QUBAHAN ACADEMIC JOURNAL
VOL. 4, NO. 1, March 2024
https://doi.org/10.48161/qaj.v4n1a493

Comparative Analysis of Process Innovation Strategies: A Study of Family and Non-Family Indian IT Firms

Phani K R [1]* and Dr. Kumar Mukul [2]

[1] Scholar, Doctoral Program at CMS Business School, JAIN (Deemed-to-be University), and a Domain Specialist at Persistent Systems, Bangalore, India.
[2] Professor and Area Chair, CMS Business School, JAIN (Deemed-to-be University), India.

*Corresponding author: e-mail: phani.bhattachar@gmail.com.

ABSTRACT: This conceptual paper delves into the dynamic realm of process innovation within the Indian Information Technology (IT) sector, scrutinizing the unique strategies and methodologies adopted by both family and non-family-owned firms. Employing a comprehensive analysis, we aim to uncover distinct approaches employed by these entities to drive and effectively implement process innovation. This paper contributes valuable insights into the intricate interplay of familial structures and corporate innovation, shedding light on how these factors shape the trajectory of technological advancements in the Indian IT landscape.

Keywords: Process Innovation, Indian IT Firms, Family Businesses, Non-Family Businesses, Corporate Innovation, Strategic Management, Technological Advancements, Comparative Analysis.

I. INTRODUCTION

We intend to provide a definition of family business and answer the question why family businesses are different from other companies and why family businesses are examined separately in the researches. In this regard, the theories that explain the difference between family and non-family companies are examined and explained. In the following, the definition of family companies and the existing approaches in defining these companies will be discussed first. In the next step, important theories about family companies are examined and finally a summary is made [1].

Family businesses are the oldest type of business organization. In most countries, family businesses account for more than 70% of all trade, playing a key role in economic growth and job creation [2]. The scope of family businesses extends from small or medium enterprises to large enterprises working in several industries and countries. The ownership structure of family companies has caused differences with non-family companies, which has made it necessary to examine different dimensions and concepts in family companies. On the other hand, due to the significant number of family companies in big cities, Stock Exchange, it is very important to examine the various aspects of these companies, which has recently been researched in the field of accounting [3]. In today's competitive world, organizations compete with each other and try to overcome each other, so enjoying competitive benefits is the concern of every organization and manager. One way for organizations to succeed is to pay attention to new aspects in the field of management and, in addition, to the performance of their organization. There is a belief that performance only finds meaning in a decision-making space, that is, the internal and external decision-makers of the company must agree on performance [4].

Performance plays a very important role in the global economy and is considered a useful tool in achieving economic growth and competitive benefits of the organization. Family companies should pay more attention to their performance than other companies because of the dependence of family members on the income and profits of the company. In recent years, the role of performance as the key source of organizations in gaining competitive advantage has become a very important issue, and the idea of performance management has opened up space in many performance-based businesses. So, organizations are looking for new ways to survive in a competitive business. From a perspective that is the main perspective of performance management literature, organizational cultures can be changed to generate performance-related value and behaviors. Culture represents beliefs, values, norms and social etiquette and monitors the behavior of individuals in the organization.

Success in any organization depends on developing the right vision and strategy. A strategy is required to evaluate the performance of a business and to represent a model or plan that combines the objectives, policies and operational chains of an organization in the form of a whole interconnected with each other. Achieving a proper link between an organization's environment and its strategy, structure and processes has positive effects on the organization's performance. Organizational structure is the main pillar of an organization that can in turn have a significant impact on the performance of the organization.

Appropriate plays an important role in the productivity of each organization, and proper planning of each structure will improve the performance of human resources and increase productivity in it. Any organization accepts a structure or form that is more compatible with their national culture, and when the organization is faced with contradictory conditions and environmental violations, they cannot adapt to them and choose an inappropriate structure. Organizational structure affects processes, and processes interact with structure.

The balance of organizational structure and strategy is another requirement of optimal performance, the main goal of the fit between organizational structure and business strategies is to design and decide on an organizational structure that will best support the implementation of strategies and plan a preliminary plan to move from the existing situation to the desired situation. Strategy and structure alignment is a systematic method of structural design in order to achieve the growth and effectiveness of the organization, which is based on the strategy and performance of the organization. Therefore, given the importance of culture, strategy, organizational structure and the fit between strategy and organizational structure and their impact on the performance of the family business, we try to examine the relationship between the fit of strategy and organizational structure and performance in family companies. Family membership in the board of directors, the percentage of ownership of a share by family members and the considerable control or influence of the family in the company are factors by which family companies are defined. In terms of percentage ownership, companies are perceived as family-owned companies where one or more people from one or two families own at least fifty percent of shareholders ' equity. From the perspective of Gypsy and corporate colleagues, it is considered a family member to be part of the board of directors, and at least two generations of the family are responsible for controlling the role of achieving organizational goals and tasks and forming executive programs. It should be said that continuous improvement in the performance of organizations creates a huge synergistic force that can support the growth and development program and create opportunities for Organizational Excellence.

In the contemporary landscape, the significance of innovation as a pivotal driver of competitive advantage within IT firms has been underscored [5, 6]. Present business leaders emphasize that the capacity to generate novel ideas and innovations stands as paramount within their organizations [7]. As economies increasingly pivot toward knowledge-intensive activities, the centrality of innovation in fostering competitiveness has amplified. Innovation serves as the conduit through which organizations usher in fresh products, systems necessary, and processes to adapt to evolving markets, technologies, and competitive paradigms [8, 9].

Cohen & Levinthal [10] define innovation as the process of creating something novel, a concept fundamental to the transformative essence of innovation. This transformative process is geared towards converting ideas into profitable ventures. The assimilation of new ideas or behaviors, whether in products, services, devices, systems, policies, or programs, defines innovation within the adopting in to organizations and its context [11, 12, 13].

Undoubtedly, innovation empowers firms to play a defining role in shaping the trajectories of their respective industries. High-performing innovators adeptly balance multiple capabilities, consistently introducing superior quality products to market swiftly, frequently, and at reduced costs in comparison to their competitors.

1. *TWO DIMENSIONS OF INNOVATION – PRODUCTS AND PROCESSES*

Innovation can be exhibited in two primary ways, according to Damanpour & Gopalakrishnan [14]: through Process Innovation and Product Innovation. A 'process' is a technique of production and delivery, whereas a 'product' is the good or service that is offered to clients [15]. While process innovation refers to the incorporation of new components into an organization's production or service operations (e.g., input materials, task specifications, work mechanisms, and equipment), product innovation is the introduction of new goods or services that meet the needs of the external market [16].

Product innovations pivot on market demands and are customer-centric, aiming to offer better, differentiated, or entirely new products. Conversely, process innovations concentrate internally, striving for greater efficiency within the company's operations to reduce costs or enhance production [16]. While product innovation targets market enhancement, process innovation centres on refining internal mechanisms to streamline production, assembly, or delivery of the product.

2. *OPERATIONAL DEFINITIONS OF PROCESS INNOVATION, FAMILY FIRMS AND NON-FAMILY FIRMS*

From hereon I will be using the terms Family Firms, Non-Family Firms, and Process Innovation frequently throughout my research paper. Here are the working definitions I have conceived for these terms. These definitions are developed keeping in mind the purpose of my research. Going forward whenever I use these terms in my paper, this is what I mean.

a. *Process Innovation:* The application of innovation to important processes is known as process innovation. A process is just a measured, planned series of actions intended to get a particular result. The term "process" emphasizes the importance of work practices inside an organization. It is a precise arrangement of work tasks over space and time, complete with a start and finish as well as distinct inputs and outputs: an action plan. The introduction of something new is known as innovation. Process innovation includes the actual process design effort, the execution of the process change, and the conceptualization of new work methods [17].
b. *Family firm:* A family firm is one that is run and/or managed by members of the same family or a small number of families with the goal of pursuing and shaping the firm's vision in a way that may be sustained through the generations [18]. This company considers itself to be a family enterprise. If family members own or control at least five percent of the voting shares in an organization, it is considered a family firm. Many studies on family businesses have adopted the 5-percent benchmark as a criterion.
c. *Non-Family Firm:* Non-family firms are those that do not consider themselves to be family businesses and in which most of the shares are not owned by a family. Leadership and Management is appointed based on Professional Expertise, rather than familial relations. They identify themselves as non-family firms.

