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FACTORS CONTRIBUTING TO ENTREPRENEURS' SUCCESS AND THE MODERATING ROLE OF FAMILY SUPPORT, MEDIATING ROLE OF RESILIENCE IN WOMEN'S AGRIBUSINESS ENTREPRENEURSHIP: EVIDENCE FROM WESTERN TAMIL NADU, INDIA

M. Anjali[1], K. Mahendran[2], M. Malarkodi[1], R. Pangayar Selvi[3], S. Padmarani[4], R. Mahendiran[5]

[1]Department of Agricultural and Rural Management, Tamil Nadu Agricultural University, Coimbatore, India.
[2]Centre for Water and Geospatial Studies, Tamil Nadu Agricultural University, Coimbatore, India.
[3]Department of Physical Sciences & Information Technology, Agricultural Engineering College & Research Institute, Tamil Nadu Agricultural University, Coimbatore, India
[4]Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, India.
[5]Department of Renewable Energy Engineering, Agricultural Engineering College & Research Institute, Tamil Nadu Agricultural University, Coimbatore, India.

ABSTRACT
Women's entrepreneurship as a pathway to inclusive economic development has not been matched by sufficient empirical enquiry into its success determinants in South Asian agribusiness contexts. Anchoring the analysis in Upper Echelons Theory (UET) and Conservation of Resources Theory (COR), this study examines how internal psychological characteristics Innovation (IN), Creativity (CR), Resilience (RS), Need for Achievement (NFA), and Self-Confidence (SF) and external enabling conditions Risk-Taking Propensity (RT), Socio-Economic Factors (EF), and Family Support (FS) shape Women Entrepreneurial Success (WES). And the mediation effect of resilience and the moderation effect of family support in entrepreneurial success were also studied. Primary data were gathered through structured face-to-face surveys administered to 180 Udyam-registered women agribusiness entrepreneurs across Coimbatore, Tiruppur, and Erode in Tamil Nadu's Western Zone. Partial Least Squares Structural Equation Modelling (PLS-SEM) confirmed that all eight constructs positively and significantly predict entrepreneurial success ($R^2 = 0.635$; $Q^2 = 0.447$; SRMR = 0.040). Resilience significantly mediated five of seven antecedent–outcome pathways, while family support significantly moderated four interactions. The findings yield theoretically grounded and policy-applicable insights for strengthening women's agribusiness entrepreneurship across emerging economies.

KEYWORDS: Women's entrepreneurship; Agribusiness; PLS-SEM; Resilience; Family Support; Upper Echelons Theory; Tamil Nadu; Mediation; Moderation

INTRODUCTION

Entrepreneurship occupies a central place in the study of economic development, a view that traces back to Schumpeter's (1934) formulation of productive recombination as the engine of economic progress. In today's globalised economy, entrepreneurial activity is widely regarded as a primary catalyst for innovation, employment generation, and national competitiveness. Within this broader landscape, women's entrepreneurship has attracted growing scholarly and policy attention because of its dual capacity to generate economic value and advance gender equity (Brush, 1992; Minniti & Naudé, 2010). The agribusiness domain has, in particular, witnessed notable growth in women-owned ventures, many of which are oriented toward addressing pressing local and societal challenges (Kimutai & Gakobo, 2022).

As the World Economic Forum's Global Gender Gap Report 2025 documents, India ranks 131st of 148 countries overall and sits among the bottom five nations globally on the Economic Participation and Opportunity sub-index, with a gender parity score of merely 40.7 per cent (World Economic Forum, 2025). The financing dimension of this gap is equally stark: the SIDBI–CRISIL (2025) report finds that only 76 per cent of women-led enterprises in India have accessed formal credit, against 84 per cent of male-owned enterprises, leaving women entrepreneurs with a credit deficit of 35 per cent the widest across all demographic segments within the Ministry of Micro, Small and Medium Enterprises (MSME) ecosystem. Within India, the Udyam Registration Portal recorded over 3.11 crore women-led enterprises by early 2026, representing approximately 40 per cent of all registered MSMEs (Ministry of MSME, 2026).

