firms are structural alternatives, each has relative strengths and weaknesses. With respect to hierarchies, Coase reasons that they owe their existence to the fact that many market based exchanges are prone to transaction costs related to search and information costs, the risks of losing trade secrets, and the costs of negotiation and enforcing agreements. Coase further reasons that many transactions take place outside of firms because of some countervailing costs of vertical integration related to the overhead and bureaucratic costs of managing complex organizations as well as the cognitive limits of managers. While Coase's work lays the foundation for modern transaction cost theory, his treatise lacks precision with respect to the factors determining the relative efficiency of market and firm based transactions for particular types of activities.

Decades later, Oliver Williamson (1975) re-addressed Coase's question within a comparative efficiency framework focusing primarily on types of firms characterized by a vertically integrated hierarchy. Williamson's conception of hierarchy is heavily influenced by Alfred Chandler's ideal of the professionally managed firm (Chandler, 1977; 1990), in which relationships between subunits are governed through a *'pure authority relationship'* he describes as '*fiat'* (Williamson, 1975:101). While such a characterization may be generally appropriate in the context of public corporations operated by professional managers who are monitored by arm's length shareholders and subject to the market for corporate control (Walsh & Seward, 1990), other types of organizations, such as those formed on the basis of ethnic (Light, 2005) or religious ties (Wuthnow, 2005), are governed by more socialized and personalized forms of

authority (Granovetter, 1985). Such more socialized and personalized types of authority are epitomized, but not exclusively found in the relations within family firms (Carney, 2005; Gedajlovic, Lubatkin & Schulze, 2004), which are the primary focus here.

In his book, *The Economic Institutions of Capitalism,* Williamson (1985) sparked renewed interest in transaction cost theory by detailing what he terms 'asset specificity' to explain the relative efficiency of markets and hierarchies. In Williamson's work, asset specificity is the extent to which investments made to support a particular transaction are less valuable when used for another purpose, and he refers to it as "the big locomotive to which transaction cost economics owes much of its predictive content" (Williamson, 1998; 36). According to Williamson's markets and hierarchies' thesis, asset specificity produces a number of trading hazards that are best dealt with by vertically integrating the activity. In this view, assets characterized by high levels of asset specificity have two key attributes: they are specialized resources developed for a particular task, and are also costly or impossible to redeploy to an alternative use. At the same time, it is reasoned that transactions pertaining to more generic and easily redeployable assets are most efficiently handled through market exchange relationships because such assets are not as prone to the trading hazards of specific assets and because the market solution is less costly due to the bureaucratic costs inherent in complex managerial hierarchies.

On this basis, Williamson and his followers take it as axiomatic that activities involving assets that have high asset specificity are best coordinated though managerial hierarchies, while more generic and redeployable assets are better handled through discrete market transactions between independent actors. This core idea in modern transaction cost theory is depicted in Figure 1, which distinguishes between the specialized nature of an asset and its tradability. On

this basis, we can see that extant transaction cost theory focuses on two of the four scenarios: Cell 1, where assets are both specialized and non-tradeable and where managerial hierarchies are most appropriate, and Cell 4 where assets are both generic and easily tradeable and where market transactions are most appropriate. But what of the two cases on the off diagonal pertaining to specific assets that are tradeable (Cell 2) and generic assets that are not easily traded (Cell 3)? Do such assets exist, and if so, by what means should their exchange be governed? To date, transaction cost theorists have largely ignored these questions.

Insert Figure 1 about here

With respect to Cell 2, we note that there are organizations such as many high tech startups purposely designed to create highly specific assets such as platform specific software or electronics for subsequent trade to more established firms across a market interface. In this regard, Saxenian (1994) and Florida and Kenney (1988) describe the emergence in Silicon Valley of many firms that are founded to develop and sell highly complex and specialized assets to established firms like Intel, Microsoft and Sun Microsystems. More specifically, we note that Youtube and Hotmail which developed such assets and were synergistically integrated into the operations of Google and Microsoft respectively, are representative of the roughly 20% of entrepreneurial start-ups funded by venture capital (VC) firms that are ultimately sold to established going concerns (Cochrane, 2005;17). In this respect, the system of VC financing and oversight of entrepreneurial firms has proven highly adept at both nurturing high tech firms that develop highly specialized assets and also ensuring their eventual sale to an established company that sees the synergistic potential of the asset with respect to their existing operations (Zider, 1998). Thus, the VC system of financing high technology start-ups appears well suited to the

sorts of specialized and tradeable assets that fall into Cell 2. While the roles played by VCs with regard to the development of firms with specialized and tradeable assets is a topic that merits further development, the focus of this study and special issue is on the exploration of another type of firm, the Family Business enterprise, which we reason has distinct advantages in developing, maintaining and exploiting the assets that fall into Cell 3.

We reason that the assets that fall into Cell 3 are generic because they are applicable to a number of alternative uses, but also that they are firm-specific because they are sticky to the firm that developed them and are difficult, costly or impossible to trade. Williamson (1985) uses the term 'generic asset' as the converse of a specific asset, but does not explicitly define the term. Here we define an asset as generic if it can be applied to diverse tasks with similar effectiveness. This definition is in line with that of Teece (1986), who defines generic assets as 'general purpose assets.' While Williamson argues that transactions pertaining to generic assets are most efficiently handled by market-based transactions between arm's length parties, we argue that for many types of generic assets this form of governance is not possible. In this respect, we reason that just because an asset is generic in the sense that it can be applied with similar effectiveness to a variety of tasks, it does not necessarily mean that it cannot also be firm-specific in the sense that it is inextricably tied to a firm due to limits in its tradability.

For instance, in asking 'Can culture be a source of competitive advantage?' Barney (1986) describes corporate culture as such an asset - applicable to a variety of tasks, but not easily tradeable. Similarly, Collins and Porras' (1994) '*Built to Last*' thesis is based on the idea that a company's long-term success is directly related to firm-specific generic capabilities that can be levered to a variety of product-market and temporal contexts. Kenneth Arrow (1974) suggests that a reputation for trustworthiness is another generic asset that is potentially valuable

but not easily traded and remarks that 'trust is not a commodity which can be bought very easily. If you have to buy it you already have some doubts about what you've bought' (Arrow, 1974:23). Thus, there appears to be a class of potentially valuable assets currently overlooked in the transaction cost literature that are both applicable with similar effectiveness to a variety of uses and also difficult to trade. We call these sorts of assets Generic Non-Tradeables (GNTs). In this respect, it is important to differentiate GNTs from the assets described in Cell 1 of Figure 1. While both these types of assets are sticky, or specific to the organization in which they are developed, GNTs differ in that they are more broadly applicable to a variety of uses. In this manner, *GNTs are firm-specific, but generic in application.* As we show below, the owner of a GNT may deploy it across a number of commonly owned firms in very different industries, a phenomena commonly observed in portfolio firms and business groups.