3. *INNOVATION DYNAMICS IN FAMILY VS. NON-FAMILY FIRMS*

In innovation research, Damanpour & Gopalakrishnan [14] stress the importance of classifying firms according to their types. Although industry, sector, structure, and strategy are the foundations of standard classifications, the alternative typology of family enterprises goes beyond these boundaries. Although family businesses are considered essential to a healthy global economy [19] and innovation is vital for all firms, there has been very little research done on the topic of family versus non-family firm innovation in management research. Remarkably few empirical studies have been conducted to compare innovation in family businesses to non-family businesses [20]. Numerous empirical studies have demonstrated how family businesses are unique in a variety of business contexts, including corporate governance, internationalization, financing and entrepreneurship. The available information strongly implies that there can be differences between family-owned and non-family-owned enterprises in the way the innovation process is structured. In order to investigate how industry-specific factors affect the longevity of family firms in comparison to non-family organizations, and vice versa, it is essential to comprehend these differences. Examining the subtle distinctions between family-run and non-family-run enterprises in the context of innovation can provide important insights into the forces guiding each group's development and survival.

We thus ask the mentioned.

4. *RESEARCH QUESTIONS*

i. *Do the differences in family and non-family firms influence their actions or steps taken to achieve Process Innovation?*
ii. *How do the innovation practices and strategies differ between Family and Non-Family firms?*

II. LITERATURE REVIEW

1. *THEORETICAL BACKGROUND: REASONS WHY FAMILY BUSINESSES DIFFER FROM NON-FAMILY BUSINESSES*

1.1 The Application of Behavioral Theory of the Firm (BTOF) to Family vs. Non-Family Firms

A crucial lens through which to view the operational differences between family and non-family enterprises is the Behavioral Theory of the Firm (BTOF). Fundamental distinctions between family and non-family businesses' operations have been made clear by the application of BTOF [18].

Key Strands of Research Utilizing BTOF

a. *Goal Divergence and Performance Feedback:* Research exploring the principal-agent and principal-principal dynamics in family firms highlights how divergent goals among owners and managers influence strategic behaviour and risk tolerance. This strand elucidates the impact of performance feedback on managerial risk preferences, revealing distinct patterns between family and non-family firms [21].

b. *Influence of Internal Factors on Aspirations:* Another facet of BTOF analysis revolves around the internal factors shaping aspiration and dominant coalitions within family firms versus their non-family counterparts [22, 23]. Notably, these studies emphasize how performance aspiration discrepancies affect managerial risk preferences and subsequently drive organizational changes.
c. *Long-term Orientation and Risk Aversion:* Chrisman et al. [23] assert that family firms, due to their long-term orientation, exhibit a propensity towards risk aversion. This aversion manifests in strategic decisions, such as lower investments in R&D compared to non-family firms. Additionally, Patel and Chrisman [24] elaborate on the nature of investments, highlighting how family firms differ not just in the levels but also in the nature of R&D investments.
d. *Technology Acquisition and Control Concerns:* Kotlar et al. [25] argue that family firms are more hesitant to engage in external technology acquisition, primarily driven by their desire to maintain control over the trajectory of technology within the firm. This apprehension stems from their commitment to retaining influence over the firm's long-term direction.
e. *Strategic Innovation and Family Involvement:* Classen et al. [26] emphasize the impact of a dominant family coalition within SMEs, elucidating its influence on strategic innovation decisions and resource acquisition. The involvement of this coalition significantly shapes the reliance on diverse external sources for innovative activities.
f. *Incorporating Family-Centered Goals:* The family firms tend to adopt goals inclusive of family-cantered, non-economic objectives, unlike their non-family counterparts. This incorporation of family-centric goals influences decision-making processes and organizational behaviours within family firms.
g. *Transgenerational Control and Succession Planning:* Zellweger et al. [22] demonstrate the heterogeneity of family businesses, emphasizing how differences in firm control and intentions for transgenerational control impact succession, wealth transfer, and even the willingness to sell the firm to non-family entities.

Below I have listed a few selected articles as well as the description of fundamental findings and variables for each article.

Table 1. BTOF selected articles and findings.

Study and Sample	**Findings**
Gómez-Mejía et al. [21], 1,237 family-owned and 549 non-family-controlled olive oil mills in Southern Spain (1944–1998)	In their comprehensive study spanning from 1944 to 1998, Gómez-Mejía et al. [21] delved into the dynamics of 1,237 family-owned and 549 non-family-controlled olive oil mills in Southern Spain. The research brought to light two pivotal findings: a) Family firms demonstrated a notable inclination to embrace substantial risks, often characterized as performance hazards, underlining their distinctive approach to risk tolerance. b) Contrarily, family-owned enterprises exhibited a tendency to shy away from business decisions that could amplify performance variability, showcasing a discernible aversion to risk venturing. These insights contribute to a nuanced understanding of the strategic choices made by family-owned versus non-family-controlled businesses in the olive oil industry during the specified period.
Gómez-Mejía et al. [27], 360 publicly traded companies in COMPUSTAT	In their extensive exploration of corporate dynamics, Gómez-Mejía et al. [27] scrutinized 360 publicly traded companies within COMPUSTAT during the period 1998–2001. The study uncovered crucial insights into family firms' strategic choices:

1998–2001	a) Family firms displayed a clear predilection for less diversification over more, emphasizing a distinct preference in their approach to portfolio expansion. b) Notably, family-owned enterprises tended to favor domestic diversification over international pursuits, shedding light on their strategic inclination towards localized business expansion. c) When family firms did engage in international investments, their proclivity leaned towards culturally proximate regions, highlighting a nuanced decision-making process aligned with cultural affinities. d) Intriguingly, the research revealed that family firms exhibited a greater willingness to diversify as business risks, both systematic and unsystematic, increased—a strategic divergence from non-family-controlled counterparts.
964 Standard and Poor's (S&P) 1500 firms in COMPUSTAT 1998–2007	Moving on to insights provided by Chrisman and Patel [28] in their analysis of 964 Standard and Poor's (S&P) 1500 firms within COMPUSTAT spanning 1998–2007: a) Family firms, in contrast to non-family entities, allocated comparatively less capital to Research and Development (R&D), illuminating distinctive investment patterns between the two categories. b) The variability in R&D investments was notably higher in family-owned enterprises, signifying a greater degree of uncertainty and flexibility in their approach to innovation.
manufacturing firms in COMPUSTAT 1996–2005	Examining the findings from Patel and Chrisman's study [24] on 847 S&P 1500 manufacturing firms in COMPUSTAT from 1996–2005: a) Family businesses demonstrated observable variations in their R&D expenditures when compared to their non-family competitors, indicating distinctive methods of innovation. b) Family businesses differentiated their strategic focus from non-family businesses by favoring exploiting R&D investments to reduce sales fluctuation in situations where performance met or surpassed expectations. c) On the other hand, loss-averse family businesses were more likely than their non-family peers to invest in exploratory R&D when performance fell short of expectations, purposefully raising sales variability as a risk-mitigation tactic.
Kotlar et al. [25], 1,540 Spanish manufacturing firms (2000–2006)	Key findings from Kotlar et al. [25]'s examination of 1,540 Spanish manufacturing companies between 2000 and 2006: a) Managers of family businesses who performed below expectations were positively motivated to contract for R&D in order to obtain technology from outside sources, indicating an adaptive response to underperformance. b) The acquisition of external technology was found to be negatively correlated with family management, indicating that family-led businesses are hesitant to implement external technological solutions. c) The association between external technology acquisition and performance was moderated by family management, which led to a lower correlation between family businesses and their non-family counterparts. d) The association between foreign technology acquisition and family management was further tempered by the interaction of technology protection, highlighting the intricacy of strategic choices made by family-owned manufacturing companies.

Classen et al. [26], 167 SMEs located in Belgium and the Netherlands	In their thorough examination of 167 SMEs situated in Belgium and the Netherlands, Classen et al. [26] uncovered significant distinctions in the innovation-related activities of family and non-family SMEs: a) Family-owned SMEs demonstrated a discernibly lower diversity of cooperation partners engaged in innovation-related activities compared to their non-family counterparts, highlighting a distinctive pattern in collaborative strategies. b) The search breadth within family SMEs was found to be subject to moderation by various factors, including the CEO's education level and the management composition of the top management team (TMT), emphasizing the multifaceted nature of innovation strategies in these enterprises.
Zellweger et al. [22], 82 Swiss and 148 German family firms	Moving on to insights gleaned from Zellweger et al. [22] examination of 82 Swiss and 148 German family firms: a) The extent of control exerted by family members exhibited no discernible relationship with the perceived total value of the firms, underscoring the complexity of factors influencing organizational value. b) The duration of control, however, was identified as potentially having a weakly positive effect on perceived value, introducing a temporal dimension to the impact of family control. c) Notably, intentions for transgenerational control were found to exert a significantly positive impact on the total perceived value of the firm, shedding light on the strategic importance of long-term planning within family businesses.
Gómez-Mejía et al. [21], 610 high technologies firms in COMPUSTAT 2004-2009	Shifting focus to the high-technology sector, Gómez-Mejía et al. [21] investigation of 610 firms within COMPUSTAT from 2004-2009 provided valuable insights: a) Family-controlled high-technology firms exhibited a tendency to invest less in Research and Development (R&D) compared to their non-family counterparts, indicating distinctive approaches to innovation in this sector. b) The negative relationship between family control and R&D investment was found to be moderated by performance, suggesting that the dynamics of R&D investments in family-controlled high-technology firms are contingent on overall organizational performance. c) Interestingly, family-controlled firms in high-technology industries were identified as investing less in R&D compared to those controlled by founders, showcasing divergent innovation strategies. d) Family-controlled high-technology firms demonstrated a higher likelihood of engaging in related diversification compared to their counterparts in low-technology industries, indicating a strategic alignment with the complexities of the high-tech sector. e) Furthermore, family-controlled firms in high-technology industries exhibited an increased likelihood of investing in R&D as related diversification increased, underscoring a dynamic relationship between diversification strategies and innovation investments. f) The negative relationship between family control and R&D investment in high-technology firms was found to be moderated by institutional ownership, highlighting the nuanced interplay of governance structures in shaping innovation decisions within family-controlled high-technology enterprises.