The agribusiness sector in Tamil Nadu's Western Zone spanning Coimbatore, Tiruppur, and Erode offers a particularly suitable setting for examining these dynamics. Women operating micro agribusiness enterprises in this region make meaningful contributions to agricultural value chains, local employment generation, and household economic stability (Palaniappan et al., 2012; Kumar & Shobana, 2024). Despite this economic

significance, the specific internal and external factors that determine their entrepreneurial success have received insufficient theoretical and empirical attention within the Indian scholarly literature.

Prior research broadly groups entrepreneurial success determinants into two domains. Internal determinants encompass psychological constructs such as self-confidence, risk tolerance, creative capacity, and achievement motivation (Cabrera & Mauricio, 2017; Hana et al., 2017), while external determinants cover financial resource access, socio-cultural context, and institutional support frameworks (Tesfaye et al., 2019; Feng et al., 2023). The moderating influence of family supports a particularly consequential variable in South Asian cultural settings has received comparatively limited empirical treatment within the agribusiness entrepreneurship literature specifically.

This study makes three distinct contributions. First, it applies UET (Hambrick & Mason, 1984) and COR Theory (Hobfoll, 1989) as complementary theoretical lenses linking decision-makers' psychological orientations and resource endowments to entrepreneurial outcomes. Second, it integrates direct-effect, mediation, and boundary-condition moderation analysis within a unified PLS-SEM framework. Third, by concentrating on the agribusiness sector in Western Tamil Nadu, the study extends empirical knowledge beyond the manufacturing and technology-focused MSME literature that currently predominates in Indian women's entrepreneurship research. Given the complex socio-cultural landscape in which Indian women entrepreneurs operate, marked by traditional gender expectations that are nevertheless gradually shifting, particularly in urban areas (Rastogi et al., 2022). Several studies identify both psychological and environmental determinants of women's entrepreneurial success (Hana et al., 2017; Cabrera & Mauricio, 2017) this study explores how personal attributes, socio-economic conditions, and family-based institutional support interact to shape entrepreneurial outcomes among women agripreneurs.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1 Upper Echelons Theory and Conservation of Resources Theory

The theoretical architecture of this study draws on two complementary frameworks. Upper Echelons Theory (Hambrick & Mason, 1984; Hambrick, 2007) holds that organisational outcomes reflect the cognitive schemas, values, and experiential histories of senior decision-makers. In sole-proprietor micro-enterprises, the entrepreneur constitutes the complete decision-making authority, rendering the conceptual distance between UET's original unit of analysis and the present context negligible. Entrepreneurship scholars have increasingly deployed UET-derived reasoning with reference to individual founders and owner-managers, treating the founder's cognitive orientation as the functional analogue of the upper echelon (Nayak et al., 2025; Khan et al., 2021). The theory argues that decision-makers interpret situations through their cognitive base, values, and experiences, which in turn influence strategic choices and organisational performance. In the context of women entrepreneurship, the entrepreneur herself represents the upper echelon, and her psychological traits and behavioural tendencies shape the success of the enterprise. Traits such as innovation, creativity, risk-taking propensity, self-confidence, and need for achievement reflect the cognitive orientations that guide entrepreneurial decision-making and ultimately influence venture outcomes.

Conservation of Resources Theory (Hobfoll, 1989) proposes that individuals are motivated to acquire, protect, and accumulate valued resources in the service of well-being and goal attainment. Resource gain spirals operate such that holding one resource such as innovation capacity or achievement drive facilitates the accumulation of others, specifically resilience, which serves as an adaptive buffer through which trait-level energy is converted into persistent entrepreneurial engagement under adversity. Luthans et al.'s (2007) Psychological Capital (PsyCap) framework reinforces this: resilience is one of four core PsyCap components (alongside hope, optimism, and self-efficacy) that together predict entrepreneurial performance. As Luthans et al. (2007) define it, resilience specifically refers to "bouncing back from adversity" the mechanism through which trait-level motivation translates into durable performance. COR theory further accounts for why Family Support operates as a moderator: family networks represent a social resource that augments the entrepreneur's overall resource base, accelerating the conversion of personal traits into resilience (Luthans et al., 2007). Upper Echelons Theory explains why individual-level traits (innovation, creativity, self-confidence, risk-taking, need for achievement) shape entrepreneurial outcomes but it doesn't explain the mechanism by which these traits translate into success under resource-constrained conditions. That's where Conservation of Resources Theory comes in: resilience, economic condition, family support has been framed as resource-replenishing mechanisms that help entrepreneurs convert their UET-driven traits into sustained success, especially when facing the resource losses common in agribusiness contexts. "While UET explains who succeeds, COR explains how psychological and social resources sustain that success under adversity".

