

EXAMINING THE MODERATING EFFECT OF GOVERNMENT SUPPORT ON ENTREPRENEURIAL ORIENTATION AND SMES' PERFORMANCE POST COVID-19 PANDEMIC IN SUKKUR

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Abstract

The current study examined how government support policies (GSPs) moderated the correlation among entrepreneurial orientation (EO) and the output of small and medium-sized enterprises (SMEs) post COVID-19 pandemic in Sukkur region. Quantitative research of 200 SME owners /managers was conducted by following a structured questionnaire and systematic sampling design. Descriptive statistics concluded the respondent demographics, and multiple regression analysis examined the hypotheses at a 5% significance level. The output explores that four EO dimensions – innovativeness, risk-taking, aggressiveness and autonomy. Each of them had significant positive impacts on SME performance (all $p < .001$), whereas pro-activeness had no significant effect ($\beta = 0.021$, $p = .139$). Government support policy also had a strong and positive impact on performance ($\beta = 0.340$, $p < .001$) and significantly intensified (moderated) the EO– SMEs performance link for all dimensions except pro-activeness. Findings of the study offers that fostering an entrepreneur's mindset especially innovativeness, risk-taking, aggressiveness, and autonomy is critical for Small Medium Enterprises success during crises, and that personalized government interventions can increase these effects.

Keywords: Entrepreneurial Orientation; Government Support; SME Performance; COVID-19 Pandemic; Sukkur Region.

Introduction

Small and medium-sized enterprises (SMEs) are very important to economic development. In the Pakistan, SMEs comprises virtually the whole of business population (99.7%) and provide about 60% of private-sector employment. Internationally, SMEs are credited with driving innovations, job creations, and competitiveness (Arshad et al., 2020; Manzoor et al., 2021). However, SMEs

mostly lack resources and face intensive competition, making them vulnerable during the pandemic crisis. The COVID-19 pandemic forced unprecedented challenges i.e lockdowns, demand shocks, supply chain disruptions, insisting many SMEs to adapt as soon as. During lockdown, few firms shifted to online sales, implemented a teleworking system, or sought emergency financial aid (Thekkootte, 2023), Such types of adaptations underline the need for entrepreneurial agilization and supportive policies during such incidents.

Worldwide, Governments responded with various support measures to support SMEs weather the pandemic. In Pakistan, authorities implemented loans, grants, and tax relief schemes aimed at keeping businesses solvent and preserving employment. Such types of interventions seek to alleviate the SMEs' financial and operational constraints, empowering them to continuously innovate and compete despite the crisis (Sultan, Mohamed, & Hussain, 2023). Entrepreneurial Orientation (EO) – a firm's strategic posture reflecting innovativeness, pro-activeness, risk-taking, autonomy, and aggressiveness has been connected to growth and higher performance in turbulent environments. However, the extent to which government support reinforces or transforms the EO performance relationship is not fully understood. Resource Advantage theory suggests that external resources (like policy support) can amplify an organization's capabilities and advantages (Shu, De Clercq, Zhou, & Liu, 2019).

The study examined these issues in the context of Sukkur, Pakistan. It asks, How do EO dimensions influence SMEs' performance post-COVID-19, and does government support moderate these impacts? The prime objective is “to ascertain how Entrepreneurial Orientation significantly impacts SMEs' performance and if government support policy adds to the effect of EO on SMEs' performance after the COVID-19 pandemic in Sukkur Region. To address this, the five dimensions of EO (innovativeness, risk-taking, pro-activeness, competitive-aggressiveness, and autonomy) are evaluated for their influence on SMEs' performance, and the moderating role of governmental support is evaluated. Present research fills a gap by focusing on the relationship among the EO and policy in a crisis situation, by offering understandings for entrepreneurs and policymakers.

Literature Review

Entrepreneurial Orientations (EO) is concerned with a firm's strategic orientation, which refers to the entrepreneurs' behaviors and decision-making processes. EO as “processes, practices, and decision-making activities that lead to new entry,” characterized by one or more of these dimensions: pro-activeness, innovativeness, aggressiveness, risk-taking, and autonomy (Solikahan & Mohammad, 2019). In SMEs, Entrepreneurial Orientations are generally seen as an antecedent to growth and competitive advantage (Rocha, Ed-Dafali, & Sharma, 2025) For example, innovativeness (first-mover initiatives and creative problem-solving) signals a readiness to develop new products or processes (Linton, 2019). Pro-activeness involves identifying the problem and acting on future market needs with foresight and initiative (Onyango, Ngugi, & Nyang'au, 2025). Risk-taking shows committing significant resources to opportunities along with uncertain outcomes, showing a boldness in new ventures (Guo & Jiang, 2020). Competitive aggressiveness is a firm's seriousness in outperforming rivals and challenging market conditions (Giachetti, 2016). Autonomy refers to the independent action taken by individuals or teams in pursuing ideas and making decisions (Boud, 2012).