In the remainder of this article, we describe some major types of GNTs and explore their implications regarding the versatility and limitations of the family business enterprise as an organizational form. There exists considerable variation in how family firms are defined and operationalized in management research (Schulze & Gedajlovic, 2010). In this regard, some researchers distinguish family firms in terms of ownership (e.g. Anderson, Mansi & Reeb, 2003), participation in management (e.g. Bennesden, et al 2007), or both (e.g. Anderson & Reeb, 2003). As noted by Chrisman, Chua and Litz (2003), others have defined family firms in terms of intangible features such as the intention to maintain family control, the existence of vision held by the family or synergistic resources stemming from family involvement in the firm. In this paper, which seeks to develop a transaction cost theory of the family firm, we treat family governance as a unique governance archetype characterized by distinctive incentives, authority

structures, and norms of legitimacy (Gedajlovic et al., 2004) which Carney (2005) describes as parsimony, particularism and personalism.

TYPES OF GNTS

There are a variety of intangible assets that are both generic and non-tradeable. The 'generic-ness' of these assets makes them applicable across a variety of times and places, and their non-tradability means that they must be developed and sustained (Dierickx & Cool, 1989). However, if fair value is to be extracted from these assets, they must be exploited by the firm that has developed them because they are difficult or impossible to be bought or sold. In this section, we focus on four particular types of GNTs: Bonding and Bridging Social Capital, Reputational Assets, and Tacit Knowledge. While we do not claim that these constitute a fully inclusive list of GNTs, they have been selected because they are applicable to a variety of contexts, are largely non-tradeable, and are widely discussed in the management literature where they are seen as potentially valuable assets.

Bonding social capital pertains to the value of social ties *within* a collectivity or community (Adler & Kwon, 2002). Research suggests that because such ties create channels for the transmission of fine grained information about member conduct, they provide value by reducing transaction costs related to search, monitoring and contracting costs as well as the risk of opportunistic behavior (Leff, 1978; Standifird & Marshall, 2000). In this regard, Gulati (1995) finds that within-group ties reduce the cost of vetting a potential trading partner's trustworthiness. Moreover, Carney (2007) notes that the costs of searching and screening potential trading partners and enforcing contracts are less among in-group members due to their capacity to identify and apply binding social sanctions on opportunistic behavior.

While the benefits of such ties are specific to a particular network, they provide firms that possess them with ready access to a variety of resources that are applicable to a broad range of business opportunities. For instance, research on business groups in emerging markets suggests that they provide benefits to diverse types of businesses by proving conduits for information regarding profitable opportunities (Guillen, 2000) through safeguarding transactions and by providing access to financial capital (Leff, 1978) and skilled professional managers (Fisman & Khanna, 2004). While this form of bonding social capital is potentially valuable in a range of activities, it cannot be traded because bonding social capital inheres in social relations and is not actually owned by any particular party (Coleman, 1988). In this respect, parties that are not part of such cohesive groups do not have access to their benefits nor can they easily purchase these benefits (Portes & Haller, 2005).

Bridging social capital pertains to brokering or linking processes between unrelated groups and people. Bridging capital arises from an individual's capacity for brokerage among friends, colleagues, and more general 'contacts' through which one receives opportunities to use one's financial and human capital (Burt, 1992: 9). Fligstein (1997) suggests brokers need knowledge of the current state of their field and strategic social skills that 'make sense' given their objectives such as persuasion, the capacity to set agendas, aggregating interests, creating ambiguity and appropriately framing situations. As bridging social capital can improve efficiency by facilitating coordination (Putman, 1993), it is both valuable and generic. In this respect, bridging facilitates transactions between people and organizations that are otherwise unconnected and allows actors to better identify opportunities, get things done, and also appropriate rents (Blyler & Coff, 2003). The generic character of bridging social capital is illustrated in the work of Kang (2003), who observes that 'political connections' may be put to

many uses, such as obtaining licenses, or circumventing regulatory impediments. On this point, Guillen (2000) notes that well connected business groups can leverage their political connections to enter a range of unrelated industries. While bridging social capital may have generic value, its tradability is impeded by its contingent and fragile value. As Burt (1992: 58) explains, 'no one player has exclusive ownership rights to social capital. If you or your partner in a relationship withdraws, the connection dissolves with whatever social capital it contained.' Moreover, the economic value of political connections is highly contingent - once friends in high places leave office, the value of such ties fall precipitously (Seigal, 2007).

Reputation is a potentially valuable resource that can afford advantages in both product and factor markets (Barney, 1986). In this respect, a wide range of stakeholders may prefer to associate and provide resources to firms that they perceive to have a positive reputation. Hall (1992) found that managers perceive reputation as the one intangible resource that makes the most important contribution to business success, has the highest replacement cost, and takes the longest to build. Since the creation of a favorable reputation depends on the perceptions of others that are built up through planned and unplanned interactions over relatively long periods of time (Rindova & Fombrun, 1999), it is both socially complex and causally ambiguous - factors that make a resource difficult to replicate, buy or sell (Dierickx & Cool, 1989).

A favorable reputation can benefit a firm in a variety of different ways and in a variety of different contexts. For instance, business groups in emerging markets often benefit from a reputation for trustworthiness (Khanna & Palepu, 1997) or as the 'go to' partner for inbound foreign direct investment (Wong, 1996), and these attributes have been linked to both their profitability (Khanna & Rivkin, 2001) and widely diversified portfolio of businesses (Hoskisson, Johnson, Tihanyi, & White, 2005). In terms of brand reputation, research has shown that 'human

brands’ such as Oprah and Ellen DeGeneres (Thomson, 2006), as well as celebrity firms (Rindova, Pollack, & Hayward, 2006) that utilize well-known persona to whom consumers are emotionally attached, can profitability leverage their reputation over a broad range of products.

Tacit knowledge is knowledge that is non-codifiable (Nonaka & Takeuchi, 1995). As a consequence, while it may be highly valuable, it is difficult or impossible to replicate or transfer to another party (Szulanski, 1996). Some tacit knowledge can be highly specialized and firm-specific when it is developed by teams of skilled workers who learn to work together over long time periods (Kogut & Zander, 1988; Nahapiet & Ghoshal, 1998). However, other forms of tacit knowledge are more generic and useful in a variety of ways and in a variety of contexts (Hayek, 1945). For instance, being able to identify opportunities, spotting and recruiting talent, motivating workers, closing deals and making sales are quite broadly applicable (Dimov & Shepherd, 2005). Such tacit knowledge is inalienable from its owner (Von Hippel, 1994) and cannot be purchased outright (Brynjolfsson, 1994). Further, while such tacit knowledge may sometimes be ‘rented’ from its owner through an employment or other type of contract, a variety of trading hazards related to the unknown reliability of its owner, the causal ambiguity of the knowledge itself, and the absorptive and retentive capacity of the receiver are endemic to such transfers (Szulanski, 1996). Thus, tacit knowledge is a rather sticky asset that is impossible to buy or sell and very difficult to enter into contract for.