Innovation and Women Entrepreneurial Success

Schumpeterian entrepreneurship theory, innovation (IN) understood as the introduction of meaningfully new or improved products, services, processes, or organisational arrangements (Brush et al., 2022) constitutes a foundational entrepreneurial driver. Research consistently documents a positive relationship between innovative orientation and entrepreneurial performance among female entrepreneurs (Huang et al., 2022). In agribusiness contexts specifically, innovation encompasses improved cultivation methods, value addition in processing, and digital marketing adoption (Maziriri et al., 2023). UET's emphasis on cognitive orientation aligns naturally with this focus on creative entrepreneurial behaviour.

H1: Innovation is positively associated with women's entrepreneurial success.

Creativity and Women Entrepreneurial Success

Creativity (CR), conceptualised as the capacity to generate ideas that are simultaneously original and practically valuable (Dzapasi, 2020; Amabile, 1997), forms a foundational pillar of entrepreneurial activity. In resource-constrained agribusiness environments, creative thinking allows entrepreneurs to reorient strategies, devise improvised solutions, and identify emerging market niches (Bulsara et al., 2014). Badrun and Syukur (2024) highlight creativity's role in driving competitive differentiation, while Osmani et al. (2021) document its influence on entrepreneurial intention formation. In the Indian context, creativity has been identified as a critical mechanism for overcoming structural constraints such as limited market access and value-chain inefficiencies (Desai, 2020).

H2: Creativity is positively associated with women's entrepreneurial success.

Need for Achievement and Women Entrepreneurial Success

McClelland's (1961) construct of Need for Achievement (NFA) refers to an individual's persistent drive to attain high performance standards and master demanding tasks. Entrepreneurs with elevated NFA display strong persistence, a preference for moderately challenging goals, and an intrinsically motivated orientation toward performance excellence (Zeffane, 2013). Empirical scholars links NFA to entrepreneurial persistence and venture expansion (Viinikainen et al., 2017). Within agribusiness, NFA motivates women entrepreneurs to continually refine operational processes, forge new market linkages, and broaden their product offerings despite structural disadvantages.

H3: Need for Achievement is positively associated with women's entrepreneurial success.

Self-Confidence and Women Entrepreneurial Success

Self-confidence (SF) an individual's trust in her own competencies, judgements, and decision-making abilities is well established as a critical antecedent of entrepreneurial behaviour (Twibell et al., 2008; Kirkwood, 2009). Entrepreneurs with strong self-belief are more inclined to pursue growth opportunities, mobilise external financing, and act decisively amid environmental uncertainty. Kirkwood (2009) observes that self-confidence deficits disproportionately hinder women entrepreneurs, narrowing their growth ambitions and limiting resource access. These dynamics are particularly acute in South Asian contexts shaped by patriarchal cultural norms and entrenched gender-role expectations.

H4: Self-confidence is positively associated with women's entrepreneurial success.

Risk-Taking and Women Entrepreneurial Success

Risk-taking (RT) propensity, understood as an individual's readiness to allocate resources toward uncertain ventures, is widely regarded as a foundational entrepreneurial trait (Miller & Friesen, 1982). Women entrepreneurs frequently operate in environments marked by informational asymmetries, market unpredictability, and capital constraints, all of which necessitate calculated risk-taking (Kozubíková et al., 2017). Whereas Dalborg et al. (2015) note that risk perception can dampen entrepreneurial passion among women, Khan et al. (2021) confirm that a proactive risk orientation positively predicts entrepreneurial success. In agribusiness, risk-taking decisions commonly involve crop diversification, technology investment, and market-entry strategies.

H5: Risk-taking propensity is positively associated with women's entrepreneurial success.