The collective findings underscore the multifaceted impact of family involvement on crucial aspects of business strategy, ranging from risk management and diversification choices to investment patterns in research and development. The exploration of these variables through various studies showcases the intricate nature of family businesses and how their distinctive characteristics shape their strategic inclinations compared to non-family counterparts.

1.2 Behavioral agency theory and the Socioemotional Wealth (henceforth SEW)

Behavioral agency theory amalgamates principles from agency, prospect, and behavioral theories to elucidate organizational risk behaviors. It delves into the decisions made on behalf of an organization, emphasizing the goals and risk preferences of decision-makers. Central to this theory is the work by Wiseman and Gómez-Mejía [29], proposing the behavioral agency model of managerial risk-taking, which serves as the cornerstone of this theory.

Reference dependence, a key tenet, posits that decision-makers gauge choices by comparing their potential consequences on their current wealth. Additionally, the theory underscores decision-makers' inclination toward avoiding losses over maximizing future wealth, a concept known as loss aversion [29]. The framing of decision problems, either as potential gains or losses to personal wealth, significantly influences risk preferences.

In the realm of family businesses, the pursuit of non-financial goals, alongside financial objectives, distinguishes them from non-family firms. Behavioral agency theory, primarily rooted in a non-family business context, needed adaptation to comprehend the intricacies of family firm behavior. This adaptation led to the Socioemotional Wealth (SEW) construct, more aligned with understanding risk behavior in family businesses.

SEW, as proposed by Gómez-Mejía et al. [21], has garnered widespread attention in family business research, evidenced by its extensive citation and diverse applications. Studies employing SEW have explored its impact on various facets of family firms, including financial and environmental prefer.

Gómez-Mejía and colleagues have notably contributed to understanding how SEW influences risk preferences in family firms, particularly concerning performance feedback and corporate decision-making. Their research highlights that family firms, more averse to risks that jeopardize their SEW, exhibit distinct behaviors, such as heightened risk tolerance to protect SEW while being generally risk-averse to decisions potentially impacting performance variance [21].

Further, their work delves into corporate diversification decisions, indicating family firms' tendency to avoid efforts linked with SEW loss, even if they reduce risk concentration (Gómez-Mejía et al., 2010). Additionally, in high-tech industries, where R&D investment entails lower risk, family firms tend to invest less to safeguard SEW, impacting innovation prospects [21, 27].

These insights emphasize the profound influence of SEW on family firm behavior, shedding light on how considerations beyond financial gains significantly shape their risk-taking propensity and strategic decisions. Below I have listed a few selected articles as well as the description of fundamental findings and variables for each article.

Table 2. Behavioural agency theory and SEW selected articles and findings.

Study and Sample	Findings
Berrone et al. [30], 194 US firms	Examining the findings from Berrone et al.'s [30] study encompassing 194 US firms: Family-controlled public firms exhibited a strategic inclination towards safeguarding their Socioemotional Wealth (SEW) by showcasing superior environmental performance compared to their non-family counterparts, with a notable emphasis on local-level initiatives. This underscores the unique role of family influence in shaping environmentally conscious strategies within the corporate landscape.
Miller et al.	Moving on to insights provided by Miller et al. [31] in their analysis of Fortune 1000 firms: Family firms showcased a distinctive motivation, demonstrating a greater willingness to align various aspects of their strategy with institutional demands compared to non-family

[31], Fortune 1000 firms	firms. This suggests a heightened sensitivity to external expectations and institutional norms within family-controlled entities.
Cennamo et al. [32], Conceptual paper	Exploring the conceptual insights from Cennamo et al. [32] study, although labelled as a conceptual paper: Family principals were identified as more likely to endorse normative and proactive stakeholder engagement strategies. This strategic preference was attributed to the belief that such engagement would generate Socioemotional Wealth (SEW) for the family, shedding light on the intricate linkages between family influence and stakeholder management strategies within the conceptual framework proposed.

Berrone et al. [30] conducted a notable study comparing environmental performance between family and non-family firms in the US. Their findings highlighted that family-controlled public firms demonstrated higher environmental protection performance, especially within their local contexts. This behavior was attributed to family owners' endeavors to evade the stigma of irresponsibility, which could negatively impact their socioemotional wealth (SEW). The pursuit of environmental strategies, thus, becomes a means for family firms to safeguard their SEW against negative perceptions [30].

Miller et al. [31] delved into the conformity of family firms' strategies to institutional demands. They posited that family firms, due to their pursuit of socioemotional wealth objectives, feel compelled to conform more rigorously to these demands. The pursuit of objectives like providing long-term careers, community visibility, family harmony, and security for future generations incentivizes family firms to adhere closely to institutional requirements. This compensatory conformity seeks to counterbalance the perceived unorthodoxy or riskiness associated with their heightened visibility [31].

Cennamo et al. [32] built on SEW logic to explain the inclination of family principals toward normative and proactive stakeholder engagement strategies. In their argument, while proactive stakeholder engagement might lack immediate financial benefits in non-family firms and potentially create agency problems, family business contexts circumvent this issue. For family firms, normative stakeholder engagement aligns with their pursuit of SEW, enhancing it without necessarily requiring immediate financial gains. This alignment occurs as ownership and management vested in family principals, reducing potential conflicts, and fostering the enhancement of SEW through normative stakeholder engagement [32].

These studies collectively underscore how the pursuit of socioemotional wealth fundamentally influences the decisions and behaviors of family firms, shaping their approaches to environmental responsibility, conformity to institutional demands, and stakeholder engagement strategies.

1.3 Agency theory and the family business

Agency theory stands as a significant organizational perspective in contemporary family business research. Stemming from Jensen and Meckling [33], agency theory primarily revolves around the notion of agency costs, arising from self-interest-driven decisions by agents, creating disparities between owners (principals) and employed management (agents). The separation of ownership and management often intensifies agency costs due to conflicting preferences and information asymmetries [33].

For family firms, the assumed alignment of ownership and management within the same family or individual ostensibly mitigates agency costs [18], as proposed by Jensen and Meckling [33]. However, familial influences beyond business interests add complexity to individual preferences within family firms. The interplay of relational and altruistic dimensions in decision-making introduces additional sources of agency costs, deviating from the conventional self-interest paradigm [23].

The nuanced nature of decision-making in family firms, influenced by relational dynamics and altruistic motives, contributes to a more intricate landscape of agency costs [34]. Consequently, agency theory serves as a pertinent lens for comprehending the behaviors of actors within family firms, shedding light on the complexities emerging from the convergence of familial and business interests. The principal-agent paradigm underscored in agency theory accentuates the contractual problem between owners and agents, emphasizing the need to align divergent interests through monitoring or contractual mechanisms to mitigate agency costs.

Table 3: Agency Theory Overview

Key idea	The central concept is that principal-agent relationships should be structured to optimize the organization of information and distribute risk-bearing costs efficiently. This framework provides a structured understanding of how principal-agent relationships should be organized, considering human behavior, organizational dynamics, information handling, and risk distribution as critical elements in achieving efficiency within these relationships.
Unit of analysis	The focal point is the contract between the principal and agent in principle-agent relationships.
Human assumptions	Self-interest, bounded rationality, and risk aversion are fundamental characteristics assumed in individuals acting as principals or agents.
Organizational assumptions	a) Acknowledges partial goal conflict among participants, recognizing that their objectives may not always align. b) Efficiency is considered the effectiveness criterion for evaluating the organization of information and risk-bearing in these relationships.
Information assumptions	Views information as a purchasable commodity, emphasizing its importance in shaping the dynamics of principal-agent relationships.
Contracting Problems	The problem domain encompasses agency issues, specifically moral hazard, and adverse selection, which may arise in the contractual relationship between principals and agents.
Risk Sharing	The concept involves addressing problems related to risk sharing between principals and agents, emphasizing the need for an effective risk distribution mechanism.
Problem domain	Encompasses relationships where the principal and agent have partly differed goals and risk preferences. Examples include compensation agreements and leadership dynamics.