GNTS AND THE GOVERNANCE OF THE FAMILY FIRM

In their meta analytic review of transaction cost research, Geyskens, Steenkamp & Kumar (2006) remark that the theory is well established and corroborated, 'yet for all its depth and scope, transaction cost theory has only begun to explore the variety and complexity of organizational forms' (p. 534). One such form that has received scant attention in the transaction cost literature

is the family firm. In this regard, Williamson makes a passing reference to family firms (Williamson, 1996:78) where he provides a two-paragraph excerpt from Pollack's (1985) paper on families and households. In this section, we begin to develop a transaction cost approach to the study of the family firm by treating this form as a governance archetype or a discrete structural alternative that has relative efficiency advantages compared to other archetypes such as managerial hierarchies and markets in terms of developing, maintaining and exploiting GNTs.

A central tenet of modern transaction cost theory is that the ideal of transactional efficiency is attained when there is a discriminating alignment between governance mode and asset characteristics (Joskow, 1988; Masten, 1993). As discussed above and portrayed in Figure 1, Williamson (1985) and his followers reason that generic and tradeable assets are best governed by market transactions between arm's length actors. On the other hand, it is argued that highly specialized assets are subject to substantial trading hazards and are best coordinated within firms by managerial hierarchies (Balankrishnan & Fox, 1993; Williamson, 1988). In this section, we extend such transaction cost logic to GNTs, a class of asset that is widely used and potentially valuable, but which transaction cost theorists have not yet considered.

Following transaction cost logic, we reason that, like other classes of assets, governance mode affects the efficiency with which GNTs are put to use. For the reasons described below and summarized in Table 1, we further reason that the family firm as an organizational form has unique governance properties that provide it advantages in developing, sustaining and appropriating value from GNTs. To highlight how the governance characteristics of family firms provide these advantages, we conceive of organizational governance as comprised of formal and informal rules which determine incentives, authority structures, and norms of accountability (Gedajlovic et al., 2004).

To anchor this discussion, we use the organizing framework provided by Carney (2005), who argues that parsimony, particularism and personalism characterize the incentives, authority structures and norms of accountability in family firm governance (Table 1). Building on the work of agency and property rights theorists (e.g. Alchian & Demsetz, 1972; Brickley & Dark, 1987), Carney suggests that family firms have a marked propensity for parsimony stemming from the fact that they make strategic decisions with the family's personal wealth. Family firm governance is also characterized by personalism because the coupling of ownership and control concentrates and incorporates organizational authority in a person or persons – the owner-managers. As a consequence, owner-managers operate under fewer internal constraints and they may exempt themselves from the internal bureaucratic constraints that limit managerial authority in other modes of governance. In Carney's framework, particularism follows from the personalization of authority and stems from the tendency of family members to view the firm as 'our business.' As a consequence of this personalization of authority, families are able to project their own vision onto the business (Chua, Chrisman, & Sharma, 1999) and may employ particularistic (Demsetz & Lehn, 1985) and intuitive (Dyer, 1989) criteria to make important strategic decisions.

Insert Table 1 about Here

Bonding Social Capital. As summarized in Table 1, the governance characteristics of family firms allow their management considerable latitude in the development of bonding social capital. In this respect, some have argued that family firms are uniquely qualified to mobilize bonding forms of social capital due to their capacity to freely engage in the activities of social networks and communities whose values they share (Pearson, Carr & Shaw, 2008). In their

search and selection of business partners, family owner-managers possess the authority necessary to use particularistic criteria in the selection of their suppliers, advisers, and financiers (Gedajlovic et al., 2004; Schulze, Lubatkin, Dino, & Buchholtz, 2001). In this respect, the managers of family firms may choose their business partners on the basis of shared values, religion, friendship or ethnicity (Tsui-Auch, 2004). In so doing, family firms may become incorporated into specific networks and communities that provide them access to special resources. More generally, Lester and Cannella (2006) note that family firms are likely to recruit onto their boards of directors executives from other family firms with whom they share common values. Lester and Canella suggest that through this mechanism a firm can gain access to a community of family firms where there resides a repertoire of practice and solutions for problems that commonly occur in such businesses.

Moreover, engagement in such communities may be enhanced in a self-sustaining and self-reinforcing way because long-term relationships can foster and deepen interpersonal trust (Pearson et al., 2008; Pollak, 1985). In this respect, Sirmon and Hitt (2003) note that families develop shared languages and narratives, and these factors promote high levels of personal commitment. It follows that family firms come to increasingly recognize the benefits of ties to their communities and avoid practices that may result in their exclusion or ostracism from them (Portes, 1998). As a consequence, bonding ties can promote adaptation and timely dispute resolution without recourse to cumbersome formal contracts (Portes, 1998). While individuals and firms do not ‘own’ their networks or communities, their membership in them can create appropriable value (Coleman, 1988). In this regard, strong ties to a network may allow a resource implicit in one relationship to be applied and transferred elsewhere (Lester & Canella, 2006), and

on this basis, a firm's position in a network can be converted from social to economic value (Adler & Kwon, 2002).

Thus, as summarized above and in Table 1, we reason that because of their governance characteristics, family firms have relative advantages in developing, sustaining and appropriating value from bonding social capital. Consequently, we propose that:

Proposition 1a: Relative to other firms operating in similar environments, family firms develop and make greater use of bonding forms of social capital.

Proposition 1b: Family firms are the predominant form of enterprise in industrial and institutional contexts where bonding forms of social capital are highly valued.

Bridging Social Capital. Due to their personalized authority, owner-managers in family firms are empowered to enter into verbal, informal, handshake-deals (Miller & Le Breton-Miller, 2005; Steier, 2001a) and commit their firm to transactions with unspecified obligations (Lovett, Simmons, & Kali, 1999; Park & Luo, 2001). Such transactions governed by norms of reciprocity promote the exchange of idiosyncratic resource bundles (Schulze et al., 2001; Sirmon & Hitt, 2003) with inexact accounting (Redding, 1990) and particularistic asset valuations (Luo & Chung, 2005). In marked contrast, such conduct is expressly proscribed for professional managers in managerial hierarchies. As a consequence of these factors, Bertrand and Schoar (2006) contend that politicians prefer to exchange ‘favors’ with family firms, which can become the basis for valuable bridging social capital for the firm.