Economic Condition and Women Entrepreneurial Success

Economic condition including access to credit, government-sponsored programmes, prevailing market conditions, and pricing competitiveness, constitute critical external enablers of entrepreneurial viability (Wube, 2010). Women entrepreneurs encounter disproportionate barriers in formal financial markets stemming from collateral requirements, thin credit histories, and systemic gender bias in lending decisions (Lindvert et al., 2017). Where institutional support is available through MSME development schemes, subsidised lending, or market integration programmes, venture sustainability and growth are meaningfully enhanced. Feng et al. (2023) identify economic enabling conditions among the most influential external predictors of women's entrepreneurial success.

H6: Economic factors are positively associated with women's entrepreneurial success.

Resilience: Direct Effect and Mediating Role

Resilience an individual's capacity to adapt, recover, and maintain forward momentum under adverse circumstances carries heightened relevance for women navigating volatile agribusiness environments (Pita & Costa, 2021). Within the present theoretical framework, resilience is positioned as a mediating construct that channels dispositional strengths (NFA, SF, RT, EF, FS) into entrepreneurial Success. Consistent with Luthans et al. (2007) and Bellini et al. (2025), dispositional traits cultivate resilience as a secondary resource, which then mediates the conversion of psychological capital into sustained performance outcomes. The non-mediation of Innovation and Creativity through Resilience is theoretically plausible: these cognitive capabilities may exert direct performance effects through opportunity recognition pathways that operate independently of the adversity-buffering mechanism. Kirmayer et al. (2011) characterise resilience through traits such as cognitive flexibility, hardiness, and effective problem resolution. For rural and semi-urban women entrepreneurs in India, institutional instability, commodity price volatility, and persistent social constraints make resilience a vital protective factor against venture discontinuation Badzaban et al., (2021).

H7: Resilience is positively associated with Women Entrepreneurial Success.
H7a–H7g: Resilience significantly mediates the relationships between (a) Innovation, (b) Creativity, (c) Need for Achievement, (d) Self-Confidence, (e) Risk-Taking Propensity, (f) Economic Factors, and (g) Family Support and Women Entrepreneurial Success.

Family Support: Direct Effect and Moderating Role
Family support occupies a structurally distinctive position within the conceptual model, functioning simultaneously as an independent predictor of success and as a boundary condition that modulates the effects of other success determinants. Al Boinin (2023) establishes that family dynamics, gender-role configurations, and social network embeddedness meaningfully shape women's entrepreneurial trajectories. Prior studies indicate that family support provides emotional encouragement, practical assistance, and social legitimacy, thereby enhancing entrepreneurial engagement among women entrepreneurs (Jha et al., 2018; Al Boinin, 2023). Family support has been conceptualised as emotional, informational, and instrumental assistance from household members (Chu, 2010). In the Tamil Nadu context, where extended family networks remain central to livelihood organisation, family support constitutes a vital socio-cultural resource that conditions the effectiveness of psychological and economic success factors.
H8: Family support is positively associated with women's entrepreneurial success.
H8a–H8g: Family support significantly moderates the relationships between (a) innovation, (b) creativity, (c) resilience, (d) Need for Achievement, (e) Self-Confidence, (f) Risk-Taking, and (g) Economic Factors, and Women Entrepreneurial Success.

