

## Entrepreneurial Orientation and Startup Performance: The Role of Digital Ecosystem Support

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### Abstract

Economic growth of the company gets a boost from the innovations; the most important factor that needs to be considered in innovation-based growth is disruptive innovation. Leaders of small and large firms welcome this as the lodestar. Entrepreneurs have very limited knowledge about the role of entrepreneurial orientation and digitalization strategies, where they can enhance or hinder the disruptive innovation of the company. Introduction of digital technologies like artificial intelligence, big data, cloud computing, and blockchain can help to achieve digital innovation by the companies that have high digital entrepreneurial orientation (EO), which in turn helps them to be more open-minded, innovative, risky, and digitally oriented. When a company acquires, analyses, interprets, and understands some new technical knowledge, it integrates it into its technological operations to secure a competitive technological advantage. Firms started relying on technology absorption capacity to get a competitive advantage, to source and use the knowledge for commercial ends from outside. This research is an empirical study that involves 167 entrepreneurs, who were surveyed to know the factors that determine Entrepreneurial Orientation, Startup Performance, and the Role of Digital Ecosystem Support. The study concludes by confirming a significant impact of digital ecosystem support on entrepreneurial orientation and startup performance.

**Keywords:** Entrepreneurial Orientation, Start-up, Business Performance, Digital Ecosystem, Entrepreneurial Innovation

### Introduction

The entrepreneurial environment is drastically changed by business digitalization, leaving behind the question of traditional knowledge for the way institutions create and achieve value. EO with different digital and online tools serves as an important competitive advantage for the firms. It is helpful for businesses in identifying and using new opportunities via digital methods. This makes EO one of the most crucial factors for success in the digital economy (Bouncken & Kraus, 2022). On the other hand, traditional models of EO do not help in understanding the results of digital performance. These are the unique features of digital technologies, and the businesses nowadays depend on models that are based on platforms where their value is created through the ecosystem by which they are connected (Schiavi & Behr, 2018). It is widely accepted that there is a great contribution of innovation and entrepreneurship in increasing economic growth. The innovation is generally considered the driver of such growth, having the potential to change the market in a complete sense. It is found that the only source of disruptive innovation is not the technology. Initially, such innovations are described as disruptive technology. But now disruptive innovation is widely used to admit different important roles of “innovation in business models, processes, and services. Disruptive innovation is “an innovation that changes the performance metrics, or consumer expectations, of a market by providing radically new functionality, discontinuous technical standards, or new forms of ownership”. In the last few years, the academic literature and management thinking have been strongly and increasingly affected by the concept (Si and Chen, 2020). The entrepreneurial action is increasingly influenced by the factor of digitalization. The strategies related to digitalization have now become a key factor that helps the company to be successful. In the digital world of the financial industry, high performance can be achieved by combining the strategies with EO. The digital innovation and technology absorptive capacity is positively influenced by digital EO. It is also found that the financial and technological performance of the

technological business is positively affected by digital innovation. It is important for the firms pursuing digital transformation to have a deep understanding of the strategic implications for digital innovation and business performance. This makes the managers of the firm give priority to EO and technological absorptive capacity to improve the performance of the business (Jang & Lee, 2025). In recent years, exponential expansion has been witnessed in digital transformation. This has promoted the digitization of conventional industries where digital technologies (artificial intelligence, big data analytics, cloud computing, and the Internet of Things) have been applied. In the world of digital transformation, it is necessary for the organization to make good use of digital technology and digital strategies, which in turn will help them to maintain and grow their current business models. New and digital entrepreneurship will be required to use these technologies. Innovative thinking and actions will also be required to find and seize new chances of creating value from digital technology. Discovery and realisation of new business opportunities is the key aim of such technology, which is possible through innovations based on sympathetic and application competencies of digital technology (Sitaridis & Kitsios (2024); Kim & Kim (2025)). An important role has been played by digital transformation in “innovation, economic growth, and job creation,” where entrepreneurial orientation is emerging as a strategic mindset that has been accepted all over to foster the innovation and performance of the organization. It is recognised as “the immediate display of innovativeness, proactiveness, and risk-taking” which shows the organization’s priority to identify and exploit the opportunities of a novel market. Entrepreneurial orientation is known as the mixture of “risk-taking, innovativeness, and proactiveness”. This quality works for a longer period of time in an organization. By the firm’s performance, one can measure how the firm is able to meet its goals and objectives as compared to its primary competitors. The social growth and profitability are both indicated comprehensively by the firm’s performance. The balance of results that are normally associated with business processes and the goals that are defined at initial stages are all included in business performance (Sanchez-Famoso et al., 2014). Financial and technological performance that incorporates in business performances and EO is important for the companies to understand. Alshahrani and Salam (2024) found in their study that the financial performance of the company can be improved by harnessing EO and absorptive capacity. The creation and adoption of new ideas and behaviour by an organization is referred to as organizational innovation. A business or a company that makes all the effort to manage to fight the changes is in a better position to promote the creation and implementation of innovative ideas and is able to interact with the environment actively (Prasad and Junni, 2016). One of the most important ways to secure a competitive advantage is innovation. The firm that looks for innovation works well by forecasting the market demand with the use of digital technology and digital methods. In this respect, the competitive advantage of the company can be improved by organizational innovation, which in turn will also increase the performance and quickly grab the new business opportunities. The financial performance of the company is enhanced by focusing on both EO and absorptive capacity. The creation of new processes and products is effectively led by absorptive capacity, which in turn increases the possibility of innovation to mitigate and manage the uncertainties and risks related to entrepreneurial behaviour in an effective manner. This in turn, will improve the firm’s performance.

