Name of Publisher: BRIGHT EDUCATION RESEARCH SOLUTIONS

Area of Publication: Business, Management and Accounting (miscellaneous)

Let's Start!

Journal of Management & Social Science

ISSN Online: 3006-4848
ISSN Print: 3006-483X

https://rjmss.com/index.php/7/about

RECOGNIZED IN "Y" CATEGORY BY HEC

[The Cognitive Pathway to Green Ventures: How Government Support Influences Entrepreneurial Behavior Through Mindset, Alertness and Intention]

Arisha
University of Central Punjab, Gujranwala Campus*Corresponding author :uarisha72@gmail.com
Aamar Ilyas
Assistant Professor, University of Central Punjab, Gujranwala
Tayyaba
University of Central Punjab, Gujranwala Campus
Aiman
University of Central Punjab, Gujranwala Campus
Muskan
University of Central Punjab, Gujranwala Campus

Review Type: Double Blind Peer Review

Journal of Management & Social Science
VOL-2, ISSUE-4, 2025

ABSTRACT

This study examines the cognitive pathway through which government support influences green entrepreneurial behavior, with a focus on the mediating roles of green entrepreneurial mindset, alertness, and intention. Drawing on institutional theory and cognitive psychology, we propose an integrated model that links policy interventions with individual-level psychological drivers of sustainable venturing. Using a quantitative, cross-sectional design, data were collected from 450 business students in Gujranwala, Pakistan, through structured questionnaires featuring validated scales. Results from SPSS and Hayes' PROCESS macro analyses revealed that all 10 direct and 11 indirect hypotheses were supported. Government support exhibited both direct ($\beta = 0.32$, $p < 0.001$) and indirect effects on green entrepreneurial behavior, with the strongest mediation occurring through green entrepreneurial intention ($\beta = 0.15$). A full serial mediation pathway (government support → mindset → alertness → intention →behavior, $\beta = 0.05$) was identified, validating a cognitive-affective-behavioral sequence in green entrepreneurship. The findings highlight that policy effectiveness depends not only on resource provision but also on fostering entrepreneurs' sustainability-oriented cognition. This study contributes to the literature by (1) bridging macro-level institutional and micro-level cognitive perspectives, (2) empirically validating a novel serial mediation model, and (3) offering practical insights for policymakers to design support programs that combine financial incentives with mindset training. Limitations include the cross-sectional design and regional focus, suggesting opportunities for future longitudinal and cross-cultural research. These results advance our understanding of how to effectively promote green entrepreneurship in emerging economies

Keywords: Govt Support in Green Entrepreneurship;Green Entrepreneurship Mindset;Green Entrepreneurship Alternes; Green Entrepreneurship Intention ;Green Entrepreneurship Behaviour

Introduction

The rising environmental crisis such as the climate crisis, the loss of resources and biodiversity has enhanced calls of a sustainable economy worldwide (Schaltegger & Wagner, 2017). As such, governments around the globe are increasingly embarking on the promotion of green entrepreneurship as a strategic tool of realizing ecological sustainability as well as ensuring economic growth (Demirel et al., 2019). Green entrepreneurship can be defined as the establishment of new ventures that focus on sustainability in the environment with the help of innovation in products, services and processes (Gibbs & O Neill, 2014). Nonetheless, the shift to green entrepreneurial behavior has so far been inconsistent even with the increased interventions of the policy, implying that there exists some psychological and cognitive processes that play the significant role in the entrepreneurial decision-making (Kuckertz & Wagner, 2010).

One of the most apparent factors influencing green entrepreneurship has been government support which has been in form of financial and regulatory support and even training programs (Yi, 2020). Research shows that this support may stimulate entrepreneurial intents because it minimizes the perceived risks and raises resource availability (Stamopoulos et al., 2022). Nevertheless, what psychological mechanisms underlie the fact that government interventions result in real green entrepreneurial activity has not been adequately addressed yet. Namely, green entrepreneurial mindset (a cognitive orientation towards sustainability), green entrepreneurial alertness (the capacity to recognize sustainable business opportunities), and green entrepreneurial intention (the motivation to follow eco-friendly ventures) should be studied in more detail as mediating factors (Krueger, 2015; Sahut et al., 2021).

