

# **DIGITAL TRANSFORMATION AND ENTREPRENEURIAL ADVANCEMENT IN FAMILY BUSINESSES: EVIDENCE FROM JALANDHAR DISTRICT**

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## **ABSTRACT**

India's economy significantly benefits from family firms, especially in rural and semi-urban regions, where they generate employment and foster the development of local industries. Although cultural traditions are essential to the economy, numerous family enterprises are apprehensive about change, lack financial resources, or decline to comply with them. This chapter analyzes the effects of digital transformation on the growth of small family enterprises in the Jalandhar region of Punjab. This study employed survey-based quantitative methods to examine the extent of digital adoption, its relationship with entrepreneurial performance, and the constraints encountered by family enterprises. The findings indicate a robust positive correlation between digital transformation and corporate performance. Nevertheless, challenges such as budgetary limitations and insufficient understanding of digital technologies impede progress. The chapter offers targeted recommendations, supported by empirical data from a specific Indian context, for legislators and entrepreneurs to foster equitable digital adoption and sustainable entrepreneurial development.

Keywords: Digital Transformation, Family Business, Entrepreneurial Growth, Digital Adoption

## **I. INTRODUCTION**

Family-owned businesses, predominantly tiny and micro firms, have been very important for India's economy in recent years. These business provide not only the job opportunities rather they play a very important role in supporting local innovation and new ideas (McKinsey, 2024; Buteau et al., 2021). Despite their importance to the economy, some small family-owned firms have been slower than larger corporations to adopt new digital technology. This, according to Blasly & Hammouda (2020) and Lathifah Tirdasari, Dhewan & Arief (2025), is because of their traditionalism, risk aversion, limited financial means, and need for stability.

Digitisation provides family enterprises the opportunity to enhance their operations, expand, and penetrate new markets. The PayNearby MSME Digital Index Report (2025) examines Indian MSMEs and concludes that digital instruments such as UPI, social media, and e-commerce platforms have facilitated their growth, particularly in semi-urban and rural regions. However, the literature suggests that many small family businesses still encounter challenges like insufficient skills, budgetary constraints, and uncertain returns on investment related to digital adoption (Philbin et al., 2022; Kubade, 2023).

Despite increased scholarly attention on the concepts of digital entrepreneurship within family enterprises (e.g., Basly & Hammouda, 2020; Lathifah Tirdasari et al., 2025), there remains a paucity of empirical evidence regarding the extent of digital transformation in small family businesses in India and its implications for their growth, including new product development, market expansion, and overall performance.

This study addresses the gap by examining the utilisation of digital technology by family-owned small enterprises in the Jalandhar region of Punjab and its impact on their commercial success. The objectives are to:

1. Assess the extent of digital transformation methods employed;
2. Investigate the relation between digital transformation and business success;
3. Study the obstacles encountered by family businesses in adoption of digitalization; and
4. Develop policy and management strategies to promote the adoption of digital technology to sustain growth.

This study concentrates on tiny family enterprises within a certain district. It provides detailed information that can assist with both little projects and overarching policymaking in India's comparable semi-urban or smaller district contexts.

## II. LITERATURE REVIEW

The literature review has been segmented into significant sub-sections. These sections highlighted the noteworthy research conducted on digital transformation, entrepreneurial achievements, and the difficulties hindering the acceptance of digital tools by family businesses.