### **Literature Review**

It is suggested by Jiang et al. (2025) that companies with high digital maturity across the region are always inclined to get connected with EO with more effective capability-based competitiveness. These market alterations range from language through cultural and infrastructural alterations, which in turn provide boundary situations that reinforce and do not weaken this critical and important relation. The people involved in social exchange have their partialities in the way they take part in the exchanges, which are usually based on their identity orientations, or social identity. In turn, these preferences show an impact on exchange dynamics and also changes in the outcomes of exchange. Different levels of interaction among the members of the organization give rise to differences in the quality of the relationship (out-group and in-group), with different observations for organizational results. Key performance aspects like profitability, growth, and innovation are all affected by the age of the organization, which also influences the planned decisions for companies. The global operations are deeply reshaped by the rise in deglobalisation and increased digital transformation in management processes and business as well.

Quayson et al. (2023) found that experiential learning mechanisms are responsible for shaping EO and capability, where differentiation of platform dynamics is facilitated by digital innovativeness and coordination of ecosystems contributes to digital proactiveness. The development of transformation capabilities is facilitated by digital risk-taking in the undefined technological environment. There is a rise in the use of blockchain in ESG reporting, where it creates transparency around “corporate social responsibility commitments and digital product passports,” providing provable information about the origin, materials, and sustainability of the product. Main characteristics of blockchain technology include the use of cryptography on the basis of distributed records, which facilitates the storage and distribution of unchangeable data depending on the agreement reached by different networks.

Ha & Chuah (2023) found that there are three main dimensions responsible for the success of the organization: digital innovativeness, digital proactiveness, and digital risk taking. Organizational tendency to experiment with digital technology is reflected by digital innovativeness. The capacity to predict and respond to digital market trends is an organization’s digital proactiveness, and the company’s willingness to invest in risky digital ventures is digital risk-taking. Along with these, there are some challenges and opportunities faced by the organizations while following these dimensions. In order to deal with these, the organizations need to have a common policy for the data and payment platform. The workforce should be equipped with digital skills that require a good training and development policy. They must be trained to have a digital mindset, which will build cybersecurity capability and capacity among them at the regional level.

Palacios-Fenech & Vrain (2024) found that the organizational performance advantages are extended by the potential for digital innovation. This is possible by the exploitation of the mechanism of value creation that is different in the form of their features, not from having the capabilities of conventional innovation. The origin of this theoretical difference is the reproductive qualities of digital technologies supporting combinative innovation. Therefore, the organization that can identify, capture, transform, and scale the digital opportunities can produce flowing effects of value. There is no place for isolated effects of value for such an organization. The consumer’s landscape is completely transformed due to the availability of new digital products and services for almost all areas of daily life. In “movement, food provision, domestic living, and energy supply”, the digitally powered innovations can reduce carbon emissions in many different ways.

Zaman et al. (2025) revealed that digitalization performance is not directly influenced by digital technologies. This relation is significantly mediated by digitalization management, which highlights the key role of managerial practices that help to maximise the advantages of digital technologies. The development of digital technologies and combinative features creates value with the help of the development processes of capability. This cannot be avoided alone with planned intent. Planned direction is offered for opportunity identification by digital EO. But technical execution capabilities are required to convert identified opportunities into performance results. This is qualitatively different from conventional operational capabilities because of the generative properties of technology and network effects.