According to the recent literature, there is a raised debate on whether the existence of governmental aid is enough or it is more about individual-level thinking that substantiates more to green entrepreneurship (Farinelli et al., 2021). On the one hand, scholars state that the driving force of policy interventions is the primary condition (Hall et al., 2020), but other representatives add that the personal motives and mental models of entrepreneurs are equally significant (Shepherd & Patzelt, 2011). It is important to fill this gap to develop policy measures with greater effectiveness that would ensure that external assistance complements internal entrepreneurship motivators.

Problem Statement

Although green entrepreneurship is gaining focus in the academic research field, most of the studies that are being conducted have preferred to concentrate their energy on macro-level aspects of green entrepreneurship, including institutional policies, market conditions, among others, but they have denied the all-important micro-level processes of cognition through which entrepreneurial behavior is mediated (Gast et al., 2017). Although it has been extensively noted that government support facilitates green ventures (Barbieri et al., 2020), the link between government support and psychological factors such as mindset, alertness, and intention, which eventually influence the green form of entrepreneurial behavior, remains a mystery.

This difference is not desirable due to a number of reasons. To begin with, governments can end up favoring ineffective or poorly strategized initiatives without knowing how the cognitive processes convert the policy support to its implementation (Linder et al., 2020). Second, a holistic approach to entrepreneurship cannot encompass all possible external (government support) and internal (cognitive) factors because there is no integrated framework to describe them in a holistic system (Ferreira et al., 2022). Third, albeit having studied entrepreneurial intention as a behavior predictor, there have been very few studies on how the government support can shape the entrepreneurial intention by examining the mindset and alertness in the green entrepreneurship context (LiñAN and Fayolle, 2015).

It is imperative to fill these gaps with regard to both theory and practice. This research aims to offer a more coherent picture of the factors that influence green entrepreneurial behavior, by exploring the interaction between governmental support and cognitive mediators. While information on the effect of governmental support is highly demanded by policy makers, the research may also help educators and entrepreneurs achieve their goals.

Study Objective

The main research question of the study includes exploring the correlation between the government support and green behavior, along with paying attention to the mediating roles of green entrepreneurial mindset, alertness, and intention. In particular, the study tends to:

1.Answer the question directly whether governmental support has an effect on green entrepreneurship behavior.

2.Determine whether the mediating role of green entrepreneurial mindset lies in the connection between government support and green entrepreneurial behavior.

3.Advance the mediating or mediator role of green entrepreneurial alertness in the connection between governmental support and green entrepreneurial conduct.

4.Explore mediating influence of green entrepreneurship intention of the connection between government support and green entrepreneurial behavior.

Through trying to meet these goals, the paper aims at taking the steps towards more integrated model of understanding green entrepreneurship that considers the external policy factors along with the internal mental operations.

Research Questions

The research questions, therefore, to orientate the investigation process are as follows:

How much is the governmental support in green entrepreneurial behavior?
2.What is the role of government support on green entrepreneurial behavior mediated by green entrepreneurial mindset?
3.Does green entrepreneurial alertness mediate the connection between government support and the green entrepreneurial behavior?
4.What is the mediating role of green entrepreneurial intention among governmental support and green entrepreneurial behavior?
Importance of the Research
This research has a few theoretical and practical implications.

Theoretical Contributions

The study is viewed to be adding to the existing literature on green entrepreneurship because it incorporates both the intellectual theories (which concentrate on mind and alertness and intentions) and the institutional theory (which is keen on the role of government support).
It offers empirical information on mediating variables through which the government supply impacts entrepreneurial behavior resolving an important gap in the existing information.
The paper contributes to the knowledge of this comparatively unexplored body in the literature on sustainability entrepreneurship, green entrepreneurial alertness.
Practical Implications
The policymakers can utilise the findings to develop more effective support programmes not only offering the financial and regulatory support that is currently offered but also developing the mental drivers of the green entrepreneurship.
Educator and trainers of entrepreneurship can design interventions to enhance green attitude and awareness among the would-be entrepreneurs.
Entrepreneurs are able to understand the interactions between government support and cognitive factors as the drivers towards sustainable choices.
Delimitations and Scope
This paper is devoted to the research on relations between governmental support, cognitive mediators (mindset, alertness and intention), and green entrepreneurial behavior. The research is limited as follows:
Geographical Scope:The research topic will be on green entrepreneurs of the emerging economies where government support programs are being introduced more and proving to be ineffective.
2.Conceptual Boundaries: Other factors which affect green entrepreneurship (access to capital, market demand) are not considered in this analysis, rather cognitive mediators are studied.
3.Methodological Limitations: The research shall undertake a quantitative cross-sectional analysis, which is efficient though not giving a longitudinal conversationalness.
With the identification of these boundaries, the study can present a focused study and consider areas in the research even in the future.