1. **The Substantial Role of Family Enterprises in Entrepreneurship:** Family enterprises are an important constituent of the international economy, predominantly in developing countries such as India, which represent a substantial share of small and medium-sized enterprises (SMEs). A research by McKinsey & Company (2024) indicates that family enterprises constitute seventy percent of all businesses in India. They significantly contribute to both the economy and employment. Research has shown that family businesses repeatedly lay emphasis on stability, inheritance, and sustainable longevity. Also, a family business is often owned and run by the same family for many generations (Basly & Hammouda, 2020). Lathifah Tirdasari et al. (2025) say that these kinds of businesses have a lot of unique issues, mainly with leadership, passing on the business, and keeping new ideas alive. According to Buteau et al. (2021), family businesses might find it hard to come up with new ideas because they are very attached to traditions, don't like taking chances, and have trouble implementing new business strategies. However, digital entrepreneurship has sped up change a lot for the next generation of family businesses (Kubade, 2023).
2. Family enterprises are transitioning to digital platforms. This elucidates the significance of digital transformation for small enterprises. "Digital transformation" signifies that a corporation is employing digital technologies comprehensively. According to McKinsey (2024), this alters the operational dynamics of firms and the services they may provide to individuals. This alteration is crucial for family enterprises as it may enhance productivity, improve customer relations, and increase profitability (Basly & Hammouda, 2020). Small family enterprises are increasingly using digital technologies, particularly in areas such as Jalandhar, which are situated centrally inside urban environments. Online retail platforms, digital payment systems (UPI), and social media marketing are among these instruments. The PayNearby study (2025) indicates that over 60% of MSMEs in rural India utilise digital payment methods. However, hardly 10 to 15 percent of small family enterprises employ more sophisticated systems such as ERP and analytics.

Due to a lack of funding, experience, or flexibility, many family businesses struggle to implement digital technology (Philbin et al., 2022). Insufficient digital technology skills or inadequate internet infrastructure may substantially hinder business growth (Kubade, 2023).

The digital transformation of micro, small, and medium-sized firms (MSMEs) has markedly expedited India's progress, especially in rural and semi-urban areas. NASSCOM (2023) asserts that digital technology, including digital payments, social media marketing, and e-commerce platforms, have enabled MSMEs to reach new clients and markets, therefore motivating more individuals to launch their own businesses. NASSCOM reports that over 60% of MSMEs have embraced digital technology to broaden their reach and improve operational efficiency. This poll corroborates the global trend of small enterprises using digital technology to surpass their competition, especially in developing countries like India.

This development supports a pattern that analyses the use of digital technology by small family businesses. Digital payments and social media marketing seem to be the predominant corporate strategy in Jalandhar. This aligns with dominant national trends. Family enterprises may encounter challenges in fully adopting digital transformation owing to issues such as increased costs, lack of knowledge, and resistance to change.

### 3. Growth and Digital Tools

There are several ways to gauge business progress, including introducing new products, increasing revenue, breaking into untapped areas, and establishing new procedures. Information and communication technology increases the likelihood that family companies will achieve these objectives. E-commerce platforms allow small enterprises to reach clients worldwide, and digital payment systems facilitate cash flow management (McKinsey, 2024).

Digital transformation improves organisational effectiveness, according to studies. Technology-savvy Indian MSMEs grew at a pace 30% faster than their less tech-savvy counterparts, according to Buteau et al. (2021). According to Lathifah Tirdasari et al. (2025), family businesses that used digital technology saw a 20–30% increase in revenue and a gain in their market share. The 2024 comparative study by Soni and Verma examines how family-owned businesses in urban and rural settings employ technology differently. Their study shows that while rural businesses encounter challenges because of inadequate infrastructure (like poor internet connectivity), lack of funding, and a lack of technical know-how, urban businesses typically have greater access to cutting-edge digital technologies like ERP and CRM systems. Businesses in places like Jalandhar, where comparable problems can arise, will particularly benefit from this research.

### 4. Obstacles to Digital Adoption in Family Enterprises

Small family businesses have limited finances, hampering their ability to acquire up-to-date digital technologies. Philbin et al. (2022) conducted a study on MSMEs and identified financial constraints as the primary reason for the lack of implementation of technologies such as ERP systems and advanced analytics. Many small family enterprises lack the requisite digital competencies to utilise their resources efficiently. Kubade (2023) indicated that 56% of small business proprietors cited insufficient

digital skills as a significant factor inhibiting the use of new technology. Older generations sometimes exhibit a greater affinity for established business models, which might hinder the adaptability of family enterprises. This resistance to adaptation is a recognised issue in the research (Buteau et al., 2021), significantly impeding family-owned firms' ability to implement new technology. In locations such as Jalandhar, sluggish internet connectivity and insufficient advanced technological infrastructure hinder individuals from effectively using digital technologies (PayNearby MSME Digital Index Report, 2025).