The two main theories that are most applied in family business research are agency theory and the resource-based view [28]. One of the traditional definitions of family businesses is the alignment of ownership and management [18]. But in the field of family business research, the conventional view advanced by Jensen and Meckling [33] has come under close examination, revealing sources of agency costs other than the standard alignment issues.

Additional pathways that contribute to agency costs resulting from relational and altruistic dynamics in family businesses have been found by researchers [23, 34]. These include issues with self-control (Jensen, 1994), instances of familial generosity that are taken advantage of, and the use of family members over potentially more qualified non-family managers [27].

This expanded view acknowledges that while alignment between ownership and management is a significant facet of family firms, other intricate factors, such as familial altruism, relational dynamics, and employment practices within the family, also contribute to the complexities surrounding agency costs. Understanding these multifaceted influences becomes pivotal in elucidating the distinct characteristics and challenges encountered within family businesses, surpassing the traditional boundaries defined by agency theory.

Below I have listed a few selected articles as well as the description of fundamental findings and variables for each article.

Table 4. Agency theory selected articles and findings.

Study and Sample	**Findings**
Quantitative (secondary data)/	Family firms exhibit superior performance compared to non-family counterparts, with a notable emphasis on the enhanced performance when family members assume the role of CEO. This performance disparity is

Standard&Poor's (S&P) 500 firms (family and non-family)[28]	attributed to the efficiency inherent in family ownership structures, reflecting the unique strengths derived from familial involvement.
Gómez-Mejía et al. [28], Quantitative (longitudinal secondary data)/276 Spanish newspapers (family and non-family firms)	The study explores the dynamics of family and non-family firms within the context of 276 Spanish newspapers. It unveils a distinctive finding that emotional criteria, rather than purely rational considerations, play a significant role in shaping the terms of exchange in family contracting. However, it highlights a potential downside, indicating that family contracting may elevate agency costs due to executive entrenchment, shedding light on the nuanced challenges associated with emotional decision-making in family-owned enterprises.
Chrisman et al. [23], Quantitative (survey) / 1,241 US firms (family and non-family)	In a comprehensive survey involving 1,241 US firms, Chrisman and colleagues unveil a key observation. Family firms, characterized by a reduced necessity for control mechanisms, face overall lower agency threats compared to their non-family counterparts. This finding underscores the distinct advantage that family firms enjoy in terms of mitigating agency risks, attributed to inherent characteristics such as trust and shared values within family-owned enterprises.

The influential contributions within agency theory in family business research have elucidated the dynamics of family firms, shedding light on their performance, management intricacies, and distinctive challenges.

Anderson and Reeb [35] offer a pivotal perspective, showcasing how family ownership and management within firms can impact their performance. Their study suggests that family firms can outperform non-family counterparts due to reduced agency costs, a result of the alignment between family ownership and management.

In a similar vein, Gómez-Mejía et al. [27] explore the function of familial relationships in agency agreements. They draw attention to the problem of management entrenchment in family businesses, a notion that is reflected in the scales created by Schulze and colleagues [36]. According to their research, family businesses may have higher agency costs than non-family businesses because of management entrenchment, which is frequently linked to emotional values in relationship contracts and prioritizes emotional ties above rational considerations.

Notably, the alignment of ownership and control emerges as a pivotal factor driving superior performance in family firms.

Contrasting viewpoints surface in Chrisman et al. [23] argument, suggesting fewer agency problems in family firms compared to non-family counterparts. Their findings indicate that control mechanisms have a more positive relationship with performance in non-family firms than in family ones. This perspective implies comparatively lower agency threats in family firms.

In essence, agency theory enhances comprehension of organizational structures and management intricacies within family firms. Family business research leverages and evolves agency theory to analyse and quantify the costs arising from the complex amalgamation of family and business elements within these organizations. Understanding these multifaceted dynamics remains crucial in grasping the distinct challenges and advantages characteristic of family businesses.

1.4 Resource based theory (RBV) and the family business

The Resource-Based View (RBV) within strategic management centers on leveraging a firm's resources to attain a competitive edge. These resources span tangible and intangible dimensions, making it challenging to compile an exhaustive list due to the diversity of definitions in the literature [37].

From Hall's perspective, the RBV conceptualizes resources in various forms: Tangible resources encompass financial and physical assets, while intangible resources comprise intellectual property, organizational assets, and reputational assets. Additionally, intangible skills encompass capabilities.

In the family business context, the RBV serves to elucidate how firms can explain, develop, bundle, and leverage resources to gain an edge over other family or non-family enterprises. It views the family as an organization wielding competitive advantages in governing a business, rooted in their distinct resources, capabilities, and management. Notably, most research drawing from the RBV in the family business field predominantly focuses on the business unit and its outcomes, elucidating how resource bundling and management contribute to competitive success.

2. RESEARCH GAPS

The comprehensive review of the prior studies unveiled critical research gaps that warrant immediate attention and further exploration.

2.1 Limited Understanding of Innovation and Ownership Structure:

There remains a significant gap in empirical research exploring the intricate relationship between innovation and ownership structure within family firms. Despite acknowledging the crucial role of family businesses in the global economy [36], the empirical investigation into how ownership structure influences innovation remains scarce.

h. *Comparative Analysis of Innovation in Family Firms vs. Non-Family Firms:*
Existing literature lacks comprehensive comparative studies examining innovation in family firms against their non-family counterparts. This gap extends globally, including a dearth of research specifically focused on Indian family firms' innovation dynamics [38].

i. *Understanding Innovation in Large Enterprise Family Firms and Non-Family Firms:*
While innovation studies have extensively covered small- and medium-sized enterprises (SMEs), there's limited understanding regarding innovation dynamics in large enterprise family and non-family firms [35].

j. *Emphasis on Process Innovation:*
The current literature primarily emphasizes product innovation, with limited research focusing on process innovatio. Given the call for more investigation into innovation dynamics in family firms and the underserved area of process innovation, there's a significant gap in understanding the nuances of process innovation in family and non-family firms.

k. *Differences and Similarities in Process Innovation:*
The distinct dynamics within family firms and non-family firms necessitate a deeper exploration of the differences and similarities in process innovation. Despite recognizing the unique drivers behind family businesses and their impact on innovation [20], there's a limited understanding of how process innovation differs in these organizational structures.

Addressing these identified research gaps will contribute significantly to the literature on Innovation and will provide valuable insights into complexities of Process Innovation withing Family and Non-Family Firms, especially within the Indian Large Enterprise Context.

The outlined key research gaps, including limited studies on the relationship between innovation and ownership structure, the comparison of innovation in family firms with non-family firms, the geographic scope of such studies, the understanding of innovation in large enterprise family firms, and the emphasis on process innovation make a strong case for studying Process Innovation in family and non-family firms, particularly in large Indian enterprises. Process innovation is well-founded, especially considering the call for more investigation into innovation dynamics in family firms and the limited research available on process innovation compared to product innovation. We focus on this aspect to provide a more comprehensive understanding of innovation within these different organizational structures. By addressing these gaps, we aim to shed light on the differences and similarities in process innovation between family and non-family firms, which is an area that hasn't been extensively explored. We propose to delve into Process Innovation in large Indian enterprise family and non-family firms, specifically Indian IT firms as this presents an opportunity to contribute significantly to this area of research.

3. WHAT IS PROCESS INNOVATION?

Process innovation entails the application or introduction of new technologies or methods that enable organizations to remain competitive and responsive to customer demands. It serves as a catalyst for problem-solving, reshaping established business processes in ways that significantly benefit both the executors and dependents of these processes. Process innovation, known for reaping efficiency gains through cost reductions and increased production volumes, can also contribute to reducing product development times and directly add value to customers through improved product quality and reliability. These outcomes, enhancing a firm's competitive position, underscore the necessity of developing an organizational strategy for managing process innovation. It is the firm's ability to acquire, assimilate, transform, and exploit resources and knowledge for process innovation purposes.

One of the most important sources of competitiveness for businesses, especially in fast-paced industries, is their capacity to implement process improvements. Although product innovation has received a great deal of theoretical attention, the body of knowledge pertaining to process innovation is still relatively small. In contexts that are changing quickly, the ability to reconfigure organizational processes through technical and administrative innovations becomes even more valuable. Furthermore, research indicates that when process and product innovations are introduced simultaneously, they enhance one another and have a favorable impact on performance [12].