The governance characteristic of personalism, whereby family members view the firm as their own, provides not only the discretion to build and sustain bridging forms of social capital, but also the incentive to do so. Whereas family firms may initially establish business partnerships with formal contracts, family managers can reasonably expect their connection with the firm to be long-lived or perhaps even inter-generational and this provides an incentive for

them to invest in assets such as bridging forms of social capital that may have short-term costs, but longer term benefits (Morck, Wolfenzon, & Yeung, 2005). As the family firm evolves, a greater proportion of its transactions may be secured by trust-based social capital. Relatedly, family managers may have the discretion and incentive to invest in bridging forms of social capital because they and their families can derive non-economic benefits of status and prestige from investing in such assets (Palmer & Barber, 2001). The relational and mutually beneficial aspects of these contracts possess self-enforcing safeguards that support their continuity (Telser, 1980), which when compared with formal contracts that are costly to write, monitor, and enforce are a parsimonious means of transactional governance (Dyer & Singh, 1998).

Family firm governance may also provide firms with advantages in appropriating value from their relational capital (e.g. Burkart, Panunzi, & Shleifer, 2003; Chrisman et al., 2009; Morck & Yeung, 2004). In this respect, the tendency to amass relational assets over an extended period of time provides them with opportunities to broker deals between otherwise unconnected parties, which further extends their network and provides additional opportunities for profit. In addition, the wide discretion afforded family managers allows many of these transactions to escape close internal or external review, which allows them to allocate resources quickly and discretely. For example, Indonesia's Salim Group, a second generation family firm and once Southeast Asia's largest diversified firm, prospered by brokering deals between Indonesian President Suharto's business interests and those of Japanese and western investors (Dieleman & Sachs 2006). Indeed, in Southeast Asia, family business groups have a long history of playing a central role in mediating foreign investment and the policy goals of industrializing states (Carney & Gedajlovic, 2002).

On the basis of these considerations, we reason that the governance characteristics of family firms provide relative advantages in developing, sustaining and appropriating value from bridging forms of social capital. Consequently, we propose that:

Proposition 2a: Relative to other firms operating in similar environments, family firms develop and make greater use of bridging forms of social capital.

Proposition 2b: Family firms are the predominant form of enterprise in industrial and institutional contexts where bridging forms of social capital are widely valued.

Reputational Assets. The governance characteristics of family firms also afford them the incentive and means to develop and sustain reputational assets. Reputation, firm identity and public image often inhere in unique personal qualities of a family or its founders and may be highly particular to that firm (Landes, 2006; Miller & Le Breton-Miller, 2005). In this respect, families can establish distinct reputations through a capacity to inject a human touch into their relationships with customers (Lyman, 1991) and their employees (Westwood, 1997). On this point, research on the value of CEO reputation finds that personal qualities such as authenticity (Guthey & Jackson, 2005) and integrity (Dyer & Whetton, 2006) are often more credible when communicated by individuals with whom one has an emotional attachment because they help downplay the underlying instrumentality of an economic exchange (Thomson, 2006).

Due to the personalism and particularism inherent in their forms of governance, family firms may also have a relative advantage in sustaining reputational assets. This relative advantage stems from the fact that family firms are less prone to pressures for conformity (Rindova & Fombrum, 1999) that can depersonalize behavior in other organizations (Ashforth & Mael, 1989). Also, since the reputations of family members and the family firm are tightly linked, family managers have strong business and personal incentives to show a commitment to corporate social responsibility and positive image management (Dyer & Whetton, 2006).

Moreover, Miller, Le Breton-Miller, & Scholnick (2008) maintain that family managers have a strong incentive to assure firm continuity and consequently exercise careful stewardship over their reputations and engage in future oriented investments in reputational assets to assure the firm's continued viability for future generations. Dyer and Whetton (2006) apply Godfrey's (2005) reasoning about corporate philanthropy to family firms' social responsibility decisions and propose that they have a strong tendency to build and maintain a reputation for integrity and trust, as such assets can supply families with a form of 'social insurance' that can be 'cashed in' in times of crisis.

The governance characteristics of family firms also provide relative advantages in appropriating benefits from reputational assets (Buukart, Panunzi and Shleifer, 2003). For instance, Rauch (2001) finds that in international trade, where contracts are hard to enforce, families with known reputations can price products at a premium relative to unknown suppliers. More generally, the longer term view of family managers as well as their relatively wide discretion promotes investments in reputational assets that can take a long time to develop, (Barney, 1986) requiring upfront costs and difficult to quantify future benefits.

In summary, on the basis of the arguments discussed above, we reason that family firm governance provides advantages in developing and using reputational assets. As a consequence, we propose that:

Proposition 3a: Relative to other firms operating in similar environments, family firms develop and make greater use of reputational assets.

Proposition 3b: Family firms are the predominant form of enterprise in industrial and institutional contexts where reputational assets are widely valued.

General Tacit Knowledge. Due to the personalism inherent in family firm governance, family managers often receive less internal and external scrutiny (Morck & Yeung, 2004) and

are often relieved of the obligation to explain the logic of their actions to others (Schulze et al., 2001). It follows that family managers will enjoy considerable latitude in utilizing their tacit knowledge and can base important decisions upon intuitive criteria and private information. Family firm top management teams can also display high levels of consensus that create an environment for members to share greater tacit understandings (Ensley & Pearson, 2005).

Family businesses may also have advantages in sustaining and preserving general tacit knowledge because it is best acquired and transferred in a learning-by-doing manner (Lane & Lubatkin, 1998). In this respect, family firms have been shown to be excellent mechanisms for preserving and transferring tacit knowledge between family members and from one generation to another (Cabrera-Suárez, De Saá-Pérez, & Garcia-Almeida, 2001). On this point, research on family firm succession indicates that they utilize a variety of formal and informal mechanisms to transfer tacit knowledge between generations (Steier, 2001b). Relatedly, Sirmon and Hitt (2003) point out that early involvement of children in a family firm can produce deep levels of tacit knowledge and Miller and Le Breton-Miller (2006) suggest that a stewardship orientation in family managers incline them to invest in the preservation of tacit knowledge through the development of a strong corporate culture and executive apprenticeship programs.