This study is based on literature regarding digital transformation, the adoption of digital marketing, and the distinct challenges encountered by rural and urban enterprises. The DTI in this study reflects the prevailing trends outlined in NASSCOM (2023) and Iyer and Sharma (2022), while the focus on family-run enterprises in Jalandhar enriches the research of Soni and Verma (2024) by clarifying how rural family businesses can leverage digital tools for growth despite considerable challenges.

While previous research has explored digital adoption in large enterprises and urban MSMEs, studies focussing on family businesses in semi-urban regions like Jalandhar remain limited. There is a lack of empirical data directly linking digital adoption to entrepreneurial growth in small family businesses.

This study aims to rectify this gap by investigating family enterprises in Jalandhar, providing empirical data on their digital transformation processes and its influence on entrepreneurial performance. It will identify barriers to the use of digital technologies and provide policymakers and family business owners with valuable insights.

### III. METHODOLOGY

A quantitative study methodology has been employed to examine the digital transformation strategies and their impact on entrepreneurial success inside small family businesses in Jalandhar district. A survey-based methodology was employed, utilising cross-sectional data collected at a single point in time to examine the relationship between digital adoption and business performance.

The research focused on family-operated small businesses in Jalandhar involved in manufacturing, retail, and services. A stratified purposive sampling technique was utilised to choose a sample of 50 family enterprises, ensuring coverage across several industries.

#### Inclusion Criteria:

- Family-owned enterprises operational for a minimum of three years.
- Micro or small businesses, as delineated by MSME standards.
- At least one family member must be engaged in management.

**Methods for Data Collection:** A structured questionnaire was developed to gather data on digital transformation practices and entrepreneurial success. The questionnaire included a section on Firm Profile, which had enquiries regarding the business's size, industry, and the number of generations it has operated throughout.

- **Digital Transformation Index (DTI):** Six questions measured on a Likert scale regarding the utilisation of digital tools such as social networking, digital payments, e-commerce, and ERP/CRM systems.
- **Entrepreneurial Growth Index (EGI):** Five Likert-scale enquiries assessing new products, an expanding customer base, and revenue augmentation.

- Obstacles to Digital Adoption: Multiple-choice enquiries identifying issues related to digital adoption.

Five companies tested the questionnaire to ensure its clarity. It was disseminated both in person and online over a duration of four weeks.

Techniques for data analysis: Means, standard deviations, and frequencies have been to summarise the DTI and EGI. This facilitated the determination of the number of individuals utilising digital tools and the extent of their business growth. Pearson's correlation was utilised to examine the relationship between DTI and EGI, assessing the strength and direction of the association. A multiple linear regression model was utilised to assess the impact of DTI on EGI, considering business size and generation. Frequency analysis has been used to identify the most common obstacles hindering individuals from utilising digital technology.

#### IV. ANALYSIS

The degree of digital transformation in various business sectors was evaluated using mean scores, standard deviations, and percentages. The results show that different functional domains have different levels of acceptance, with supply chain tools being the least used and digital payments being the most common.

**Table 1: Descriptive Statistics of Digital Transformation (DTI)**

Domain	Mean	SD	Percentage	Interpretation
Online Payments (UPI/Wallets)	4.5	0.5	90%	Very high adoption
Accounting/ERP/CRM Software	3.7	0.9	65%	Moderate to high
Social Media Marketing	4.0	0.8	75%	High adoption
Tools for e-commerce/Online Sales	3.3	1.1	50%	Moderate adoption
Supply Chain and Logistics	3.2	1.0	55%	Moderate adoption
Analytics and Business Intelligence Dashboards	3.5	1.0	60%	Moderate adoption
<b>DTI Composite</b>	<b>3.7</b>	<b>0.8</b>	—	High overall digital transformation

Table 1 indicates that online payments (UPI/Wallets) exhibit the highest acceptability level, with 90% concurrence and a very high mean score. Subsequently, social media marketing and accounting/ERP/CRM software exhibit moderate to high utilisation levels. Conversely, e-commerce, supply chain/logistics, and analytics and business intelligence dashboards are utilised to a moderate extent, indicating that companies are still striving to enhance these domains. The DTI composite score of 3.7 indicates a significant degree of digital transformation across all categories, however numerous functional areas exhibit potential for enhancement.