- **Innovativeness:** an individual has intentions to support new ideas, novelty, and experimentation. Innovativeness shows first-mover advantages, as innovative SMEs create new value propositions and unique products. Research shows that innovativeness is connected to higher revenue and market

growth and improves the quality of performance by differentiating firms against their competitors (SCAGLIONE, 2018).

- **Pro-activeness:** An Entrepreneur's ability to recognize the future demand and actively seize opportunities. Pro-active SME launches new products/services ahead of competitors and prepares for future trends. Pro-activeness is theorized to generate early-move benefits and resilience by enabling firms to work before crises completely unfold (Lumpkin & Dess, 1996).
- **Risk-taking:** A tendency to get involved in bold initiatives and invest a huge number of resources in uncertain projects. Risk-taking means accepting potential losses in pursuit of a high rate of return (Muhammad, 2021). Firms that are high risk-taking may enter into new markets or adopt new technologies rapidly, expecting payoffs in growth and performance (Fan et al., 2021)
- **Competitive Aggressiveness:** The strength of a firm that encounters its competitors and the industry's norms. Aggressive behavior might include lowering prices or increasing marketing efforts to capture market share (Kurt & Hulland, 2013). This dimension reflects a combative stance to outperform rivals, which can drive efficiency and market penetration when managed well.
- **Autonomy:** The degree of independence granted to individuals or units to develop ideas and implement projects. Autonomous action allows employees or owners to pursue entrepreneurial initiatives without excessive bureaucracy. Greater autonomy often leads to faster decision-making and higher employee commitment, which can improve firm agility and performance (Khodor, Aránega, & Ramadani, 2024).

EO and SME Performance.

Ambad & Ali (2024) reported that innovativeness and risk-taking contribute significantly to growth and profitability. Similarly, high autonomy and aggressiveness have been linked to stronger sales growth and market expansion (Fatima, Bilal, Imran, & Sarwar, 2024). The multidimensional nature of EO means each dimension can affect performance differently. For instance, while innovativeness and risk-taking often have immediate impact, proactiveness may yield benefits over a longer horizon. Overall, EO equips SMEs to sense and exploit opportunities, which is critical during disruptive periods such as the COVID-19 pandemic.

Government Support for SMEs.

After COVID-19, governments worldwide introduced support programs for SMEs, ranging from financial aid (grants, loans, tax relief) to advisory services (training, market research assistance). In Pakistan, key measures included low-interest lending schemes and regulatory adjustments by the State Bank of Pakistan to increase lending capacity to SMEs (Ashraf, 2025). These policies aimed to reduce pandemic-induced financial distress and uncertainty, helping SMEs to survive lockdowns and maintain operations. Generally, government support policies (GSPs) can be categorized as *direct support* (e.g., emergency loans, wage subsidies) and *indirect support* (e.g., regulatory relief, tax breaks). Both types have been documented to improve SME performance. Nakku et al. (2020) pointed out that GSPs help SMEs overcome financial and non-financial constraints, and evidence shows that such policies can boost performance directly and by enhancing firms' entrepreneurial capabilities.

Government Support as Moderator. Resource Based & Resource Advantage Theories suggested that external resources (like government programs) can augment internal firm capabilities. In this context, government support can serve as an *environmental enabler* that amplifies the effects of EO on performance. Empirical reviews indicate that both direct and indirect support policies can have *moderating* (interaction) effects. They may magnify the impact of entrepreneurial activities on performance outcomes. Adhikari et al. (2024) found that policy interventions help firms leverage

their entrepreneurial orientation more effectively. In other words, an SME that is innovative and risk-taking may achieve even greater performance if it also receives timely government assistance.

Methodology

This research adopted a positivist paradigm and a deductive quantitative approach. A survey design was used to collect primary data from SMEs in the Sukkur region. The population comprised of registered and unregistered SMEs in the region. Systematic sampling was used to select 200 firms, and questionnaires were distributed among the owners or managers. A total of 197 responses were received (98.5% response rate), which were complete and used for analysis.