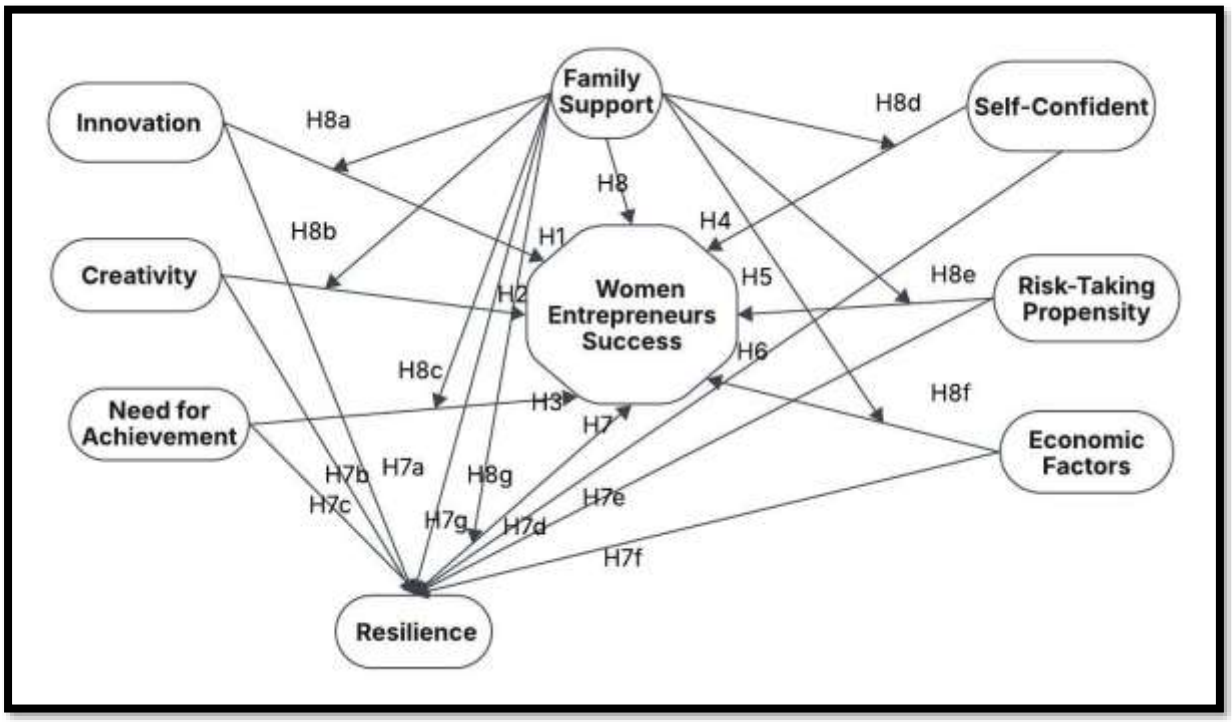

Fig:1 Conceptual framework

MATERIALS AND METHODS
A quantitative, cross-sectional research design was adopted to collect primary data from the target population. The study sampled female entrepreneurs whose agribusiness ventures were formally registered under the Udyam scheme at District Industries Centres in each of the three selected districts. Simple random sampling was used to select respondents, and data were collected through structured, face-to-face interviews using a pre-tested questionnaire. The final sample comprised 180 women agribusiness entrepreneurs drawn from Coimbatore, Tiruppur, and Erode districts in Tamil Nadu's Western Zone.
All measurement scale items were adapted from previously validated instruments. Items for the exogenous constructs Innovation, Creativity, Resilience, Need for Achievement, Self-Confidence, Risk-Taking, Economic Factors, and Family Support were drawn from scales developed and validated by Lai et al. (2010), Zhang et al. (2025), Shahab et al. (2018), Osmani et al. (2021), Kirmayer et al. (2011), Badzaban et al. (2021), Zeffane (2013), McClelland (1961), Twibell et al. (2008), Kirkwood (2009), Miller and Friesen (1982), Dalborg et al. (2015), Wube (2010), Lindvert et al. (2017), Al Boinin (2023), and Jha et al. (2018). The endogenous construct of Women Entrepreneurial Success (WES) was measured using items adapted from Khan et al. (2021). All constructs were rated on a five-point Likert scale anchored at 1 (strongly disagree) and 5 (strongly agree). Figure:1 represent the conceptual framework. Measurement items are detailed in Appendix 1.

Table:1 Demographic characterise of women entrepreneurs

Variable	Classification	Percentage (%)
Age	Below 25 Years	3
	25-34 Years	13
	35-44 Years	45
	45-54 Years	33
	55 Years & Above	6
Marital Status	Married	85
	Un Married	15
Educational Qualification	School Level	23
	Diploma	7
	Undergraduate	46
	Postgraduate	24
Ownership Structure	Partnership	14
	Sole Proprietor	86
Years of experience	1-5 Years	40
	6-10 Years	7
	11-15 Years	41
	More than 15 Years	12
Prior Employment	Salaried Employee	52
	Student	5
	Business	5
	Unemployed	38

RESULTS

Demographic Profile

Table 1 presents the demographic characteristics of survey respondents. By age, the largest cohort (45%) fell in the 35–44 years bracket, followed by those aged 45–54 years (33%), 25years (13%), 55 years and above (6%), and below 25 years (3%). Regarding marital status, 85% of respondents were married and 15% were unmarried. In terms of educational attainment, 46% held undergraduate qualifications, 24% had completed postgraduate studies, 23% had attained school-level education, and 7% held a diploma. On ownership structure, 86% operated as sole proprietors, while 14% had established partnership arrangements. Regarding entrepreneurial experience, 41% had between 11 and 15 years of experience, 40 % had 1–5 years, 12% had more than 15 years, and 7% had 6–10 years. Pre-entrepreneurship employment backgrounds included salaried employment (52%), unemployment (38%), student status (5%), and prior business involvement (5%).