Process innovations with an internal organizational focus are usually those that strive to improve the technical and administrative processes' effectiveness and efficiency. The literature has identified a wide range of individual, social, and organizational characteristics that promote process innovation. These include the financial resources that are available, the talents, dedication, and drive of the workforce, the organizational atmosphere and structures, and the R&D activities of the firms. It is more likely to achieve process innovation (Innovation Output) when innovation-related activities (Innovation Inputs) are undertaken. Improvements in quality, time and money savings, productivity gains, and a decrease in turnover are among the possible advantages.

4. *OVERVIEW OF INDIAN IT INDUSTRY*

The Indian IT Services market showcases dynamic growth, with a strong emphasis on diverse services catering to evolving business needs. Key players play a vital role in shaping this landscape, and the sector's projection indicates a robust trajectory in the coming years. The IT Services market encompasses services for creating, managing, and delivering information, aligning with business strategies and internal processes. Key focus of Indian IT Services is on ensuring effective implementation, operation, and optimization of IT infrastructure to support organizational objectives. Revenue in the Indian IT Services market is poised to reach US$26.45bn by 2024. IT Outsourcing dominates, with a projected market volume of US$10.51bn in 2024. Anticipated annual growth rate (CAGR 2024-2028) is 12.98%, reaching a market volume of US$43.09bn by 2028. Indian IT companies are global leaders in the services space and not the product space. Indian software exporters largely provide services rather than products and has captured a significant portion in software services with over 80% of exports are software services, which includes custom software development, consultancy and professional services. Indian IT industry is built mostly around services and not products. therefore, making process innovation especially important to IT industry.

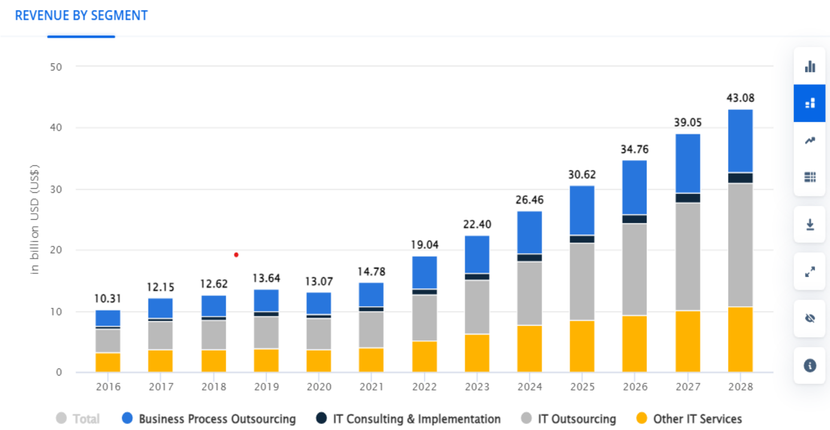


FIGURE 1. Indian IT Industry revenue

Share of Information technology/business process management sector in the GDP of India from financial year 2009 to 2023

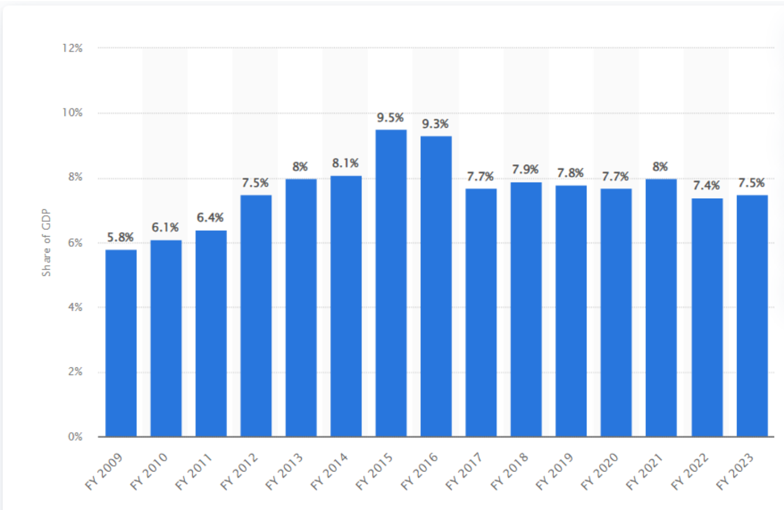
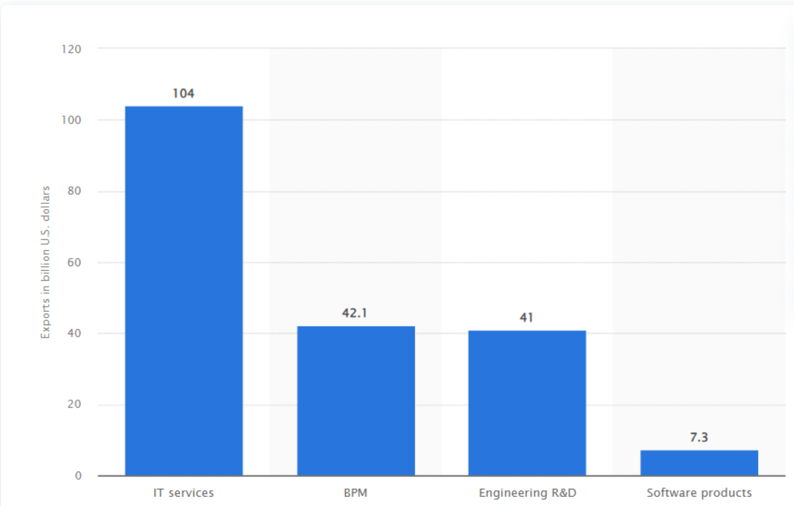


FIGURE 2. Export value of IT software and services from India in financial year 2022, by type (in billion U.S. dollars)



Source: Statista Dec 2023

III. The Conceptual Model

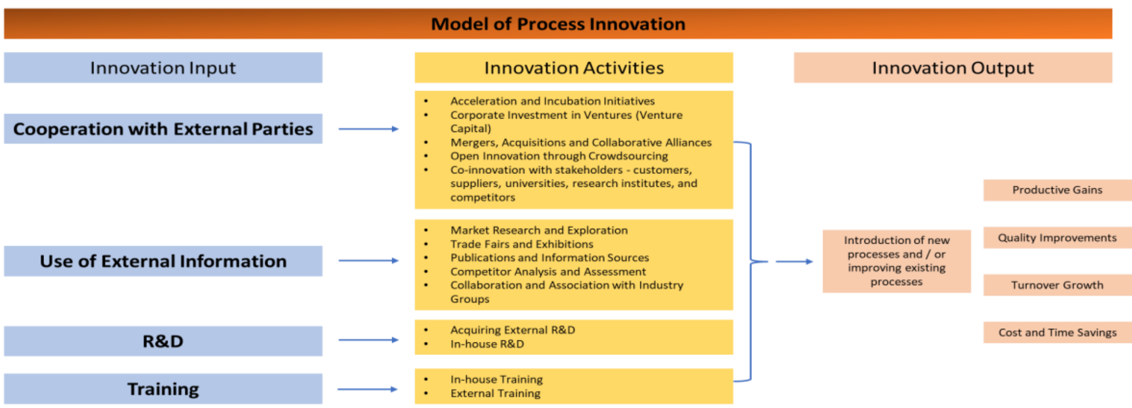


FIGURE 3. The Conceptual Model of Process Innovation in IT Firms

1. COOPERATION WITH EXTERNAL PARTIES

The potential of an organization to innovate is greatly impacted by collaboration with other entities. The discovery and assimilation of external innovations are facilitated by engaging with a varied range of partners, including startups, suppliers, users, competitors, research institutes, and universities [39]. Partnerships promote learning, potential co-creation, engagement, feedback loops, and learning [40].

Access to extra resources is facilitated by the capacity to establish alliances or collaborations with other groups. These partnerships provide insightful information [41] that increases the chances of implementing new procedures successfully. Suppliers, for example, might provide technological know-how, capital, and expertise to support organizational growth initiatives.

Collaboration with external entities not only aids in understanding partner capabilities but also reveals how these capabilities complement each other's processes and products. This interaction enriches the focal organization's awareness of process technology available within the supplier's domain and the broader market, exposing them to diverse process management approaches.

Engaging with various external entities, each with their unique routines and processes, potentially endows an organization with sustainable competitive advantages. As organizations collaborate with suppliers, customers, or competitors, they must efficiently incorporate partner routines, leading to heightened intraorganizational learning. This emphasis on learning fosters the development of novel procedures and routines. Successful collaboration necessitates the sharing of valuable information and tacit knowledge, which can then be integrated into the organization's operational framework. Such collaborations provide access to invaluable knowledge and ideas, aiding continuous learning and innovation. Extensive literature in innovation management underscores the direct correlation between increased cooperation and elevated innovation levels. Remarkable instances of this approach include major corporations establishing their accelerator or incubator programs, such as Muru-D backed by Telstra, Wipro Ventures investing in startups, and Facebook's acquisition of Instagram, all exemplifying the potential of collaborative innovation strategies.