The questionnaire comprised structured, closed-ended items on a 5-point Likert scale. Measures for the five EO dimensions and SME performance were adopted from established scales (e.g., Lumpkin & Dess, 1996; Zhou, 2017). Government support was measured via items on perceived financial and nonfinancial aid received. Cronbach's alpha coefficients were calculated to confirm reliability (all constructs exceeded acceptable thresholds).

Data were analyzed by using SPSS software. Descriptive statistics (frequencies, percentages) summarized respondent demographics and firm characteristics (Table 1). Inferential analysis involved multiple linear regression to test hypotheses. The regression model included each EO dimension and government support as predictors of SME performance, as well as interaction terms (EO dimension \times GSP) to test moderation. Specifically, the model was:

SME Performance = $\beta_0 + \beta_1$ Innovativeness + β_2 Risk-taking + β_3 Proactiveness + β_4 Autonomy + β_5 Aggressiveness.

Statistical significance was evaluated at the 5% level ($p < .05$). Ethical considerations included voluntary participation, anonymity of respondents, and confidentiality of data.

Results

Demographic	Frequency	Percentage
Gender	Male	58.4%
Age	18-29	42.1%
Education	High School and Above	55.8%
Marital Status	Married	78.2%
Business Type	Wholesale and Retail Trade	34.0%
Business Size	Small (1-9 employees)	65.5%
Business Age	1-5 years	24.9%
Business Location	Urban	58.4%
Business Ownership	Sole Proprietorship	43.7%
Business Structure	Partnership	34.0%
Business Capital	Self-funded	65.5%
Business Revenue	Less than \$10,000	24.9%
Business Profit	Low	58.4%
Business Growth	Stagnant	42.1%
Business Challenges	Lack of Capital	55.8%
Business Opportunities	Government Support	34.0%
Business Future	Optimistic	65.5%
Business Satisfaction	Dissatisfied	24.9%
Business Loyalty	High	58.4%
Business Reputation	Good	42.1%
Business Network	Strong	55.8%
Business Innovation	High	34.0%
Business Risk-taking	Low	65.5%
Business Proactiveness	Low	24.9%
Business Autonomy	Low	58.4%
Business Aggressiveness	Low	42.1%

Demographics. Table 1 summarizes the sample characteristics. Of the 197 respondents, the majority of firms (50.3%) employed 11–20 people, and most were partnerships (43.7%) or sole proprietorships (34.0%). Owners were generally young. 42.1% were aged 18–29 and 24.9% aged 30–39. 55.8% held a university degree or higher. On average, the firms had been in business for over 20 years (58.4% had operated 21+ years). The main sectors represented were wholesale/retail

(55.8%), Hotel and Restaurant (25.4%), and education (14.7%). These data indicated a diverse SME sample in terms of age, size, and industry.

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ndent Variable : SMEs Performance

lctors : (Constant), Government support, Entrepreneurial Risk Taking, Entrepreneurial veness, Entrepreneurial innovativeness, Entrepreneurial Autonomy, Entrepreneurial siveness

Regression Model Fit. The multiple regression generated a very high R-value (0.982) and $R^2 = 0.964$. This implies that 96.4% of the variance in SME performance was explained by the EO dimensions and government support variables (the remaining 3.6% is attributable to unmodeled factors). The overall model was highly significant ($F(6,190) = 973.27, p < .001$), indicating a strong fit. Thus, collectively, EO and GSP significantly relate to SME performance during the pandemic.

Independent Variables	Standardized Coefficients	Standardized Coefficients
	t for	
Entrepreneurial innovativeness		
Entrepreneurial Risk Taking		
Entrepreneurial Proactiveness		
Entrepreneurial Aggressiveness		
Entrepreneurial Autonomy		
Government support		

Dependent Variable : SMEs Performance

Effects of EO Dimensions. Table 2 presents the regression coefficients. Entrepreneurial innovativeness had a positive and significant effect on performance ($\beta = 0.321, t = 16.15, p < .001$). Similarly, risk-taking was a significant positive predictor ($\beta = 0.122, t = 7.453, p < .001$). Competitive aggressiveness also showed a strong positive impact ($\beta = .338, t = 18.29, p < .001$). Autonomy was positively related as well ($\beta = .071, t = 4.808, p < .001$). In contrast, proactiveness did not significantly affect performance ($\beta = 0.021, t = 1.486, p = .139$). These results indicate that SMEs exhibiting greater innovation, willingness to take risks, aggressiveness, and autonomy tended to have better business performance during COVID-19.