Data Normality and Multicollinearity

Normality of the data was assessed through skewness and kurtosis diagnostics. Multicollinearity was evaluated using variance inflation factor (VIF) and tolerance statistics. As shown in Table 4, all VIF values remained below the threshold of 3.0, consistent with established guidelines (Diamantopoulos & Siguaw, 2006; Hair et al., 2016), thereby ruling out problematic collinearity among predictors.

Table:2 Result of Factor analysis

Dimension	Items	Standard estimates	Average variance extracted (AVE)	Composite reliability (CR)	Cronbach's Alpha (CA)
Innovation (IN)	IN1	0.911	0.769	0.864	0.850
	IN2	0.878			
	IN3	0.841			
Creativity (CR)	CR1	0.914	0.818	0.896	0.889
	CR2	0.915			
	CR3	0.883			
Need for Achievement (NFA)	NFA1	0.895	0.801	0.926	0.918
	NFA2	0.892			
	NFA3	0.880			
	NFA4	0.914			
Self-confident (SF)	SF1	0.856	0.747	0.892	0.887
	SF2	0.851			
	SF3	0.875			
	SF4	0.875			
Risk-taking propensity (RT)	RT1	0.890	0.788	0.912	0.911
	RT2	0.909			
	RT3	0.861			
	RT4	0.891			
Economic Factors (EF)	EF1	0.890	0.765	0.910	0.898
	EF2	0.868			
	EF3	0.876			
	EF4	0.865			
Resilience (RS)	RS1	0.898	0.773	0.906	0.902
	RS2	0.880			
	RS3	0.882			
	RS4	0.856			
Family support (FS)	FS1	0.915	0.813	0.886	0.885
	FS2	0.893			
	FS3	0.898			
Women Entrepreneurs Success (WES)	WES1	0.864	0.747	0.918	0.915
	WES2	0.891			
	WES3	0.871			
	WES4	0.862			
	WES5	0.833			

Note: factors meet CR >= 0.70. factors meet AVE >= 0.50. factors meet CA>= 0.70.

Measurement Model

The measurement model was estimated in SmartPLS using PLS-SEM, with Exploratory factor analysis executed via the maximum likelihood approach. Model fit was assessed using the standardized root mean square residual (SRMR), normed fit index (NFI). The SRMR value of 0.040 was well below the recommended threshold of 0.08 and NFI value of 0.95, indicating good model fit (Hair et al., 2010). As Table 2 indicates, factor loadings for all items were statistically significant and exceeded 0.70. Internal consistency reliability was confirmed through Cronbach's alpha values surpassing 0.70 across all constructs. Composite reliability (CR) estimates similarly exceeded 0.80 for all constructs, indicating robust internal stability. Average Variance Extracted (AVE) values exceeded the required threshold of 0.50 for each construct, demonstrating convergent validity (Fornell & Larcker, 1981; Hair et al., 2010).

Table: 3 Discriminant validity; Fornell-Larcker criterion

Factor	WES	RT	EF	SF	IN	NFA	FS	RS	CR
WES	**0.904**								
RT	0.213	**0.875**							
EF	0.238	0.319	**0.902**						
SF	0.335	0.201	0.167	**0.877**					
IN	0.265	0.299	0.174	0.176	**0.895**				
NFA	0.209	0.523	0.400	0.262	0.368	**0.879**			
FS	0.260	0.366	0.217	0.216	0.145	0.553	**0.888**		
RS	0.337	0.252	0.154	0.285	0.240	0.409	0.204	**0.864**	
CR	0.412	0.368	0.336	0.463	0.355	0.534	0.501	0.306	**0.864**

Note: Bold diagonal values represent the square root of the AVE for each construct.