Proposition 1: Families and non-family businesses collaborate with other parties to improve the chances of implementing new procedures successfully.

Family firms exhibit a remarkable ability to foster enduring relationships with stakeholders [27]. Their inherent structure, where members are entrenched within the family group and organizations, establishes deeper connections across multiple stakeholders. Leveraging organizational social capital, these firms cultivate diverse networks, granting access to a spectrum of resources and knowledge crucial for exploring strategic avenues, fostering innovation, and consolidating robust market positions.

This strong social fabric not only offers access to valuable resources [42] but also facilitates beneficial alliances with other firms, leveraging the social capital to advance their mission [18]. The stability inherent in family firms ensures continuity in social structures, enhancing mutual obligations, trust, cooperation norms, and goodwill accumulation. Additionally, these enterprises often maintain strong community ties, treating vendors and suppliers as integral parts of their extended family.

A transgenerational outlook characteristic of family firms allows for sustained cultivation of relationships with societal stakeholders, leading to effective partnerships with support organizations like banks, maintaining legitimacy across various constituencies. These firms adeptly leverage their external stakeholder network to collaboratively drive the stages of process innovation [20]. Their proclivity for enhancing visibility and reputation encourages family firms to heavily rely on external knowledge sources during innovation initiatives [43].

In contrast, non-family firms predominantly rely on internal capabilities for process innovation activities [20]. The absence of well-established social structures among members of non-family firms contrasts with the robust relational foundations within family businesses. Family-owned enterprises invest significantly in relationships, envisioning long-term gains, exemplified by IKEA's strategy with Polish suppliers. Despite initial costs, IKEA heavily invested in these suppliers, resulting in highly efficient, loyal partners aligned with IKEA's designs and methodologies [31]. This narrative highlights the proactive partnership approach of family firms compared to their non-family counterparts.

Proposition 2: On activities associated with process innovation, the extent to which family firms work with external parties will be greater than non-family firms' cooperation with external parties

2. USING OF EXTERNAL INFORMATION

Innovation encompasses multiple facets such as perceiving customer needs, tracking market dynamics through methods like market research, and identifying technological prospects like scanning patent databases [44]. Organizations actively gather external information from diverse sources such as trade fairs, technical publications, industry exhibitions, and platforms like Wipro's Patent Carnivals, fostering an environment for patentable ideas and expanding the internal network of innovators. Initiatives like Hackathons and Ideathons at Wipro serve as crucial mechanisms enabling learning from external sources and facilitate the incorporation of cutting-edge technologies into innovative solutions.

The use of external data indicates how much a company incorporates knowledge from outside sources into its efforts to innovate. This component, in contrast to active collaboration with other parties, entails comparatively passive information gathering. This information includes factual data regarding new markets and technological innovations obtained from trade periodicals and scientific journals. The internet and information technology have greatly increased the availability of this kind of information. However, there is still a growing interest in finding new, elusive technologies, which emphasizes how important information acquisition is to process innovation.

In line with the Resource-Based View (RBV) and Dynamic Capabilities frameworks [44], obtaining outside information is important because it can supplement internal resources and capabilities, which can boost a company's capacity for innovation. Making use of data from other sources always results in recommendations for improving current procedures. Important market insights help to spot new trends that are important to supporting creative outputs. These patterns may indicate that new process development is required [25]. These examples show how utilizing outside data can directly and favorably influence the creation of new processes.

The repository of external information offers myriad improvement ideas, often culminating in the introduction of new processes, thereby underscoring its pivotal role in fostering innovation.

Proposition 3: Both family and non-family firms use information acquired from external sources for introducing a new process or enhancing an existing process

Family businesses have a particular talent for fostering long-lasting connections with stakeholders. They also tend to increase their family's reputation and exposure outside of their company [43]. This inclination prompts family firms to rely more significantly on external knowledge contributions during innovation projects [20]. Leveraging their extensive network of external stakeholders, family firms collaboratively engage in various stages of the innovation process [20].

In contrast, non-family firms predominantly hinge upon internal capabilities for executing innovation activities [20], often adopting a closed, internally focused approach [20]. The inherent reliance on internal resources leads to a more insular innovation strategy within non-family firms, differing starkly from the collaborative, external engagement approach observed in family-owned enterprises.

Proposition 4: When it comes to innovation, family businesses are far more likely to rely on outside sources of information and technology, while nonfamily businesses typically take a closed, inward-looking approach.

3. RESEARCH AND DEVELOPMENT

31. acquisition of external Research & Development (R&D)

Acquiring external R&D (R&D Outsourcing) refers to a firm's engagement in obtaining knowledge generated by third-party research endeavours. In contrast to basic information acquisition, incorporating external R&D involves a more intricate process, demanding a nuanced understanding of how externally developed knowledge can synergize with internal resources [39]. This multifaceted process relies on a blend of formal and informal methods to effectively integrate externally developed insights [39].

The introduction of new processes is greatly impacted by the adoption of external R&D. Based on the Resource-Based View (RBV), companies can outperform rivals in knowledge redistribution by utilizing external R&D resources. Adding to this viewpoint, the literature on innovation suggests that an organization's ability to innovate is increased when external R&D is included. Assimilation of private knowledge from suppliers or customers can act as a catalyst for the development of new or improved goods or processes.

The idea of absorptive capacity—the firm's ability to recognize, assimilate, and utilize environmental knowledge—provides support for the enhanced innovation capabilities resulting from using external R&D. This capability encompasses the ability to mimic and utilize outside information, which is crucial for enhancing a company's potential for innovation [10]. It is regarded as a dynamic capability that uses iterative learning to reshape a company's knowledge base. These capacities differ between companies, which influences how well they can use knowledge that has been obtained from outside sources [24].

Building these "relational" skills adds to a unique combination of technology and knowledge that improves organizational procedures. Sourcing R&D from other sources strengthens a company's knowledge base and improves its ability to innovate processes. Acquiring external R&D expands the potential for improvement ideas by enabling businesses to improve elements of their operations that might otherwise remain unchanged.

As a result, using outside R&D greatly increases the possibility of implementing innovative procedures. There is potential for cost and quality benefits from outsourcing research and development (R&D) since it provides access to specialized knowledge and capabilities beyond what is available internally.

Proposition 5: Both Family and Non-family acquire external R&D to increase the likelihood of introducing a new process or enhancing an existing process.

Owners of family firms have different goals and priorities than owners of nonfamily enterprises. Preserving their Socioemotional Wealth (SEW)—which they define as the "non-financial aspects of the firm that cater to the family's emotional needs" [21] is the primary source of their motivation and dedication. Family business owners frequently consider gains or losses in SEW instead than just profitability when making strategic decisions [21, 30].

Socioemotional wealth is immediately at danger from the acquisition of research and development (R&D) [20]. A large body of research indicates that family businesses typically invest less in R&D than their nonfamily counterparts in an effort to preserve socioemotional wealth. Family business decision-makers are risk averse when it comes to R&D acquisitions because the rewards take time to materialize.

Furthermore, purchasing R&D entails large upfront expenditures and serves as a proxy for long-term strategic choices. The difficulties with integrating following an acquisition [11] add to the likelihood of loss and uncertainty.

To acquire R&D, capital is essential and can come from both internal and external sources. Because they believe that having a lot of leverage means they must rely on outside investors and run a higher risk of going bankrupt, family businesses typically avoid taking out loans from outside sources. A failed R&D acquisition implies a direct loss of the socioemotional wealth of the family, which is highly customized. The intricacy and disparities in information linked to research and development procurements additionally augment the intricate process of decision-making in family-run enterprises.

Proposition 6: Family firms will exhibit fewer acquisitions of external R&D than nonfamily firms.

3.2 conducting in-house R&D

In-house Research and Development (R&D) constitutes systematic creative efforts aimed at expanding the reservoir of knowledge and leveraging it to innovate new and enhanced goods, services, or processes. Activities supporting internal knowledge generation play a pivotal role in the early stages of the innovation process, such as idea generation or concept development. Specifically, internal R&D endeavours empower companies to deepen their comprehension of the process technology underpinning production and support processes.

This acquired knowledge is considered essential for identifying and resolving process-related challenges. These arguments align with the perspective that innovation involves novel combinations of existing knowledge, as articulated by Schumpeter in 1934. According to this view, a comprehensive knowledge base enhances a firm's ability to creatively combine previously disparate knowledge elements.