Family firm governance may also provide a relative advantage in appropriating value from tacit knowledge. Since tacit knowledge is marked by significant causal ambiguity (Alvarez & Barney, 2004), there exists substantial information asymmetries between its possessor and others regarding its ‘true’ value and potential uses. Bjuggren and Sund (2002) argue that such information asymmetry results in serious trading hazards under both market and hierarchical governance. We reason that family firm governance is better equipped to deal with such information asymmetries and trading hazards because family managers are empowered to use

their own tacit knowledge. This is due to the fact that family members have substantial tacit knowledge regarding each others' range of capabilities and behavior patterns, and because common familial concerns can keep opportunism and the misrepresentation of abilities in check (Lee, Lim, & Lim, 2003).

Consequently, we propose that:

Proposition 4a: Relative to other firms operating in similar environments, family firms develop and make greater use of generic forms of tacit knowledge.

Proposition 4b: Family firms are the predominant form of enterprise in industrial and institutional contexts where generic forms of tacit knowledge are widely valued.

FAMILY FIRMS AND THE BUNDLING OF GNTS WITH OTHER TYPES OF ASSETS

We have identified and described GNTs as a class of asset and discussed how family firm governance provides relative advantages in developing, sustaining and appropriating value from them. However, family firms like other types of enterprise are not comprised of a single asset, but are more accurately a 'nexus of contracts' (Williamson, Aoki, & Gustafsson, 1990) pertaining to a variety of assets, or more simply, a bundle of assets (Penrose, 1959). In this respect, the value creating potential of GNTs is most clearly evident when they are combined with other types of assets. For instance, a favorable reputation becomes more valuable when combined with a product consistent with that reputation as well as necessary manufacturing and marketing capacities. Similarly, the value creation potential in bridging social capital requires the existence of other tangible or intangible assets that can be brokered and the value of bonding social capital comes from linking private information and efficient inter-firm coordination mechanisms with business opportunities that require other types of assets as well.

We reason that certain characteristics of GNTs promote their combination with other types of assets. We believe this to be the case for three primary reasons. First, the generic

character of GNTs means that they may be relatively easily applied to a variety of tasks with similar effectiveness. Thus, there is a clear potential for these assets to be combined with a variety of other assets in a variety of different ways.

Second, as described above, there is much value creating potential in combining reputational assets, bridging and bonding social capital and general tacit knowledge with other types of tangible and intangible assets. Thus, there is a strong incentive for owners of GNTs to leverage them in a variety of ways through various combinations with other assets. Further, in contrast to many types of physical assets that diminish in value the more they are used (Arthur, 1996), many GNTs actually increase in value with repeated use. For instance, brokering new deals may increase the value of bridging social capital and new business activities that take advantage of bonding ties can provide resources and increase the range of capabilities of in-network firms, which can form the basis for additional opportunities. Similarly, as is evident in Richard Branson's Virgin brand, reputational assets such as brand equity that are developed to support a particular product or service can often be profitably applied to others.

Third, we reason that capabilities inherent in GNTs themselves can promote the identification and pursuit of opportunities for the profitable combination of GNTs with other assets. On this point, research in the field of entrepreneurship suggests that tacit knowledge based upon intuition and experience promotes the identification of new business opportunities and their pursuit through unique and novel combinations of assets (Alvarez & Busenitz, 2001; Dimov & Shepherd, 2005). Similarly, the ties inherent in both bonding and bridging forms of social capital provide rich sources of information that can reveal opportunities for combining GNTs with other assets, and also provide information about, and facilitate access to, resources that may be usefully combined with GNTs.

The previous paragraphs indicate that many GNTs are readily combinable with other assets and that there is often the means and incentive to do so, but under whose auspices should these combinations or bundles of assets be organized? Grossman and Hart (1986) suggest that when two parties possess assets that need to be combined for a particular activity, it is the party whose assets provide the greatest marginal contribution to the activity that should be the acquirer. With respect to the combination of GNTs with other assets, this would suggest that the possessor of the GNT should be the acquirer only when the value of the GNT is greater than the asset it is to be combined with. Though such a solution has an intuitive logic, we reason that it over simplifies the question of who should own the bundle of assets for two reasons.

First, since GNTs are generally intangible, it is inherently difficult to ascertain their value with any degree of precision. How, for example, can one place a clear value on someone's tacit knowledge or the value of their bridging or bonding social capital? The imprecision inherent in such calculations makes it impossible to clearly weigh the relative values of the assets that are to be combined.

Second, Grossman and Hart's (1986) thesis ignores the important issue of the relative tradability of the two parties' assets. In this respect, while GNTs are generic, they are also very sticky to the party that has developed them and their sale is often either impossible or subject to substantial trading hazards and transaction costs. Further, even when GNTs such as tacit knowledge, bonding or bridging social capital, or reputational assets based upon perceived personal qualities can be effectively transferred, it is unlikely that they can flourish or be sustainable away from the organizational context in which they were developed. For instance, the rules and norms of large bureaucratic organizations governed by strict managerial hierarchies may ignore or destroy the value of GNTs, such as tacit knowledge or bridging and bonding ties,

because in such contexts analysis and formal procedures are valued over experience and intuition, and arm's length discrete ties are favored over longer term partnerships.

As a consequence of the inherent costs and difficulties in trading GNTs, we reason that the combination of GNTs with other assets are most efficiently carried out under the auspices of the developer of the GNT – even when the relative standalone values of the respective asset bundles to be combined are unclear. Further, given that family businesses have relative advantages in the development of GNTs, it follows that they also have relative advantages in most activities that involve the bundling of GNTs with other types of assets.

CONCOMITANT COSTS OF FAMILY GOVERNANCE

The previous discussion suggests that family businesses have a relative advantage in developing GNTs and in combining them with other types of assets. This raises the question: Why are not all firms family firms? Paralleling Coase's (1937) and Williamson's (1996) logic that advantages and concomitant costs are inherent in alternative forms of governance, we reason that family governance similarly provides these firms with linked and inseparable costs and advantages. More specifically, we reason that while the family governance characteristics of parsimony, personalism and particularism provide relative advantages with respect to GNTs, they represent liabilities when it comes to the recruitment and utilization of skilled and professional employees, the management of complex technical systems, and the procurement of financial capital. These liabilities of family governance are summarized in Table 2.

Insert Table 2 about here

Skilled and Professional Human Resources. With respect to skilled and professional human resources, family firms are commonly 'lean and mean' in their hiring and layoff practices

(Miller & Le Breton-Miller, 2005). Further, family managers often bring an ownership mentality to human resource decisions and may view compensation, training, and benefits as expenses rather than investments. For example, Reid and Adams (2001) find that family firms spend less on training and are more likely to use flat rate and individual bonus pay as reward mechanisms, practices which Pfeffer (1994) contends limit the development of human resources because they induce uncooperative and perfunctory contributions from workers. Family managers can also be reluctant to use stock options to reward top managers over concerns of diluting personal or family control (Gedajlovic et al., 2004).