Government Support Effects. Importantly, the government supported such a policy that had a significant positive impact on SME performance ($\beta = .340, t = 18.381, p < .001$). This suggested that SMEs that perceive or receive more government support performed substantially better. Moreover, government support amplified the positive effects of each EO dimension on performance (moderation) except for proactiveness. In other words, when government support was strong, the benefits of aggressiveness, risk-taking, innovativeness, and autonomy on output were even greater.

Discussion

This study confirms that a strong entrepreneurial orientation drives SME success during crises. Each of the four significant EO dimensions contributed to higher performance, consistent with prior research. Innovativeness generated unique value propositions that helped firms attract customers despite lockdowns. The observed innovativeness–performance link aligns with findings that innovation fosters growth (Gomes, Seman, Berndt, & Bogoni, 2022). Risk-taking likewise proved valuable, and managers who took calculated risks (e.g. investing in new delivery methods or government-backed projects) saw returns. This echo showing bold entrepreneurship boosts performance (Bonareri Bosire, 2024). Competitive aggressiveness here, a proactive effort to outperform rivals had the largest standardized effect ($\beta = .338$). This suggests that SMEs that actively competed (lowering prices, expanding service offerings, etc.) fared better. Autonomy’s positive effect implies that firms giving employees decision-making freedom could respond faster to change, enhancing resilience (Boohene et al., 2012).

Interestingly, proactiveness did not significantly predict performance in this sample. It may be that during an unprecedented crisis, simply forecasting future demand had limited payoffs, whereas reactive innovation and decisive actions mattered more. Lumpkin & Dess (2001) noted that proactiveness may only translate to growth in stable or expanding environments, which COVID-19 disrupted. Thus, the lack of proactiveness effect may reflect the unique context of the pandemic, where survival often depended on immediate adaptability rather than long-term planning (Linden, 2021).

Crucially, government support magnified the positive EO–performance link. SMEs that were entrepreneurial gained more when aided by policy measures. This finding supports theoretical arguments (e.g. Resource-Advantage theory) that external resources enhance firm capabilities. Adhikari et al. (2024) found that direct and indirect support policies can *increase* EO’s impact on performance. In practical terms, government loans, grants, and advisory programs provided SMEs with additional capital and guidance, enabling entrepreneurial owners to exploit opportunities more effectively. For example, an innovator SME with access to a COVID relief loan could rapidly develop a new product line, leveraging the support. The significance of the support policy ($\beta = .340$) underscores its role as a facilitator. However, government support did not significantly change the effect of proactiveness, indicating that policy levers may not equally enhance every entrepreneurial trait.

Conclusion

In summary, this research found that all the parameters of entrepreneurial orientation (aggressiveness, innovativeness, risk-taking, and autonomy) positively influenced SME performance during the COVID-19 pandemic, whereas Proactiveness had no significant direct effect. Importantly, government support policies significantly strengthened the impacts of these EO dimensions on performance except for pro-activeness. This indicated that SMEs with high EO achieved greater resilience and success when backed by financial and non-financial support. The findings are consistent with resource-based perspectives, suggesting that external assistance can augment entrepreneurial capabilities.

The study contributes to understanding how SMEs can navigate crises; it emphasizes the value of innovation, risk-taking, aggressiveness, and autonomy in turbulent times. It also demonstrates that government interventions play a key moderating role. Theoretical implications include validation of the Resource-Advantage framework in this context, showing that combining internal EO with external resources produces superior outcomes.

Recommendations

- SMEs should actively invest in *innovativeness* to improve adaptability because entrepreneurs should “innovate to exploit changes as opportunities”.
- Encouraging a culture of experimentation can lead to novel products or services that sustain performance during disruptions.
- Owners should be engaged in calculating *risk-taking*. While boldness is beneficial, excessive uncontrolled risk can be harmful. Consistent with the thesis advice, SMEs should “avoid the use of excessive and uncalculated risk” and instead make informed decisions to pursue promising opportunities. Taking moderate risks (e.g. investing in pandemic-adaptive business models) can pay off, but it is important to weigh potential downsides.
- SMEs should strive to anticipate future needs. In practice, this means investing in market research and R&D even during a crisis, so the firm can remain ahead of changes.

- proactiveness may require resources like R&D to be effective: “SMEs must participate invest more in R&D to offset environmental turbulence”. Proactive R&D can position SMEs to seize post-crisis opportunities (e.g. developing health-conscious products).
- Firms should continue to pursue aggressive competitive strategies, as this trait “has a tremendous impact on business performance”. This could involve benchmarking competitors, innovating pricing, or expanding marketing, even under constraints. A high level of competitively aggressive behavior can help SMEs win market share and prevent erosion of their business.
- Policymakers should sustain and adapt support measures for SMEs.

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