For companies to select appropriate research and development partners and work productively with them, some degree of internal research and development must be carried out. These results are consistent with the concept of absorptive capacity proposed by Cohen and Levinthal [10], which holds that a firm's prior related knowledge gained through internal R&D efforts has a significant influence on its ability to recognize, assimilate, and capitalize on knowledge generated externally.

Proposition 7: Family businesses and non-family businesses both participate in internal R&D for process innovation.

As sunk costs with a long return horizon and substantial risk, research and development (R&D) investments are described. Failed R&D projects can have consequences that go beyond monetary losses; they might include harm to a company's image and a consequent decline in the socio-emotional resources of the family that owns it. Because the family name and the company are inherently associated, this connection is especially noteworthy.

Important "human capital" investments are also made in R&D projects, which increases risk aversion in family businesses because of managerial capacity limitations. These limitations increase the risks connected with such investments and restrict their capacity to successfully navigate the R&D process. Family businesses may need to add nonfamily managers with technical skills and expertise to their top management teams (TMTs) to get around these constraints. Hiring more nonfamily managers could undermine family influence over decision-making, which would reduce socioemotional wealth, which is why this strategic step raises questions [27].

The financial aspect of R&D projects necessitates substantial investments, compelling family firms to choose between internal cash flows, debt financing, or seeking outside equity. Reluctance to dilute ownership by seeking external equity often leads family firms to utilize internal cash flows or debt financing. However, this choice poses constraints on the ability to invest in projects with shorter, more certain payoffs, potentially increasing the risk of firm failure and threatening socioemotional wealth.

The reluctance to recruit outside employees in family firms, driven by the desire to maintain ownership and control, contrasts with the potential benefits of incorporating new creative knowledge and skills for managing R&D intensity [10]. Limiting the labour pool to family members may impede the evaluation and selection of valuable R&D projects, as family members may lack the specific managerial skills, knowledge, and expertise needed for this discernment. Consequently, the family firm's propensity for R&D intensity is compromised.

In family firms, top executive positions are typically held by family members aiming to maintain control, resulting in long CEO tenures. However, extended CEO tenures may lead to a conservative approach, as CEOs become more concerned about succession issues and exhibit a resistance to change through R&D intensity [10]. The aging factor further contributes to risk aversion, as older CEOs may avoid R&D investments perceived as too risky or personally threatening.

The availability of internally generated funds limits a family firm's ability to invest unless it takes on or increases debt. Despite potential benefits, family members are generally reluctant to rely on external financing, as evidenced by the desire to retain ownership and control [27]. The apprehension toward external financing is reinforced by concerns about losing decision-making discretion due to lender-imposed restrictive covenants and reporting requirements. This hesitance may hinder family firms from pursuing projects requiring debt financing, given the potential loss of socioemotional wealth.

Managers in family firms may prioritize the controlling family's interests over those of general shareholders, leading to principal–principal agency costs. The ability of large family shareholders to extract private benefits at the expense of minority shareholders may impact R&D intensity negatively. The reluctance to back R&D investments could favour high dividends over innovation, reinforcing the argument that family firms have a lower propensity for R&D intensity compared to nonfamily firms, as supported by findings on Canadian firms controlled by heirs.

Family firms, deeply concerned about family wealth closely tied to firm wealth, tend to prioritize business survival, preserve the status quo, and avoid major changes. This conservative approach and risk-averse stance may result in strategic decisions that deter from uncertain projects, such as R&D investments. This association between family involvement and a reluctance to embrace R&D suggests a negative correlation, emphasizing the impact of family dynamics on innovation within these businesses.

Proposition 8: Non-family firms will have stronger in-house R&D capabilities when compared to family firms.

4. *TRAINING EMPLOYEES FOR INNOVATION (EDMONDSON ET AL., 2001)*

4.1 In-house training

4.2 External training

Referring to the training provided to staff members with an emphasis on innovation development and introduction. Innovation-focused training is essential for improving the performance of businesses and has a favorable effect on process innovation success. By increasing workers' enthusiasm and expertise, this type of training helps with important parts of the innovation process, like idea generation, concept development, and the methodical implementation of process improvements.

The association between employee training and tangible benefits extends to both process innovation success and financial performance.

Proposition 9: Both family and non-family firms conduct employee training to enhance the likelihood of achieving process innovation.

Reid and Adams [45] conducted an examination of human resource practices, drawing distinctions between family and nonfamily firms. Their findings reveal that, in comparison to nonfamily firms, family-run enterprises allocate a smaller portion of their annual salary and wage budget to employee training and are less inclined to undertake systematic analyses of employee training needs. Schulze et al [19] further underscore the disparity, highlighting the perceived lower caliber of managers in family firms and their challenge in competing for skilled staff due to comparatively lower compensation packages.

Matlay [46] contributes to this narrative by emphasizing that family proprietors tend to prioritize the training needs of family members employed in the firm over those of nonfamily employees. These portrayals of family firms suggest a limited focus on employee training beyond the essentials required for job performance, particularly when it comes to nonfamily employees. The restriction on employee training is also rooted in the perception that highly skilled employees pose a threat to the family proprietor’s desire to maintain control of the firm [45]. Consequently, the attention dedicated to employee training and development is more likely to be substantial in larger nonfamily firms compared to their family-run counterparts.

Proposition 10: Formal employee training would be lower in firms with greater family ownership and management than in firms that are owned by outsiders and managed by nonowners.

The existing literature highlights a common trend where both family and nonfamily firms tend to adopt more nuanced Human Resource (HR) policies for training as they undergo periods of growth [45]. Notably, family firms exhibit a lower degree of formality in their approach to employee training [45]. This is exemplified by their heightened emphasis on informal training, a characteristic that persists regardless of the firm's size.

The potential challenge arises for family firms when considering external training providers, as it involves relinquishing control, viewed as a risk due to the necessity of placing trust in the external company's ability to deliver high-quality training. The cost factor also plays a role, as external trainers can be expensive, making this solution less cost-effective for family firms. Additionally, the introduction of an external perspective, one of the key advantages of external training, may be perceived as a threat to the Socioemotional Wealth (SEW) of family firms. This is because it has the potential to expose employees to alternative approaches to business, potentially diverging from the established norms within the family firm.

Proposition 11: Compared to nonfamily enterprises, family businesses are less likely to enroll staff members in university courses, hire outside professional trainers or specialists, or use outside training programs.

IV. SCOPE OF THE STUDY

This research delves into a comparative analysis of process innovation strategies within the context of family and non-family Indian IT firms. The scope encompasses an in-depth exploration of the distinctive approaches employed by these two categories of firms in fostering and implementing process innovations. The study encapsulates diverse dimensions, including organizational structures, decision-making processes, and cultural influences, to provide a comprehensive understanding of how these factors shape innovation strategies.

Furthermore, the scope extends to examining the impact of familial ties on innovation dynamics, considering the unique challenges and opportunities presented by family-run IT firms. The study incorporates a wide range of variables, spanning leadership styles, risk appetites, and long-term orientations, aiming to unravel the intricate interplay between familial influences and process innovation initiatives.

V. IMPORTANCE OF THE STUDY

1. *ADDRESSING RESEARCH GAPS*

This study bridges existing gaps in the literature by offering a nuanced examination of process innovation strategies, specifically in the Indian IT sector, where family and non-family firms coexist. It contributes to filling the void in understanding how familial structures influence innovation decisions, providing valuable insights for researchers, practitioners, and policymakers.

2. *INFORMING STRATEGIC DECISION-MAKING*

Findings from this research hold significance for leaders and decision-makers in both family and non-family IT firms, aiding them in formulating informed strategies to enhance their respective innovation capabilities. The study's insights can serve as a guide for devising tailored approaches that align with the inherent characteristics of family and non-family enterprises.

3. *GUIDING POLICY FORMULATION*

Policymakers in the domain of innovation and entrepreneurship can leverage the outcomes of this study to craft policies that foster a conducive environment for diverse business structures, considering the family-specific nuances identified.

4. *CONTRIBUTING TO ACADEMIC KNOWLEDGE*

Academically, this research enriches the literature on process innovation in the context of family businesses, providing a foundation for future studies and theoretical advancements in understanding the intricacies of innovation within familial organizational frameworks.

5. ENHANCING COMPETITIVENESS

By uncovering the nuances of process innovation strategies, this study equips businesses, especially those within the Indian IT sector, with the knowledge to enhance their competitiveness in a rapidly evolving industry landscape.

VI. CONCLUSION

In conclusion, the scope and importance of this research extend beyond the confines of academic inquiry, offering practical implications for business leaders, policymakers, and academics. The study's findings are poised to shape strategic decision-making, foster innovation, and contribute to the holistic understanding of organizational dynamics in the Indian IT sector.