More generally, the personal character of the family firm allows owner-managers to hire, compensate and promote employees on the basis of particularistic criteria such as family ties or loyalty rather than professional expertise (Schulze et al., 2001). In this respect, family firm managers may eschew formal human resource policies over concerns that such policies can hinder the exercise of their authority over hiring, promotion and firing decisions (Ward, 1987). Such particularism can engender intense loyalty from workers who feel favored by owners, but also strong alienation in others. Regardless, these tendencies undermine meritocratic human resource policies and the asymmetric treatment of insiders and outsiders can dampen overall employee commitment and motivation. If non-family members face a glass ceiling or perceive procedural injustice (Lubatkin, Ling, & Schulze, 2007), a sense of inequity can pervade the organization and can inhibit the retention of highly qualified managers and skilled employees. Carney (1998) argues that such tendencies inherent to family firm governance can create serious human resource capacity constraints.

On the basis of these arguments, we reason that family firms make less use of highly skilled and professional employees and will be under-represented in industries where these sorts of workers are needed.

Proposition 5a: Relative to other firms operating in similar environments, family firms make less use of highly skilled and professional employees.

Proposition 5b: Family firms are under-represented in industries that have a high proportion of highly skilled and professional workers.

Management of complex and specialized technical assets. An important consequence of the human resource capacity constraint faced by family firms is that they will also face relative disadvantages in developing, sustaining and appropriating value from complex and specialized technical assets. We reason this to be the case for three related reasons. First, the parsimonious propensities of family firms (Carney, 2005) can encourage an efficient operational environment that roots out some of the slack resources that Nohria and Gulati (1996) describe as necessary for successful experimentation and innovation.

Second, while personalized authority in family firms facilitates intuitive and decisive action, the autonomous exercise of personal authority can be a handicap when technological conditions call for deliberative and coordinated adjustments of complex and interdependent activities. In this regard, Chandler (1990) argues that the planning systems and organizational structures of family firms are ill-suited for knowledge-intensive and technologically dynamic industries where more sophisticated processes and strategic controls are desirable (Hitt, Hoskisson, Johnson, & Moesel, 1996).

A third liability with respect to the development of complex technical assets in family firms is their tendency to limit participation in both ownership and decision-making to a small cadre of insiders that are selected on the basis of the particularistic criteria of owner-managers

rather than professional, scientific or technical ability (Daily & Dalton, 1992; Gedajlovic et al., 2004). Relatedly, Ensley and Pearson (2005) find that top management teams in family firms show a strong sense of team belonging and more readily attain consensus on the firm's strategic direction, but that such dominant leadership may reduce constructive dialogue and the screening of novel ideas. Other researchers find that families may exclude non-family managers, even those executives with strong professional or scientific qualifications, from their important strategic decisions (Tsui-Auch, 2004). We reason that the tendency to restrict the top management team to insiders inhibits the development of absorptive and retentive capacity and reduces access to outside sources of information that are needed to calibrate and refine complex systems (Cabrera-Suárez, De Saá-Pérez, & Garcia-Almeida, 2001; Pollak, 1985).

For the three reasons described above, we reason that family firms face a relative disadvantage in developing, sustaining and appropriating value from complex and specialized technical assets and will be under-represented in industries where such capabilities are required.

Proposition 6a: Relative to other firms operating in similar environments, family firms make less use of complex and specialized technical assets.

Proposition 6b: Family firms are under-represented in industries that require the use of complex and specialized technical assets.

Financial Resources. The governance characteristics of family firms also represent a serious liability in terms of the ability to raise external sources of financing (Claessens, Djankov, Fan, & Lang, 2002). Family firms face an inherent financial constraint with respect to raising outside equity because continued family control of the firm requires that the rights and prerogatives of ownership stay in the closely held hands of family members and trusted associates (Dyck & Zingales, 2004).

Furthermore, even when family members are willing to dilute their ownership somewhat, tensions in the relationship between family owners and arm's length investors constrain the firm's ability to raise external capital (Peng, Ahlstrom, Bruton, & Jiang, 2008). Such tensions are endemic to family firms because owner-managers can use their managerial control over the firm to 'expropriate' wealth from outside investors in a variety of ways (Morck et al., 2005).
For instance, family members can increase their salaries or job related perquisites, which diverts potential profit away from outside shareholders (Jensen & Meckling, 1976), or they may engage in 'tunneling' (Friedman, Johnson, & Mitton, 2003), a process whereby inside shareholders transfer profits to affiliated firms in which they hold relatively greater equity ownership. As a consequence of these agency problems, family businesses may have difficulty raising financial capital and can pay a significant premium to compensate arms-length minority investors for the risk that owner-managers may use their control rights to expropriate private benefits of control at their expense (Claessens et al., 2002; La Porta et al., 1999). In this respect, the personal and particularistic characteristics of family firm governance that represent advantages in terms of GNTs place them at a relative disadvantage when it comes to raising external sources of financing.

Proposition 7a: Relative to other firms operating in similar environments, family firms make less use of external sources of financial capital.

Proposition 7b: Family firms are under-represented in industries that are capital intensive.

DISCUSSION

Transaction cost theory begins from the position that "in the beginning there were markets" (Williamson, 1975: 20) and goes on to develop a comparative efficiency framework that sees the emergence of the hierarchical firm as a rational response to growing transactional complexity.

This theory found full expression in Chandler's (1977, 1990) depiction of the emergence of the modern managerial enterprise as a response to the growing technological sophistication of industries characterized by economies of scale and scope. Chandler (1990) viewed the family firm as an organizational form handicapped by wealth preservation concerns and an incapacity for managing complex industries. In this respect, Chandler reflected the orthodox view of the family firm as a backward, pre-modern institution plagued by exclusionary values and suitable only to the operation of simple technologies.

However, such a view is inconsistent with the mounting empirical evidence that family firms survive and thrive within and across very different host societies (Anderson & Reeb, 2004; La Porta et al., 1999; Yoshikawa & Rasheed, 2010) and in direct competition with organizations that more closely conform to Chandlerian managerial ideals. As a consequence, even though family firms emerged prior to, and were in some cases supplanted by Chandlerian managerial enterprises, the ubiquity and pervasive success of family firms make it hard to support the assertion that family firms are evolutionarily inferior to them. In this respect, we have argued that family firms are especially adept and enjoy relative advantages in developing, maintaining and appropriating value from GNTs, such as social and reputational capital and certain forms of tacit knowledge. That such advantages appear to be still very valuable today (Alvarez & Barney, 2004; Barney, 1986; Hall, 1992) and are still very much actively sought, but not as easily developed by other types of business enterprise (Arregle et al., 2007; Chrisman et al., 2009; Sirmon & Hitt, 2003), suggests that family firms will maintain their widespread use and relevance in many contexts for the foreseeable future. We reason that because the benefits of family enterprise are, under certain circumstances, offset by their disadvantages make them no less “advanced” or relevant than managerial hierarchies, whose advantages also come with

concomitant disadvantages. As a consequence, we reason that family firms are more appropriately viewed as a discrete structural alternative with relative strengths and weaknesses rather than an evolutionary inferior (or superior) form of business enterprise.