Literature review

Seeing the rising environmental fiasco in the world, sustainable business models are becoming urgent, making green entrepreneurship the essential catalyst of the ecological and economical change (Schaltegger & Wagner, 2017). Governments all over the world are adopting policies that lead to supporting green ventures, and there is little study of the psychological process of such support and its connection to entrepreneurship behavior (Demirel et al., 2019). The paper looks into the connections among government support, green entrepreneurial mindset, alertness, intention, and behavior offering 10 direct and 11 indirect hypotheses based on the three theories: institutional theory, cognitive psychology, and the theory of planned behavior.
Green Entrepreneurial Support through Government.

A key feature of green venture creation is government support (financial support, such as grants, tax credits, and regulatory measures, such as emissions standards and training plans) (Yi, 2020). According to studies, this kind of support decreases the perceived risks and improves resource accessibility (Stamopoulos et al., 2022). Nevertheless, cognitive factors tend to mediate its direct effect on behavior (Farinelli et al., 2021). The theory of institutions (Scott, 2014) explains that entrepreneurial activity is created by the external policy institutions in how the conduct of green practices are legitimized.

Green Entrepreneurial Mindset (GEM)

GEM represents a cognitive attentiveness to sustainability and it entails incorporating the sustaining environment into company strategy (Shepherd & Patzelt, 2011). It is developed with the help of education, exposure to the concerns of sustainability, and use of benefits through policies (Krueger, 2015).

Cognitive theory (Bandura, 1986) points out the fact that in recognition of opportunities and taking the action, there is indeed the influence of the mindset.

Green Entrepreneurial Alertness (GEA)

GEA refers to the capability of recognizing and realizing sustainable business (Tang et al., 2012). It facilitates the gap between external support and action as it helps the entrepreneurs to convert policy benefits into viable investment companies (Ferreira et al., 2023).

Perspectives on Alertness theory (Kirzner, 1979) emphasize entrepreneurial alertness in opportunity discovery.

Green Entrepreneurial intention(GEI)

GEI is the antecedent motivational variables of acts of being green, which is influenced by attitude, by subjective norms, and perceived control of behavior (Ajzen, 1991). GEI is fortified with a government connection minimizing the barriers (Li n 2015, Lin n 2015).

The Technical Lens: Theory of planned behavior (TPB) (Ajzen, 1991).

Green Entrepreneurial Behavior (GEB)

Some of the practices included in GEB are the introduction of environmentally friendly products, embracing environmental clean technologies, and certification of sustainability (Gibbs & O'Neill, 2014).

Theoretical Lens: Theory of behavioral entrepreneurship (McMullen & Shepherd, 2006).

Hypotheses Development

Direct Hypotheses (H1 H10)

H1: Government support has a positive effect on GEB.

Green ventures are encouraged by policies that reduce obstacles to entry and legitimize the green ventures (Yi, 2020; Stamopoulos et al., 2022).

H 2: GEM is improved by government support.

The sustaining of sustainability-based thinking is brought about by training programs and subsidies (Krueger, 2015).

H3: GEA augments through government support.

Enforcement certainty assists businesspeople to identify opportunities (Tang et al., 2012).

H4: GEI is made stronger by government sponsorship.

Motivation is enhanced by the fact that financial incentives minimize the perceived risks (LiñAN & Fayolle, 2015).

H5: GEM has a positive effect on GEB.

The pro-environmental behavior is forecasted by sustainability-inspired thinking (Shepherd & Patzelt, 2011).

H6: GEA has a positive influence on GEB.

The running of green ventures is made possible through resource mobilization because of

alertness (Demirel et al., 2019).

H7: GEB is positively prognosticated by GEI.

The immediate antecedent of behavior is intentions (Ajzen,1991).

H 8: GEM promotes GEA.

An opportunity recognition is made more acute by a sustainability-minded state of mind (Kuckertz & Wagner, 2010).

H9: GEI is enhanced by GEA.

Identification of opportunities boosts the urge to take action (Gast et al., 2017).

H10: GEM has a positive implication to GEI.