Discriminant validity was assessed using the Fornell–Larcker criterion, with results reported in Table 3. For each construct, the square root of the AVE (diagonal value) exceeded the inter-construct correlations in the corresponding rows and columns, confirming that each construct shares greater variance with its own indicators than with any other construct. All diagonal values surpassed 0.70, satisfying the recommended threshold for discriminant validity (Fornell & Larcker, 1981; Hair et al., 2010).

Structural Model and Hypothesis Testing

The structural model was assessed through path coefficient analysis. Hypothesis support was determined using t-values (critical value > 1.96) and p-values (significance threshold < 0.05). Table 4 reports the results for both direct, mediation and moderation effects. The model explained 63.5% of the variance in WES ($R^2 = 0.635$), indicating substantial explanatory power. The Q^2 value of 0.447 exceeds the 0.35 threshold for large predictive relevance (Hair et al., 2019). SRMR = 0.040 confirms adequate model fit.

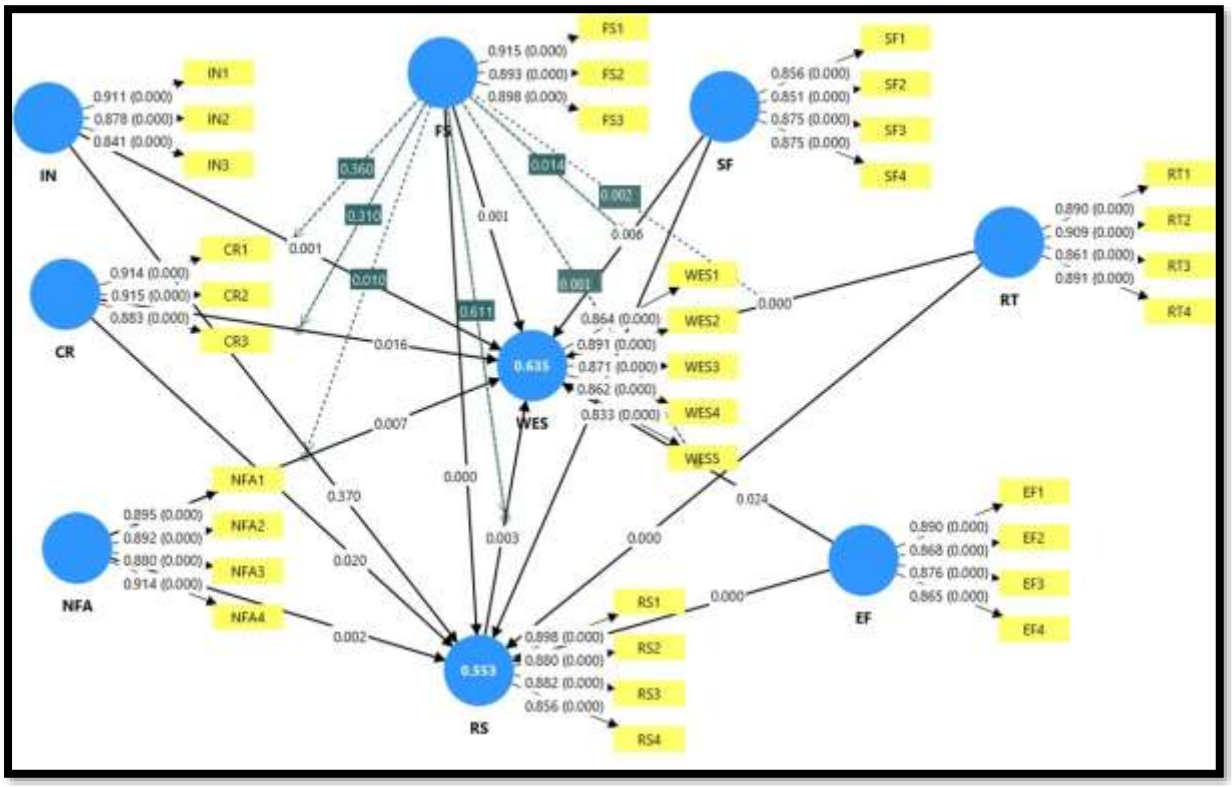

Figure:2 path diagram

Regarding the direct effects, all eight hypothesised paths from the independent variables to Women's Entrepreneurial Success (WES) were positive and statistically significant. Risk-taking propensity exhibited the largest path coefficient ($\beta = 0.223$, $t = 3.506$, $p < 0.001$), followed closely by Innovation ($\beta = 0.217$, $t = 3.454$, $p = 0.001$) and Resilience ($\beta = 0.217$, $t = 2.945$, $p = 0.003$). Family Support also demonstrated a significant positive effect on WES ($\beta = 0.168$, $t = 3.785$, $p < 0.001$), followed by Need for Achievement ($\beta = 0.141$, $t = 2.709$, $p = 0.007$), Creativity ($\beta = 0.138$, $t = 2.402$, $p = 0.016$), Self-Confidence ($\beta = 0.114$, $t = 2.728$, $p = 0.006$), and Economic Factors ($\beta = 0.080$, $t = 2.253$, $p = 0.024$). Since all path coefficients were positive and their corresponding p-values were below the threshold of 0.05, hypotheses H1 through H8 were supported.

Table:4 path analysis result

Hypothesis	Relationship	Original sample(β)	T value	P Value	VIF	Decision
Direct Effects						
H1	IN -> WES	0.217	3.454	< 0.001	1.099	supported
H2	CR -> WES	0.138	2.402	0.016	1.123	supported
H3	NFA -> WES	0.141	2.709	0.007	1.088	supported
H4	SF -> WES	0.114	2.728	0.006	1.135	supported