Purnawan et al. (2025) demonstrated through their study that organizational performance is directly and indirectly influenced by digital EO in a significant manner. This is possible with the help of digital innovation capability that works as a partial mediator. The role of a critical moderator is played by digital technology preparedness, which significantly amplifies the relation between EO and innovation competence at a high level of preparedness. The strong predictive value of the model is presented by the fact that a large part of the digital innovation competence and a moderate part of organizational performance is explained by the model.

Touijer et al. (2026) found in their investigation that the role of a key accelerator for successful digital transformation is played by EO in SMEs, which in turn helps the business in active adoption and integration of new digital technologies. However, this highlights that when the organization works with entrepreneurial orientation, it shows great agility and innovation. At the same time, its success in digital transformation depends on “organizational readiness, resource availability, and external market dynamics”. It is also found that limited capabilities force SMEs to struggle with climbing digital initiatives. This struggle can be dealt with by making a balance between EO and planned foresight.

Rompho (2018) and Ghobakhloo et al. (2022) found in their study that the total knowledge and the capabilities that an organisation requires to survive in the ecosystem of digital business will include the ability of the management team to develop digitalization strategies. This will also include the capability of the organization to make plans to handle risks and threats in the projects related to digital transformation. In recent times, the performance of a startup is considered one of the most widely practical dependent constructs in the “management, entrepreneurship, and innovation field”. The performance of the startup is usually evaluated by its “rise in its sales, market penetration, and financial achievement”. There are several ideas and perspectives that can be used to measure the performance of a new venture, but it is not easy to do this in a consistent manner. When it comes to startups and their superficial capability of focusing on network learning, the relation amid start-up ecosystem and technological factors is useful for the startup performance. The shape of a clear view of the capabilities of network learning is hindered by the measures of startup performance.

Vrontis et al. (2022) revealed that the financial and technological performance of the startup is improved by digital innovation. The company shows good financial and technological performance after gaining digital innovation. This makes it important for the companies to make efforts and increase their digital EO and technology absorptive capacity. In order to increase performance, it is important for the SMEs to transform their EO into the technological absorptive capacity of the organization. The result of this study makes it important for the SME managers to nurture and promote the key factors of EO into a value element of the firm and secure the organization’s technology absorptive capacity. It is important for the entrepreneurial companies to strike a balance among their “capabilities of innovative, risk-taking, and proactive capabilities”. If the firms have an absorptive capacity to recognise the importance of external knowledge, it will definitely increase their performance. Along with this, it is also important for them to incorporate this approach into their process. The startup performance will also improve if the company applies this to the products and the services they offer.

Nasiri et al. (2020) found that it is important for entrepreneurs to focus more on improving their financial performance when it comes to SMEs in the manufacturing sector. This is possible with digitally related management resources, which in turn increases technological development. Strong commitment to business and management results in better digital innovations. As compared to these, there is a small role of strategy in digital innovation. When it comes to digital transformation, the role of the IT department and the services they offer are not very relevant. In the manufacturing sector, it is important to integrate digital technology with a structured digitalization plan, which in turn is helpful in supporting the goals of the organization. It is necessary for the decision makers to know the way the digital tools improve the digitalization performance. This will help them to develop a detailed plan that has the ability to incorporate these technologies into the current processes. Clear guidelines should be there for these plans for all the phases of implementation, key steps, and stages. The plan must also have a good and expected impact on different aspects of the company.

### **Objective**

1. To explore the factors that determine Entrepreneurial Orientation, Startup Performance and Role of Digital Ecosystem Support.
2. To know the impact of digital ecosystem support on entrepreneurial orientation and startup performance.

### **Methodology**

167 entrepreneurs were surveyed to know the factors that determine Entrepreneurial Orientation, Startup Performance, and the Role of Digital Ecosystem Support. The study also explored the impact of digital ecosystem support on entrepreneurial orientation and startup performance. Data collection and analysis are done through “Random sampling method” and “Exploratory Factor Analysis”, followed by “Multiple Regression Analysis”.

**Findings**

In the study survey male are 54.5 and the rest 45.5% are females. Respondents below 35 years of age are 61.7%, and rest 38.3% are above 35 years of age. 20.9% respondents are from tech startups, 24.6% from education startups, 16.2% from biotech startups, 31.7% from e-commerce startups, and rest 6.6% respondents are from other startups.