Intent is fuelled by cognitive alignment with values relating to sustainability (Shepherd & Patzelt, 2011).

Mediated Hypotheses (Mediation Paths, H11191421)

H11: Gov-Support ->GEM GEB.

Policies influence the way of thinking, and thinking, in turn, pushes people into behavior (Krueger, 2015).

H12: Government support ==> GEB meditated by GEA.

Support intensifies the level of vigilance, which results in action (Ferreira et al., 2023).

H13: GEI mediates government support--->GEB.

Incentives enhance intention, which is transformed into behavior (Yi, 2020).

H14: There is a sequential mediation of government support GEM by GEA.

The sense of alertness that is brought about by mindset is what brings about the ease of behavior (Tang et al., 2012).

H15: Government support H21: GEM H22: GEI

Intentional thinking is followed by an action (Shepherd & Patzelt, 2011).

H16: GEB is mediated by GEI → GEA in a sequential manner.

Motivation and behavior are stimulated by opportunity recognition (Gast et al., 2017).

H17: GEM - GEA - GEI - GEB is a complete serial mediation.

Policy-to-action pathways are explained by cognitive-affective- conative chain (Ferreira et al., 2023).

H18: Mediation of GEA will be greater than that of GEM under high uncertainties.

Adaptive alertness matters most within unstable markets (Tang et al., 2012).

H19: In policy-driven economies, mediation of GEI is robust as compared to GEA.

Where the decrease in uncertainty comes through policies, the intentions take precedence (Yi, 2020).

H20: The mediation of GEM is higher than that of GEI among early stage entrepreneurs.

The novices prefer to use mindset instead of formal planning (Krueger, 2015).

H21: Serial mediation (GEM GEA GEI GEB) is better than relating individual paths.

Maximized explanatory power comes about through integrated cognitive-affective-behavioral pathways (Ferreira et al., 2023).

Theoretical Integration

This is a combination of institutional theory (government support as an external driver), cognitive theory (mindset/alertness as internal drivers), and TPB(intention-behavior connection). It responds to the request of multilevel inquiries in green entrepreneurship (Farinelli et al., 2021).

Research Methodology

Research Design and Philosophy

This study adopts a quantitative, cross-sectional research design to examine the relationships between government support, green entrepreneurial mindset, alertness, intention, and behavior. The research is grounded in a positivist philosophy, which emphasizes objective measurement and statistical analysis to test hypotheses (Creswell & Creswell, 2018). By employing a deductive approach, this study aligns with the theoretical framework (see Figure 1) to empirically validate the proposed relationships.

Unit of Analysis

This study will assume the student as a unit of analysis and those are the individual students doing business and entrepreneurship course in the universities of Gujranwala in Pakistan. The emphasis on the student population is reasonable since the students belong to a demographics group with excellent entrepreneurial advantage and exposure to sustainability learning (Liu romantic y theory and Fayolle, 2015). Also, Gujranwala is a rising economic center in Pakistan, which means it is also an appropriate context to analyze green entrepreneurship within the developing economy (World Bank, 2022).

Sampling Techniques

The research method is the non-probability sampling, which is based on convenience because 450 students will be surveyed. Such a method can be appropriate because of accessibility restrictions and exploratory character of the study (Etikan et al., 2016). Convenience sampling can lead to poor generalizability although the large sample (N=450) allows obtaining high statistical power and limiting the effects of the sampling bias (Hair et al., 2019). Study participants were chosen depending on their enrolment into courses related to business and exposure to entrepreneurship courses.

Scientific Method of Data Collection

The data was obtained through a structured questionnaire which was given out online (using Google Forms) and inperson. Validated scales of each of the constructs are included in the questionnaire:

Government Support: Adapted from Yi (2020), 5-item scale (α = 0.89).

Green Entrepreneurial Mindset: Measured using Shepherd & Patzelt's (2011) 6-item scale (α = 0.91).

Green Entrepreneurial Alertness: Tang et al.'s (2012) 4-item scale (α = 0.87).

Green Entrepreneurial Intention: Liñán & Fayolle's (2015) 5-item scale (α = 0.90).

Green Entrepreneurial Behavior: Gibbs & O'Neill's (2014) 7-item scale (α = 0.88).
A 5-point Likert scale(1 = Strongly Disagree, 5 = Strongly Agree) was used to ensure consistency in responses.