Key elements including as innovation, market expansion, client acquisition, revenue trends, and process enhancements were analysed to evaluate entrepreneurial advancement. The mean scores, standard deviations, and percentages were studied to understand the extent of entrepreneurial outcomes achieved by the firms.

**Table 2: Descriptive Statistics of Entrepreneurial Growth (EGI)**

Indicator	Mean	SD	Percentage	Interpretation
New Products/Services	3.8	0.9	65%	Moderate to high
New Customer Segments/Markets	3.7	0.8	63%	Moderate to high
Increased Customer Base	3.9	0.8	70%	High
Improved Sales/Revenue Trend	3.6	1.0	60%	Moderate to high
Process Improvements	3.4	0.9	55%	Moderate
<b>EGI Composite</b>	<b>3.7</b>	<b>0.8</b>	—	High entrepreneurial growth

The findings in Table 2 indicate that the most important entrepreneurial growth outcome is growing the clientele (Mean = 3.9, 70%). This is followed by innovation through new goods and services (Mean = 3.8, 65%) and entering new markets and consumer segments (Mean = 3.7, 63%). Even though process improvements and sales and revenue trends show modest to large progress, they nevertheless lag far behind client expansion and innovation. Although there is room for improvement in operational and process efficiency, the EGI composite score of 3.7 indicates significant entrepreneurial growth and suggests that businesses are successfully employing innovation and client acquisition strategies.

A correlation matrix was constructed to examine the interrelations of digital transformation, entrepreneurial growth, and hurdles to adoption. The coefficients indicate the strength and direction of the relationships among the three variables.

**Table 3: Correlation Matrix of Key Variables**

Variables	DTI	EGI	Barrier Index
<b>DTI</b>	1.00	0.72**	-0.45**
<b>EGI</b>	0.72**	1.00	-0.50**
<b>Barrier Index</b>	-0.45**	-0.50**	1.00

\*\*p < 0.01\*

As per table 3, higher levels of digital adoption are substantially linked to better entrepreneurial outcomes, which show a strong positive connection ( $r = 0.72$ ,  $p < 0.01$ ) between DTI and EGI. On the other hand, the Barrier Index exhibits noteworthy negative associations with both DTI ( $r = -0.45$ ,  $p < 0.01$ ) and EGI ( $r = -0.50$ ,  $p < 0.01$ ), indicating that higher barriers restrict both entrepreneurial growth and digital transformation. These results highlight how important it is to overcome adoption barriers in order to fully realise the potential of entrepreneurship and digital transformation.

A multiple regression model was employed to identify the factors influencing Entrepreneurial Growth Index (EGI). The independent variables included Digital Transformation Index (DTI), Barrier Index, Firm Size, and Generation. Table 4 presents the standardised beta coefficients ( $\beta$ ), standard errors, t-values, and p-values.

**Table 4: Regression Results Predicting Entrepreneurial Growth (EGI)**

Independent Variable	$\beta$ (Std.)	SE	t	p-value
Digital Transformation (DTI)	0.60	0.12	5.0	0.001**
Barrier Index	-0.35	0.11	-3.2	0.005**
Firm Size (employees)	0.20	0.10	2.0	0.04*
Generation (1st vs. 2nd/3rd)	0.15	0.09	1.6	0.12
Constant	—	—	—	—
Model Statistics: $R^2 = .56$ , Adjusted $R^2 = .53$ , $F(4, 45) = 11.20$				

Note. \*\* $p < .01$ , \* $p < .05$ .

The regression analysis demonstrated that the model effectively predicted entrepreneurial growth,  $F(4, 45) = 11.20$ ,  $p < .001$ , accounting for 56% of the variance ( $R^2 = .56$ , Adjusted  $R^2 = .53$ ). Digital transformation ( $\beta = .60$ ,  $p < .001$ ) emerged as the most significant positive predictor of entrepreneurial success among the variables analysed. The barrier index ( $\beta = -.35$ ,  $p = .005$ ) had a significant negative effect, indicating that increasing barriers hinder advancement. The size of the firm ( $\beta = .20$ ,  $p = .04$ ) exerted a positive influence, although to a lesser extent. In contrast, generation ( $\beta = .15$ ,  $p = .12$ ) did not prove to be a significant predictor.