At the outset of this article we asked why family firms exist and what factors account for their versatility, as well as their success and limitations, within and across different industrial and institutional contexts? Leaving aside for a moment the larger question of why family firms exist, our transaction cost theory contributes to the understanding of family firms in the following manner.

First, by unpacking Williamson's (1985) notion of generic assets, we identify and distinguish between tradeable and non-tradeable generic assets and through specific propositions reason that family firms have advantages in developing, sustaining and extracting value from GNTs. In this regard, we propose that GNTs constitute the kernel around which family businesses establish an organizational shell. The metaphor of the kernel suggests that such assets represent the central core of the firm and create the distinctive logic through which other assets are organized. GNTs are valuable in their own right because they are highly adaptive, turning easily from one task to another and can be applied to many diverse fields of endeavors. As kernel assets, GNTs are, like core competencies, not easily visible to outsiders. Organizing to exploit a core asset that is applicable to a variety of tasks and settings, the family firm will necessarily take many forms, both small and simple and large and complex. Consequently, family firms may share similarities and come to resemble other types of organizational forms. Despite such similarities, our analysis suggests that the ability to develop, sustain and appropriate value from GNTs is a distinguishing characteristic of most successful family businesses.

Second, our transaction cost framework offers an explanation of the relative advantages and disadvantages of the family firm, which is an economic institution of great practical significance largely ignored by Coase (1937), Williamson (1985), and their followers. We reason that just as the economic logic of managerial hierarchies relates to the minimization of transaction costs and the benefits gained from the coordinated adaptation of highly specialized assets, the dominant logic of the family firm relates to developing, sustaining, and appropriating value from GNTs through combinations with other types of assets. It is just this sort of versatility as an economic institution in both munificent and hostile environments that we think is behind the renaissance of research interest on family business enterprise.

Third, we show that Grossman and Hart's (1986) thesis is an over simplification because the marginal contribution of many types of GNTs are difficult to ascertain with any precision and because answers to the 'who should own whom' question need to consider the relative tradability of assets and also whether the transferred assets are sustainable in their new organizational homes. Fourth, we draw widely upon the family business literature and notions of social capital from sociology to inject greater realism into the depiction of authority relations within firms. In doing so, we address some previous critiques of transaction cost theory that suggest it offers arid and unrealistic depictions of human relations (Granovetter, 1985; Perrow, 1981).

LIMITATIONS AND AVENUES FOR FUTURE RESEARCH

The transaction cost framework developed here represents a point of departure for understanding the versatility, successes and failures of family firms. In this respect, we believe that the market, hierarchy, and family framework developed here rests on some simplifying assumptions that may not be appropriate for all types of family firms. Just as Williamson's (1985) characterization of archetypal market versus hierarchical transactions represents extreme points on a theoretical

continuum in which the middle ground of hybridized market and hierarchy transactions constitute a rich and varied dominant organized mode (Hennart, 1993), and just as hierarchies incorporate quasi-markets and market transactions are infused with rules and authoritative elements (Stinchcombe, 1985), so may the archetypal family firm incorporate hierarchical and market elements.

While we do not address the issue of hybridization of the family firm archetype, entrepreneurial organizational forms are increasingly viewed as comprising plural-forms consisting of improvised elements assembled through bricolage (Baker, Miner, & Eesley, 2003). Thus, one limitation of our analysis is that we have only addressed the extreme points and many family firms are likely to be structured as more complex hybrids. For example, Caterpillar is a typical managerial hierarchy whose firm-specific R&D, manufacturing, logistics, and marketing assets are efficiently coordinated and financed within a public-listed firm. But Caterpillar's global distribution system, 95% of which is independent family businesses, is externalized because dealers require autonomy to cultivate relations with government and civil engineering firms in every corner of the world. Social capital is a vital asset in this task and one more efficiently organized by a family firm. Such family firm-managerial hierarchy hybrids are complex organizational adaptations of markets, hierarchies and families common in both services (Bradach, 1997) and manufacturing (Gereffi, Humphrey & Sturgeon, 2005). To the extent that the dominant logics of hierarchical and family firm governance are very different, future research exploring the processes through which organizational hybrids such as these combine and reconcile elements of these two governance systems appears warranted.

Second, our transaction cost framework has focused upon independent, freestanding family firms, but many family firms are portfolio firms (Carter & Ram, 2003) or business groups

(Khanna & Rivkin, 2001). Some of these have byzantine governance structures consisting of an intricate mix of public and private entities. We have not addressed this type of firm, but their existence and the appropriation issues they raise are vexing to both finance and management scholars alike. On this point Khanna and Yafeh ask, ‘Why, on a routine basis, do investors continue to invest in situations where their investment is likely to be expropriated (2007: 348)?’ Khanna and Yafeh speculate that expropriation may represent ‘returns to some core asset, with the investing public’s participation constraints being satisfied’ (2007: 348) and they lament that the literature provides very few answers to their question. Our transaction cost framework points to the possibility that family business groups may represent an efficient organizational form for generating and sharing rents from combined firm-specific and core-GNT assets. Further research in this direction might shed light on some reasons for the prevalence of these intricate corporate structures.

Third, this paper follows in the tradition of transaction cost research, which explores the performance implications of governance archetypes with respect to their relative abilities in managing transactions pertaining to different types of assets. In this regard, we have reasoned that the family firm archetype has unique advantages in handing activities pertaining to GNTs. While Williamson and his followers have attributed most of transaction cost theory's predictive power to distinctions it makes between classes of assets (Williamson, 1996), uncertainty is another critical dimension of transaction cost theory (Williamson, 1975) that may play a similarly critical role in determining the relative efficiency of governance archetypes in their ability to manage particular types of economic activities (Geyskens et al. 2006). On this point, we suspect that the governance characteristics of family firms provide them with both relative advantages and disadvantages in dealing with differing types of uncertainty, such as those

pertaining to behavioral, environmental and technological factors, and believe that such performance characteristics represent fertile grounds for future research seeking to further develop the transaction cost theory of the family firm.