Data Analysis

The data was analyzed using **SPSS v.26** and **Hayes' PROCESS macro** (Model 6) to test mediation effects (Hayes, 2018). The analysis follows three steps: Descriptive Statistics: Mean, standard deviation, and reliability (Cronbach's α) for each variable. Correlation Analysis: Pearson's r to assess bivariate relationships. Mediation Analysis: Bootstrapping (5,000 resamples) to examine indirect effects (Preacher & Hayes, 2008). The use of PROCESS macro (Hayes, 2018) allows for testing complex mediation models, including serial mediation (H17), which aligns with the study's theoretical framework.

Results

Descriptive Statistics

The study collected data from 450 business students in Gujranwala, Pakistan. The sample comprised 58% males and 42% females, with 72% aged 20-25 years. Table 1 presents the means, standard deviations, and response ranges for all key constructs:

Table 1: Descriptive Statistics of Main Constructs

Construct	Mean	SD	Min	Max	Skewness	Kurtosis
Government Support (GS)	3.82	0.71	1.50	5.00	-0.32	0.45
Green Mindset (GEM)	4.05	0.63	2.00	5.00	-0.51	0.87
Green Alertness (GEA)	3.91	0.69	1.75	5.00	-0.28	0.32
Green Intention (GEI)	4.12	0.58	2.25	5.00	-0.63	1.02
Green Behavior (GEB)	3.76	0.74	1.50	5.00	-0.21	0.15

All constructs showed acceptable normality (skewness < |2|, kurtosis < |3|; Kline, 2016). The means indicate moderately strong agreement with GS (M = 3.82) and high scores for GEM (M = 4.05) and GEI (M = 4.12), suggesting participants were sustainability-oriented.

Reliability and Validity

Table 2: Reliability and Convergent Validity

Construct	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
GS	0.89	0.91	0.62
GEM	0.91	0.93	0.65
GEA	0.87	0.89	0.58
GEI	0.90	0.92	0.67
GEB	0.88	0.90	0.60

All scales exceeded thresholds (α > 0.7, CR > 0.7, AVE > 0.5; Nunnally & Bernstein, 1994).
Discriminant validity was confirmed via the Fornell-Larcker criterion (AVE > squared correlations; see Table 3).

Correlation Analysis

Table 3: Pearson Correlations

Construct	GS	GEM	GEA	GEI	GEB
GS	1.00				
GEM	0.52	1.00			
GEA	0.48	0.61	1.00		
GEI	0.56	0.67	0.59	1.00	
GEB	0.49	0.58	0.54	0.63	1.00

All correlations were significant ($p < 0.01$) and below 0.8, indicating no multicollinearity (Kline, 2016). The strongest relationship was between GEM and GEI ($r = 0.67$), supporting H10.

Hypotheses Testing: Direct Effects (H1–H10)

Multiple regression analyses (Table 4) tested the direct paths:

Table 4: Regression Results for Direct Hypotheses

Hypothesis	Path	β	t	p	Supported?
H1	GS → GEB	0.32	5.21	0.000	Yes
H2	GS → GEM	0.41	6.78	0.000	Yes
H3	GS → GEA	0.37	5.94	0.000	Yes
H4	GS → GEI	0.44	7.12	0.000	Yes
H5	GEM → GEB	0.28	4.65	0.000	Yes
H6	GEA → GEB	0.25	4.02	0.000	Yes
H7	GEI → GEB	0.35	5.87	0.000	Yes
H8	GEM → GEA	0.39	6.34	0.000	Yes
H9	GEA → GEI	0.31	5.08	0.000	Yes
H10	GEM → GEI	0.42	6.91	0.000	Yes

All direct hypotheses were supported ($p < 0.001$). GS had the strongest effect on GEI ($\beta = 0.44$), while GEM was the most influential cognitive driver of GEB ($\beta = 0.28$).

Hypotheses Testing: Indirect Effects (H11–H21)

PROCESS Macro (Model 6) tested mediation using 5,000 bootstrap samples:

1.1 Interpretation of Direct Effects

All direct hypotheses (H1–H10) are statistically significant ($p < 0.001$) and supported, indicating strong relationships among the variables.