Overall, these findings indicate that digital transformation is a crucial determinant of entrepreneurial expansion, while restrictions impede development potential. The size of a company may be beneficial, but the age of the organisation appears to have less impact on outcomes.

## V. DISCUSSION

This study examined the impact of digital transformation on small family business growth in Punjab's Jalandhar district. The data investigation demonstrated how becoming digital affects future regulations and practices, issues, and business growth. This study shows that among family businesses, digital transformation (DTI) promotes entrepreneurial growth (EGI). Businesses that use more digital tools, such social media marketing, online payments, and e-commerce, are more likely to have high entrepreneurial success, according to the connection coefficient ( $r = 0.72$ ). It has been demonstrated that digital technology may help small businesses expand their markets, generate new ideas, and operate more effectively (Buteau et al., 2021; McKinsey, 2024). Businesses in Jalandhar experienced better client and market expansion when they employed social media (75%) and online payments (90%). This demonstrates how small enterprises, particularly those in rural and semi-urban locations, can benefit from digital technologies. By making it simpler for small enterprises to get started, digital tools can help them expand their market reach (McKinsey & Company, 2024). This is particularly true for companies with limited funding. Digital transformation (DTI) has a positive impact on entrepreneurial development (EGI), according to regression study ( $\beta = 0.60$ ,  $p < 0.001$ ). This demonstrates how essential digital technologies are for introducing new goods, increasing clientele, and generating revenue. Although the size of the company didn't really matter, the emergence of entrepreneurs was primarily due to digital revolution. Bigger businesses claimed to be expanding more quickly.

Even if there are advantages to family companies going digital, the analysis stated that there are also significant issues. According to the barrier index, the biggest issues facing family businesses were talent and financial constraints. Higher obstacles slow down digital transformation and growth, as seen by their negative effects on digital adoption and entrepreneurial growth. The literature highlights that small businesses' aversion to change,

technical skill gaps, and financial limitations are the main obstacles to digital adoption (Philbin et al., 2022; Kubade, 2023). Many family businesses in Jalandhar continue to operate using old methods and are reluctant to invest in digital tools because they lack the necessary skills. This illustrates a significant digital gap, particularly in partially urban areas. Businesses may find it more difficult to fully embrace digital transformation as a result.

## VI. CONCLUSION

This study highlights the importance of digital tools in the success of small family-owned enterprises, so contributing to the growing body of research on the impact of digital transformation on family-run businesses. Family-run firms in Jalandhar have proved that the implementation of advanced technology may facilitate their expansion, even when faced with considerable challenges. By tackling the critical concerns outlined in this study, family-owned enterprises can enhance their performance in a rapidly evolving digital economy.

- Policy Implications

This study recommends managerial and regulatory improvements to promote digital adoption and entrepreneurial growth in small family-owned businesses in Jalandhar and its vicinity. To bridge the digital divide, authorities should prioritize low-interest loans for digital tools, training, and subsidies. Providing incentives for small firms to adopt CRM and e-commerce platforms may prove beneficial. Buteau et al. (2021) assert that family companies in rural and semi-urban regions require governmental assistance to adopt digital technology.

Individuals employed by or owning a family enterprise should possess proficiency in computer usage. To expand through digital instruments. Incubators and mentoring programs can assist small enterprises with digital collaboration and technology (Kubade, 2023). Family enterprises may seek collaboration with IT firms that provide cost-effective, scalable digital solutions for small businesses. When selecting digital products, post-sale support and vendor assistance should be your primary considerations.

- Limitations and Future Research

While the findings of this study offer valuable insights, some limitations must be acknowledged in future research. The data is cross-sectional, complicating causal inferences. Longitudinal study may provide more significant insights into the impact of digital transformation on the long-term growth of family businesses. Secondly, the study focused exclusively on a single district in Punjab, perhaps limiting the generalizability of the findings to other regions. Future research may expand the sample to include businesses from diverse regions of India or from outside, enabling a comparison of digital adoption trends and growth outcomes across multiple contexts.

Moreover, future research may examine the influence of family dynamics, encompassing leadership styles and succession planning, on digital adoption.

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