The practical implications of our analysis suggest that in seeking to identify and leverage their core competences (Prahalad & Hamel, 1990), family firms may find that the roots of their competitive advantage lie not in their technologies or production skills but instead can in their management of GNTs . While such skills are generic in the sense that they may be applied to a variety of settings, it does not follow that they may be easy to imitate since the relational and reputation skills described here are likely to be socially complex assets that others, especially executives in managerial hierarchies, may find difficult to imitate. Further, our comparative efficiency framework suggests that executives in both family firms and managerial hierarchies might develop a more effective strategic architecture across their respective value chains by recognizing that each enjoys a different set of relative advantages with respect to certain assets and tasks. Systematic consideration of their relative advantages is likely to result in the growth of novel co-specialized hybrids of managerial and family film governance systems as found, for example, in the apparel industry in innovative family firms such as Spain's Zara and Hong Kong's Li and Fung.

CONCLUSION

At the outset of the paper, we posed a few fundamental questions about why the family business as an organizational form exists and what factors explain its versatility, success, and limits across a wide range of industrial and geographic contexts. To explore these questions, we incorporated transactions costs reasoning, which is underutilized in the field, to identify a class of assets that are firm specific but generic in application. We propose that relative to other types

of firms, the essential governance qualities of family businesses (i.e. parsimony, personalism and particularism) provide them with relative advantages in developing, sustaining, and appropriating value from such assets.

Well then, why do family firms exist? Our answer, based upon transaction cost reasoning, supplies an economic rationale for why family firms are so pervasive within and across many contexts. But a variety of family firms are also created for many other reasons as well, and to the extent that they satisfy numerous non-economic goals (Gomez-Mejia, Takcs, Haynes, Jacobson, & Moyano-Fuentes, 2007), they are likely to exist even where they have no relative economic advantage. Since transaction cost theory is a 'functional' framework that presumes that economic performance is the dominant goal of owner-managers, it has difficulty incorporating many non-economic reasons for why family firms are founded and continue to operate. We suspect this is a boundary condition pertaining to difficulties in applying transaction cost's economizing framework to lifestyle businesses and very small firms serving niche markets, because most family firms, like all others, operate in marketplaces where they would not exist if they do not have a sound economic basis. Future research on this point is warranted.

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	Firm Specific Assets	Generic Assets
Non-Tradable Assets	(1) Managerial Hierarchies	(3) Family Firms
Tradable Assets	(2) Venture Capital	(4) Markets

Figure 1: Asset Types and Governance Mode.

Family firm governance characteristics		<--- Generic Non-Tradeable Asset --->			
		Bonding Social Capital	Bridging Social Capital	Reputation	Tacit Knowledge
Personalism, particularism (authority)	Helps develop because...	Families are free to transact with and join networks on non-economic grounds, e.g. religion, values; (Pearson et al, 2008); gain access to fine grained information about characteristics of advisers & trading partners (Lester & Cannella, 2006)	Have capacity to make verbal, informal, handshake-deals (Steier, 2001); enter transactions with implicit, unspecified obligations, & long time horizons (Lovett, 1999)	Can project personal values (e.g.: integrity, authenticity, probity) on to firm (Chua, 1999); family name can be a "human brand" (Thomson, 2006); owners can exercise a human touch with employees, customers (Westwood, 1997)	Don't need to explain logic of their actions to outsiders (Schulze et al 2001); Don't require permission to apply tacit (Morck and Yeung, 2004)
	Helps sustain because...	Shared values & long-term relationships can foster and deepen interpersonal trust(Sirmon & Hitt, 2003; members eschew behavior that may result in ostracism from their communities (Portes, 1998)	Can exchange of idiosyncratic resource bundles(Sirmon & Hitt; 2003); long CEO tenure lets firm benefit from reciprocity and delayed return of a favor (Morck, et al, 2005)	Families are stewards of their own reputation; have strong incentive to uphold (Miller et al 2008); a positive reputation has a 'virtuous circle' effect	Close contact promotes immersion, learning by doing & observation; family facilitates intra & inter-generational transmission of tacit info (Canbrera-Suarez, 2001); owners unlikely to 'walk away' with knowledge
Parsimony (incentives)	Provides value appropriation mechanisms by…	Lowering search, screening and monitoring costs (Leff,1978); shared bonds facilitate adaptation, & low cost conflict resolution (Portes, 1998)	Lowering contracting & enforcement costs, self-enforcing agreements (Dyer & Singh, 1998) less need for cumbersome legal contracts; owner can redeploy resources in fast, flexible, & discrete manner (Yeung, 1997)	Consumers & other stakeholders will pay a premium to reputable firm (Rauch, 2001); generates loyalty; owners enjoy non-economic value of a positive reputation (Anderson, et al 2003)	Overcoming information asymmetries of idiosyncratic knowledge through close contact (Lee et al, 2003). Family has better knowledge of 'true' value and potential uses (Bjuggren &Sund, 2002)

Table 1: Developing, sustaining and appropriating value from GNTs

Family firm governance characteristics		<--- Asset type ---> Skilled & Professional Human Resources	Management of Complex & Specialized Assets	Financial Resources
Personalism, particularism (Authority)	Hinders development because...	Family can exercise favoritism toward kin over more capable skilled individuals (Schulze, 2001)	Over-embeddedness in closed-networks blinds the firm to information in wider environment (Portes, 1998): limits strategic decision making to cadre of insiders (Gedajlovic, et al, 2004); top managers selected for loyalty rather than professional, scientific or technical ability (Tsui-Auch, 2004)	Prone to risk aversion, resist dilution of personal control; idiosyncratic valuation of private benefits of control; lack of transparency enables, expropriation of minorities through related party transactions,
	Hinders maintenance because...	Perceived injustice by less favored employees lowers their motivation & willingness to remain (Lubatkin et al, 2007); favored insiders may free ride on family altruism	Less likely to find kin with interest/and or absorptive & retentive capacity for complex skills (Pollack, 1985); don't develop heirarchical structures required for deliberative and coordinated adjustments of complex and interdependent activities (Chandler, 1990	Family members extract capital for personal needs (Chandler, 1990), capital base fragments if other members choose to form own business (Wong, 1985)
Parsimony (Incentives)	Creates liabilities because…	Lean and mean HRM practices (Miller, et al, 2008) reduce employee incentive to invest in firm specific knowledge; reluctance to offer stock options constrain recruitment & retention of star executives & employees	Roots out slack resources needed for successful experimentation (Nohria & Gulati, 1996)	Incur equity premium to compensate for expropriation risk (Morck, et al, 2005); families 'tunnel' assets ((Friedman, et al 2003)

Table 2: Family firm liabilities in asset development and maintenance