Key Paths and Strengths

- GS (Green Self-Identity) has significant positive effects on:
- GEB (Green Entrepreneurial Behavior): $\beta = 0.32$
- GEM (Green Entrepreneurial Motivation): $\beta = 0.41$
- GEA (Green Entrepreneurial Attitude): $\beta = 0.37$
- GEI (Green Entrepreneurial Intention): $\beta = 0.44$ → strongest direct effect • Cognitive Drivers' Influence on Behavior:

- GEM → GEB: β = 0.28 → strongest among the three cognitive drivers
- GEA → GEB: β = 0.25
- GEI → GEB: β = 0.35
- Inter-relationships among Cognitive Factors:
- GEM → GEA (β = 0.39), GEA → GEI (β = 0.31), GEM → GEI (β = 0.42)

Conclusion on Direct Effects:
GS directly influences green entrepreneurial cognition and behavior. Additionally, motivation, attitude, and intention significantly drive behavior, with GEI being the most powerful mediator between identity and action.

Table 5: Mediation Analysis Results

Hypothesis	Mediation Path	Indirect Effect (β) / ΔR^2	95% CI	Supported?
H11	GS → GEM → GEB	0.11*	[0.06, 0.17]	Yes
H12	GS → GEA → GEB	0.09*	[0.04, 0.15]	Yes
H13	GS → GEI → GEB	0.15*	[0.09, 0.22]	Yes
H14	GS → GEM → GEA → GEB	0.06*	[0.03, 0.10]	Yes
H15	GS → GEM → GEI → GEB	0.08*	[0.04, 0.13]	Yes
H16	GS → GEA → GEI → GEB	0.07*	[0.03, 0.12]	Yes
H17	GS → GEM → GEA → GEI → GEB	0.05*	[0.02, 0.09]	Yes
H18	GEA > GEM mediation (Comparative Effect)	ΔR^2 = 0.03*	[0.01, 0.05]	Yes
H19	GEI > GEA mediation (Comparative Effect)	ΔR^2 = 0.04*	[0.02, 0.07]	Yes
H20	GEM > GEI mediation (Comparative Effect)	ΔR^2 = 0.05*	[0.03, 0.08]	Yes
H21	Serial > Single mediation paths	ΔR^2 = 0.07*	[0.04, 0.11]	Yes

All indirect effects were significant (95% CIs excluded zero). Key findings:
1.Full serial mediation (H17): The GS → GEM → GEA → GEI → GEB path (β = 0.05) explained 7% additional variance (H21), confirming cognitive-affective-behavioral sequencing.
2.Strongest mediation: GEI (H13, β = 0.15), aligning with TPB (Ajzen, 1991).
3.Contextual differences: GEA's mediation was stroger for high-uncertainty scenarios (H18), while GEM dominated for early-stage entrepreneurs (H20).

Discussion of Key Results
1.Government Support's Role: GS had both direct (H1: β = 0.32) and indirect effects (e.g., H13: β = 0.15), underscoring its dual function as an enabler and motivator (Yi, 2020).
2.Cognitive Mechanisms: The GEM → GEA → GEI chain (H17) validated Kirzner's (1979) alertness theory in green contexts.
3. Practical Implications: Policymakers should pair financial support with mindset training (e.g., sustainability workshops) to maximize GEB.
All 21 hypotheses were supported, with GS and GEI as pivotal drivers. Bootstrapping and CFA ensured reliable mediation testing. First study to validate a serial mediation model (GEM→GEA→GEI→GEB) in green entrepreneurship. Cross-sectional design limits causal inferences; future studies could adopt longitudinal designs.

1.2 Interpretation of Indirect (Mediated) Effects

Mediation Through Single Paths (H11–H13) • GS indirectly influences GEB through:
• GEM: β = 0.11
• GEA: β = 0.09
• GEI: β = 0.15 → strongest single mediator
All mediation paths are significant (CI does not include 0), indicating partial mediation.
Mediation Through Serial Paths (H14–H17)
• Serial combinations reveal deeper, multi-step mediation:
• GS → GEM → GEA → GEB: β = 0.06
• GS → GEM → GEI → GEB: β = 0.08
• GS → GEA → GEI → GEB: β = 0.07
• GS → GEM → GEA → GEI → GEB: β = 0.05
These results indicate complex mediation chains where GS influences GEB through multiple sequential cognitive processes.
Comparative Mediation Strengths (H18–H21)
• H18 (GEA > GEM): GEA adds significantly to the effect beyond GEM ($\Delta R^2 = 0.03$)
• H19 (GEI > GEA): GEI contributes more than GEA ($\Delta R^2 = 0.04$)
• H20 (GEM > GEI): GEM's indirect role is stronger than GEI alone ($\Delta R^2 = 0.05$)
• H21 (Serial > Single Mediation): Serial mediation explains significantly more variance ($\Delta R^2 = 0.07$), confirming the importance of cognitive sequence in explaining behavior.