**“Table 1 General Details of Respondents”**

<b>“Variables”</b>	<b>“Respondents”</b>	<b>“Percentage”</b>
<b>Gender</b>		
Male	91	54.5
Female	76	45.5
<b>Total</b>	<b>167</b>	<b>100</b>
<b>Age</b>		
Below 35 years	103	61.7
Above 35 years	64	38.3
<b>Total</b>	<b>167</b>	<b>100</b>
<b>Kind of startups</b>		
Tech startup	35	20.9
Education startup	41	24.6
Biotech startup	27	16.2
e-Commerce startup	53	31.7
Others	11	6.6
<b>Total</b>	<b>167</b>	<b>100</b>

**“Exploratory Factor Analysis”**

**“Table 2 KMO and Bartlett's Test”**

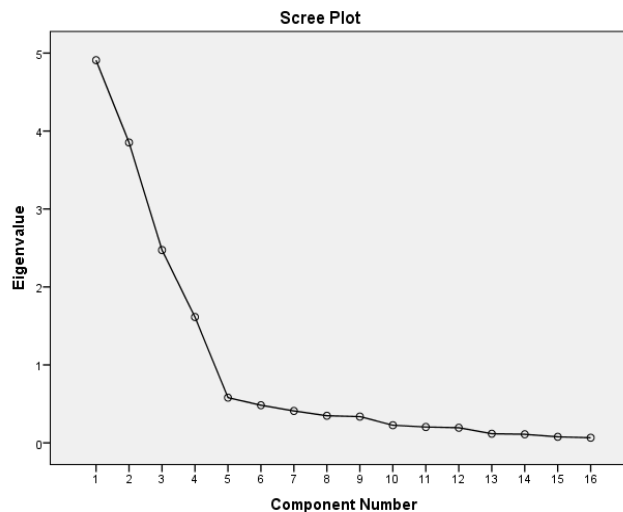
“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.795
“Bartlett's Test of Sphericity”	“Approx. Chi-Square”	2291.000
	“df”	120
	“Sig.”	.000

KMO value is 0.795, and the “Barlett’s Test of Sphericity” is significant.

“Table 3 Total Variance Explained”

“Component”	“Initial Eigen values”			“Rotation Sums of Squared Loadings”		
	“Total”	“% of Variance”	“Cumulative %”	“Total”	“% of Variance”	“Cumulative %”
1	4.909	30.683	30.683	3.611	22.569	22.569
2	3.853	24.081	54.764	3.151	19.694	42.262
3	2.473	15.456	70.220	3.106	19.411	61.673
4	1.614	10.086	80.306	2.981	18.633	80.306
5	.580	3.627	83.933			
6	.483	3.017	86.951			
7	.410	2.561	89.511			
8	.347	2.171	91.682			
9	.337	2.105	93.788			
10	.226	1.412	95.200			
11	.204	1.272	96.472			
12	.194	1.211	97.684			
13	.117	.733	98.416			
14	.110	.687	99.103			
15	.078	.485	99.588			
16	.066	.412	100.000			

In a “principal component analysis”, 16 variables were grouped into 4 factors with 22.569%, 19.694%, 19.411%, and 18.633% variance, respectively, and the total variance is 80.306%.



The graph above shows the Eigenvalues derived from the "Total Variance Explained" table, indicating an elbow point at 4 components.

**“Table 4 Rotated Component Matrix”**

“S. No.”	“Statements”	“Factor Loading”	“Factor Reliability”
	<b>Innovativeness</b>		.964
1	Product innovation by developing new and improved products	.941	
2	Process innovation by use of technology and automation	.938	
3	Deal with business challenges and market changes with unique solutions	.936	
4	Stay competitive with an upgraded business model	.926	
	<b>Proactiveness</b>		.902
5	Identifying new trends through market analytics	.939	
6	Fast market response by automation and cloud tools	.900	
7	Predict customer needs by data analytics	.797	
8	Take advantage of the first move by digital marketing and online business platforms	.789	
	<b>Technology absorptive capacity</b>		.899
9	Fast technology adoption through digital ecosystem support	.909	
10	Extract knowledge from online sources and the network of experts	.882	
11	Integrate new technologies with current processes	.859	
12	Regular upgradation of systems with real-time updates	.816	
	<b>Risk-taking ability</b>		.885
13	Make informed decisions using market research tools	.865	
14	Take growth-related risks using online funding opportunities	.838	
15	Use online tools to test new ideas with low monetary risks	.826	
16	Real-time monitoring for fast adaptation and recovery	.804	

Factor “Innovativeness” includes the variables like Product innovation by developing new and improved products, Process innovation by use of technology and automation, Deal with business challenges and market changes by unique solutions, and stay competitive by upgrading business models. Factor “Proactiveness” consists of the variables like Identifying new trends through market analytics, Fast market response by automation and cloud tools, predicting customer needs by data analytics, and taking the advantage of the first move by digital marketing and online business platforms. Factor “Technology absorptive capacity” includes the variables like Fast technology adoption through digital ecosystem support, extracting knowledge from online sources and a network of experts, integrating new technologies with current processes, and Regular upgradation of systems by real-time updates. Factor “Risk-taking ability” includes the variables like making informed decisions using market research

tools, taking growth-related risks using online funding opportunities, using online tools to test new ideas with low monetary risks, and real-time monitoring for fast adaptation and recovery.