VII. Acknowledgement

Note, due to space limitations, we have included a partial bibliography. Feel free to reach out to us at Phani.bhattachar@gmail.com for complete list. Authors are thankful to CMS Business School, JAIN (Deemed-to-be University).

REFERENCES

1. Rubino, F. E., Tenuta, P., & Cambrea, D. R. (2017). Board characteristics effects on performance in family and non-family business: A multi-theoretical approach. Journal of Management & Governance, 21, 623-658.
2. Colli, A. (2003). The history of family business, 1850-2000 (No. 47). Cambridge University Press. https://ideas.repec.org/b/cup/cbooks/9780521800280.html.
3. Jackling, B., & Johl, S. (2009). Board structure and firm performance: Evidence from India's top companies. Corporate Governance: An International Review, 17(4), 492-509.
4. Christensen, M., & Knudsen, T. (2010). Design of decision-making organizations. Management Science, 56(1), 71-89.
5. Mahesh, M. V., & Phani, K. R. (2023). Spiritual Leadership and Innovation Capacity in Indian Entrepreneurial Firms: The mediating role of Organizational Learning. Journal of Informatics Education and Research, 3(2). https://jier.org/index.php/journal/article/view/236.
6. Kadaei S (2023). A review of limitations and future challenges in optimization of energy in sustainable high-rise buildings. Journal of Art and Architecture Studies, 12 (2), 27-34. DOI: https://dx.doi.org/10.54203/jaas.2023.4.
7. Furman, J. L., Porter, M. E., & Stern, S. (2002). The determinants of national innovative capacity. Research Policy, 31(6). https://doi.org/10.1016/S0048-7333(01)00152-4.

Tien, J. M., & Berg, D. (2007). A calculus for services innovation. Journal of Systems Science and Systems Engineering, 16, 129-165. https://doi.org/10.1007/s11518-007-5041-y.

8. Zoranka, M., Milica, Đ. Š., & Mirjana, J. (2021). Recycling of waste sludge from wwtp "gorić" valjevo using the process of stabilization and solidification. Arhiv za Tehnicke Nauke / Archives for Technical Sciences, 25(1), 59-64. DOI: 10.7251/afts.2021.1325.059M.
9. Chen, H.L. & Hsu, W.T. (2009). Family ownership, board independence, and R&D investment. Family Business Review, 22(4), 347-362.
10. Damanpour, F., & Evan, W. M. (1984). Organizational innovation and performance: The problem of "organizational lag." Administrative Science Quarterly, 29(3), 392–402. https://doi.org/10.2307/2393031.
11. Daft, R. L. (1982). Bureaucratic versus Nonbureaucratic Structure and the Process of Innovation and Change. In S. B. Bacharach (Ed.), Research in the Sociology of Organizations (pp. 129-166). Greenwich, CT: JAI Press Inc.
12. Nguyen, T. H., Le, X. C., & Vu, T. H. L. (2022). An extended technology-organization-environment (TOE) framework for online retailing utilization in digital transformation: empirical evidence from Vietnam. Journal of Open Innovation: Technology, Market, and Complexity, 8(4), 200. https://doi.org/10.3390/joitmc8040200 .
13. Damanpour, F. and Gopalakrishnan, S. (2001) The Dynamics of the Adoption of Product and Process Innovations in Organizations. Journal of Management Studies, 38, 45-65. https://doi.org/10.1111/1467-6486.00227.
14. Barras, R. (1986). Towards a theory of innovation in services. Research Policy, 15(4), 161-173. https://doi.org/10.1016/0048-7333(86)90012-0.
15. Utterback, J.M. and Abernathy, W.J. (1975) A Dynamic Model of Process and Product Innovation. Omega, 3, 639-656.
16. Davenport, D. S. (1992). Ethical and Legal Problems with Client-Centered Supervision. Counselor Education and Supervision, 31(4), 227–231. https://doi.org/10.1002/j.1556-6978.1992.tb00165.x.
17. Chua, J.H., Chrisman, J.J., & Sharma, P. (1999). Defining the family business by behavior. Entrepreneurship Theory and Practice, 23(4), 19-39.
18. Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2001). Agency relationships in family firms: Theory and evidence. Organization Science, 12(2), 99–116.
19. De Massis, A., Frattini, F., & Lichtenthaler, U. (2013). Research on technological innovation in family firms: Present debates and future directions. Family Business Review, 26(1), 10-31.
20. Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. Administrative science quarterly, 52(1), 106-137.

21. Zellweger, T. M., Kellermanns, F. W., Chrisman, J. J., & Chua, J. H. (2012). Family control and family firm valuation by family CEOs: The importance of intentions for transgenerational control. Organization Science, 23(3), 851-868. https://doi.org/10.1287/orsc.1110.0665.
22. Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. Entrepreneurship Theory and Practice, 28(4), 335–354.
23. Patel, P. C., & Chrisman, J. J. (2014). Risk abatement as a strategy for R&D investments in family firms. Strategic Management Journal, 35(4), 617-627.
24. Kotlar, J., De Massis, A., Frattini, F., Bianchi, M., & Fang, H. (2013). Technology acquisition in family and nonfamily firms: A longitudinal analysis of Spanish manufacturing firms. Journal of Product Innovation Management, 30(6), 1073-1088.
25. Classen, N., Van Gils, A., Bammens, Y., & Carree, M. (2012). Accessing resources from innovation partners: The search breadth of family SMEs. Journal of Small Business Management, 50(2), 191-215. https://www.tandfonline.com/doi/abs/10.1111/j.1540-627X.2012.00350.x.
26. Gómez-Mejía, L.R., Makri, M., & Larraza-Kintana, M. (2010). Diversification decisions in family-controlled firms. Journal of Management Studies, 47(2), 223-252.
27. Chrisman, J.J., & Patel, P.C. (2012). Variations in R&D investments of family and nonfamily firms: Behavioral agency and myopic loss aversion perspectives. Academy of Management Journal, 55(4), 976-997.
28. Wiseman, R.M., & Gómez-Mejía, L.R. (1998). A behavioral agency model of managerial risk taking. Academy of Management Review, 23(1), 133-153.
29. Berrone, P., Cruz, C., Gomez-Mejia, L. R., & Larraza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: Do family-controlled firms pollute less? Administrative Science Quarterly, 55(1), 82-113.
30. Miller, D., Le Breton-Miller, I., & Lester, R. H. (2013). Family firm governance, strategic conformity, and performance: Institutional vs. strategic perspectives. Organization Science, 24(1), 189-209. https://doi.org/10.1287/orsc.1110.0728.
31. Cennamo, C., Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012). Socioemotional wealth and proactive stakeholder engagement: Why family-controlled firms care more about their stakeholders. Entrepreneurship Theory and Practice, 36(6), 1153-1173.
32. Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3(4), 305-360.
33. Akhand, M. I., Hamid, M. A., Islam, M. N., & Akter, S. (2024). Influence of Corporate Social Responsibility on Financial Performance of Listed Private Commercial Banks in Bangladesh: An Econometric Analysis. EPH-International Journal of Humanities and Social Science, 9(1), 8-19.
34. Anderson, R.C., & Reeb, D.M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. The Journal of Finance, 58(3), 1301-1328.
35. Pisano, G. P. (1994). Knowledge, integration, and the locus of learning: An empirical analysis of process development. Strategic management journal, 15(S1), 85-100.
36. Galbreath, J. (2005). Which resources matter the most to firm success? An exploratory study of resource-based theory. Technovation, 25(9), 979-987.
37. Calabrò, A., Torchia, M., Pukall, T., & Mussolino, D. (2013). The influence of ownership structure and board strategic involvement on international sales: The moderating effect of family involvement. International Business Review, 22(3), 509-523.
38. Laursen, K., & Salter, A. (2014). The paradox of openness: Appropriability and the use of external sources of knowledge for innovation. Research Policy, 43(5), 868-878.
39. Lynn, G. S., Morone, J. G., & Paulson, A. S. (1996). Marketing and discontinuous innovation: the probe and learn process. California management review, 38(3), 8-37.
40. Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. Academy of management review, 23(4), 660-679.
41. Pearson, A.W., Carr, J.C., & Shaw, J.C. (2008). Toward a theory of familiness: A social capital perspective. Entrepreneurship Theory and Practice, 32(6), 949-969.
42. Dunn, B. (1996). Family enterprises in the UK: A special sector?. Family Business Review, 9(2), 139-155. https://doi.org/10.1111/j.1741-6248.1996.00139.x.
43. Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28(13), 1319-1350.
44. Reid, M., Adams, P. (2002). People management in SMEs: An analysis of human resource strategies in family and non-family businesses. Journal of Small Business and Enterprise Development, 9(3), 245-259.
45. Matlay, H. (2002). Training and HRD strategies in family and non-family-owned small businesses: A comparative approach. Education+ Training, 44(8/9), 357-369.