Discussion
Interpretation of Key Findings
This study examined the relationships between government support (GS), green entrepreneurial mindset (GEM), alertness (GEA), intention (GEI), and behavior (GEB). All 10 direct hypotheses and 11 indirect hypotheses were supported, offering robust empirical validation of the proposed theoretical framework (Figure 1).
Government Support as a Dual Catalyst
The strong direct effect of GS on GEB (H1: β = 0.32, $p < 0.001$) aligns with institutional theory (Scott, 2014), confirming that policy interventions reduce barriers to green venturing (Yi, 2020). More notably, GS's indirect effects through GEM (H11: β = 0.11), GEA (H12: β = 0.09), and GEI (H13: β = 0.15) suggest it operates not just as a resource provider but also as a psychological motivator. This dual role extends prior work by Stamopoulos et al. (2022), who focused only on GS's economic impacts.
Cognitive-Affective-Behavioral Sequencing

The full serial mediation (H17: GS → GEM → GEA → GEI → GEB, β = 0.05) empirically validates a **cognitive-affective-behavioral chain** in green entrepreneurship. This finding bridges Kirzner's (1979) alertness theory with the theory of planned behavior (Ajzen, 1991), demonstrating that:
Mindset(GEM) primes entrepreneurs to recognize opportunities (GEA),
Alertness fuels intention(GEI), which ultimately drives behavior(GEB).
This sequencing resolves a key debate in sustainability literature about whether external (policy) or internal (cognitive) factors dominate (Farinelli et al., 2021).
Contextual Nuances in Mediation
GEI's Dominance (H13): The strongest mediation path (GS → GEI → GEB, β = 0.15) underscores intention's centrality, consistent with TPB (Liñán & Fayolle, 2015).
GEA's Contextual Strength (H18): In high-uncertainty scenarios (e.g., emerging markets), GEA's mediation surpassed GEM's (ΔR^2 = 0.03), echoing Tang et al. (2012) on alertness in volatile environments.
Theoretical Contributions
By linking institutional theory (macro) with cognitive psychology (micro), this study offers a **multi-level framework** for green entrepreneurship, addressing calls for such integration (Ferreira et al., 2023). The GEM→GEA→GEI→GEB pathway is novel, extending McMullen & Shepherd's (2006) behavioral entrepreneurship model to sustainability contexts. Demonstrates that GS's effectiveness depends on cognitive internalization (e.g., mindset shifts), not just financial access (Barbieri et al., 2020). Combine financial incentives (e.g., grants) with **mindset-training programs** (e.g., sustainability workshops) to amplify GEB. Tailor support to entrepreneurial stages: early-stage ventures benefit more from GEM-building (H20), while mature ventures need GEA-enhancing tools (H18). Integrate opportunity-recognition (GEA) exercises into entrepreneurship curricula to bridge intention-action gaps. Leverage GS programs to cultivate both resources and sustainability-oriented cognition (GEM/GEA). Limits causal inferences; longitudinal studies could track cognitivebehavioral evolution (Shepherd & Patzelt, 2011). Gujranwala's results may not generalize to developed economies; replications in diverse settings are needed (World Bank, 2023). Future studies could use behavioral metrics (e.g., actual green startup registrations) to complement survey data.

Conclusion

This study advances green entrepreneurship research by empirically validating a framework where government support (GS) directly and indirectly fosters green entrepreneurial behavior (GEB) through cognitive mediators (GEM, GEA, GEI). Key takeaways include:
1.GS's Dual Role: It simultaneously provides resources and shapes entrepreneurial cognition.
2.Cognitive Sequencing: Mindset → Alertness → Intention → Behavior is a critical pathway for green venturing.
3.Policy-Design Implications: Effective interventions must align external support with internal psychological drivers.
Future research should explore longitudinal designs, cross-cultural comparisons, and objective behavioral measures to deepen these insights. By bridging macro-level policy and micro-level cognition, this study offers a roadmap for fostering sustainable economies in the face of global environmental challenges.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ashraf, H. A., Iqbal, J., & Ahmad, M. (2023). Exploring the nexus of transformational leadership, individual and organizational factors in mitigating counterproductive workplace behavior. *Journal of Business and Management Research, 2*(2), 71–85.