“Table 5 Reliability Statistics”

“Cronbach's Alpha”	“N of Items”
.844	16

The overall reliability is 0.844 for the 4 constructs comprising sixteen items.

“Table 6 Model Summary”

“Model”	“R”	“R Square”	“Adjusted R Square”	“Std. Error of the Estimate”
1	.861 <sup>a</sup>	.742	.735	.33077
Predictors: (Constant), Innovativeness, Proactiveness, Technology absorptive capacity, and Risk-taking ability				

The adjusted R-squared value is 0.735 with approximately 74% of the variation.

“Table 7 ANOVA”

“Model”	“Sum of Squares”	“df”	“Mean Square”	“F”	“Sig.”	
1	“Regression”	50.898	4	12.725	116.300	.000 <sup>b</sup>
	Residual	17.725	162	.109		
	Total	68.623	166			
a. Dependent Variable: Overall impact of digital ecosystem support on entrepreneurial orientation and startup performance						
b. Predictors: (Constant), Innovativeness, Proactiveness, Technology absorptive capacity, and Risk-taking ability						

Value under the significant column indicates a significant relationship between the factors, namely “Innovativeness, Proactiveness, Technology absorptive capacity, Risk-taking ability,” and digital ecosystem support.

“Table 8 Coefficients”

“Model”	“Unstandardized Coefficients”		“Standardized Coefficients”	“t”	“Sig.”
	“B”	“Std. Error”	“Beta”		
(Constant)	4.293	.026		167.737	.000
Innovativeness	.072	.026	.112	2.814	.005
Proactiveness	.139	.026	.216	5.413	.000

Technology absorptive capacity	.052	.026	.081	2.039	.043
Risk taking ability	.529	.026	.822	20.587	.000
DV: Overall impact of digital ecosystem support on entrepreneurial orientation and startup performance					

All the factors, Innovativeness, Proactiveness, Technology absorptive capacity, and Risk-taking ability, are showing a significant impact of digital ecosystem support on entrepreneurial orientation and startup performance. Highest impact is shown by Risk-taking ability with a beta value .822 followed by Proactiveness (.216), Innovativeness (.112), and Technology absorptive capacity (.081).

**Conclusion**

Entrepreneurial orientation plays a vital role in determining the success and growth of startups, especially in today’s fast-changing business environment. Traits such as innovativeness, proactiveness, risk-taking ability, competitive aggressiveness, and autonomy help startups identify market opportunities, respond quickly to customer needs, and create sustainable competitive advantages. However, entrepreneurial orientation alone may not always guarantee strong startup performance. The presence of a supportive digital ecosystem significantly strengthens the relationship between entrepreneurial orientation and business success. Digital ecosystem support, including access to digital platforms, online marketplaces, cloud technologies, digital payment systems, social media networks, mentoring platforms, and innovation hubs, provides startups with the resources needed to scale efficiently. It reduces barriers related to finance, market reach, communication, and operational efficiency. Startups that effectively combine entrepreneurial orientation with digital ecosystem support are better positioned to improve productivity, customer engagement, innovation outcomes, and financial performance. The empirical findings suggest that policymakers, incubators, investors, and technology providers should focus on creating stronger digital support systems for emerging businesses. At the same time, startup founders should continuously develop entrepreneurial capabilities and embrace digital transformation strategies. Overall, the study highlights that startup success is not driven by entrepreneurial mindset alone, but by the synergy between entrepreneurial orientation and a well-developed digital ecosystem that enables growth, resilience, and long-term sustainability.

The study aims to know the factors that determine the Entrepreneurial Orientation, startup performance, and the role and the impact of digital ecosystem support on entrepreneurial orientation and startup performance. It is found that Innovativeness, Proactiveness, Technology absorptive capacity, and Risk-taking ability are the factors that determine Entrepreneurial Orientation, Startup Performance, and the Role of Digital Ecosystem Support. The study concludes that there is a significant impact of digital ecosystem support on entrepreneurial orientation and startup performance.

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