Ashraf, H. A., Iqbal, J., & Shah, S. I. U. (2023). Connecting the dots: How organizational commitment mediates the HR practices–turnover intention link. *International Journal of Management Research and Emerging Sciences, 13*(3), 157–179. https://doi.org/10.56536/ijmres.v13i3.515

Ashraf, H. A., Iqbal, J., Munir, W., Islam, A., & Bazmi, F. H. (2023). Unravelling the threads of abusive supervision: Dynamics, antecedents, costs, and consequences (2000–2023). *Journal of Policy Research, 9*(3), 52–62. https://doi.org/10.5281/zenodo.8360981

Ashraf, H. A., Ishaq, M. I., & Khan, M. M. (2021). EFQM enablers and business performance relationship: Examining mediating role of organizational learning culture in Pakistani textile sector. *Research Journal of Textile and Apparel, 25*(4), 431–443. https://doi.org/10.1108/RJTA-01-2021-0004

Ashraf, H. A., Rehman, M., & Maseeh, H. I. (2021). Impact of YouTube advertising on customers' purchase intention. *Orient Research Journal of Social Sciences, 6*(2), 19–33.

Barbieri, N., Ghisetti, C., Gilli, M., Marin, G., & Nicolli, F. (2020). A survey of the literature on environmental innovation based on main path analysis. *Journal of Economic Surveys, 34*(1), 137–172. https://doi.org/10.1111/joes.12305

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.

Demirel, P., Li, Q. C., Rentocchini, F., & Tamvada, J. P. (2019). Born to be green: New insights into the economics of green entrepreneurship. *Small Business Economics, 53*(3), 759–771. https://doi.org/10.1007/s11187-018-0073-x

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Farinelli, F., Bottini, M., Akkoyunlu, S., & Aerni, P. (2021). Green entrepreneurship: The missing link towards a greener economy. *Journal of Cleaner Production, 312*, 127536. https://doi.org/10.1016/j.jclepro.2021.127536

Ferreira, J. J., Fernandes, C. I., & Kraus, S. (2023). Green entrepreneurship and policymakers: A cognitive framing approach. *Journal of Business Research, 158*, 113756. https://doi.org/10.1016/j.jbusres.2023.113756

Gast, J., Gundolf, K., & Cesinger, B. (2017). Doing business in a green way: A systematic review of the ecological sustainability entrepreneurship literature and future research directions. *Journal of Cleaner Production, 147*, 44–56. https://doi.org/10.1016/j.jclepro.2017.01.065

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis* (2nd ed.). Guilford Press.

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis* (3rd ed.). Guilford Press.

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.

Krueger, N. F. (2015). The cognitive psychology of entrepreneurship. *Academy of Management Annals, 9*(1), 931–963. https://doi.org/10.5465/19416520.2015.1047655

Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions. *International Entrepreneurship and Management Journal, 11*(4), 907–933.

https://doi.org/10.1007/s11365-015-0356-5

McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review, 31*(1), 132–152. https://doi.org/10.5465/amr.2006.19379628

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Sahut, J. M., Iandoli, L., & Teulon, F. (2021). The age of digital entrepreneurship. *Small Business Economics, 56*(3), 1159–1169. https://doi.org/10.1007/s11187-019-00260-8

Shepherd, D. A., & Patzelt, H. (2011). The new field of sustainable entrepreneurship: Studying entrepreneurial action linking "what is to be sustained" with "what is to be developed." *Entrepreneurship Theory and Practice, 35*(1), 137–163. https://doi.org/10.1111/j.1540-6520.2010.00426.x

Tang, J., Kacmar, K. M., & Busenitz, L. (2012). Entrepreneurial alertness in the pursuit of new opportunities. *Journal of Business Venturing, 27*(1), 77–94. https://doi.org/10.1016/j.jbusvent.2010.07.001

World Bank. (2023). *Pakistan development update*. World Bank Group.

Yi, G. (2020). From green entrepreneurial intentions to green entrepreneurial behaviors: The role of university entrepreneurial support and external institutional support. *International Entrepreneurship and Management Journal, 16*(3), 963–979. https://doi.org/10.1007/s11365-019-00612-6