H5	RT -> WES	0.223	3.506	< 0.001	1.049	supported
H6	EF -> WES	0.080	2.253	0.024	1.085	supported
H7	RS -> WES	0.217	2.945	0.003	1.133	supported
H8	FS -> WES	0.168	3.785	< 0.001	1.091	supported
Mediation effect (Resilience as Mediator)						

H7a	IN -> RS -> WES	0.010	0.803	0.422	1.289	Not supported
H7b	CR -> RS -> WES	0.028	1.634	0.102	1.174	Not supported
H7c	NFA -> RS -> WES	0.039	2.142	0.032	1.274	supported
H7d	SF -> RS -> WES	0.050	2.155	0.031	1.438	supported
H7e	RT -> RS -> WES	0.082	2.620	0.009	1.226	supported
H7f	EF -> RS -> WES	0.051	2.243	0.025	1.614	supported
H7g	FS -> RS -> WES	0.044	2.321	0.020	1.228	supported
Moderation Effects (Family Support as Moderator)						
H8a	FS x IN -> WES	0.067	0.916	0.360	1.150	Not supported
H8b	FS x CR -> WES	-0.062	1.014	0.310	1.137	Not supported
H8c	FS x NFA -> WES	0.123	2.577	0.010	1.074	supported
H8d	FS x SF -> WES	0.134	2.466	0.014	1.286	supported
H8e	FS x RT -> WES	0.277	3.035	0.002	1.207	supported
H8f	FS x EF -> WES	0.271	3.569	< 0.001	1.132	supported
H8g	FS x RS -> WES	0.033	0.508	0.611	1.142	Not supported

Note: β = standardized path coefficient; *** p < 0.001; ** p < 0.01; * p < 0.05.

Mediation effects were examined using the bootstrapping procedure. The results indicate that resilience significantly mediated five of the seven hypothesised relationships with Women's Entrepreneurial Success (WES). Specifically, the indirect effects of Need for Achievement on WES through Resilience (β = 0.039, t = 2.142, p = 0.032), Self-Confidence on WES through Resilience (β = 0.050, t = 2.155, p = 0.031), Risk-Taking Propensity on WES through Resilience (β = 0.082, t = 2.620, p = 0.009), Economic Factors on WES through Resilience (β = 0.051, t = 2.243, p = 0.025), and Family Support on WES through Resilience (β = 0.044, t = 2.321, p = 0.020) were positive and statistically significant. Therefore, hypotheses H7c, H7d, H7e, H7f, and H7g were supported.

In contrast, the indirect effects of Innovation on WES through Resilience (β = 0.010, t = 0.803, p = 0.422) and Creativity on WES through Resilience (β = 0.028, t = 1.634, p = 0.102) were not statistically significant. Consequently, hypotheses H7a and H7b were not supported. These findings suggest that resilience serves as an important mediating mechanism through which achievement motivation, self-confidence, risk-taking propensity, economic factors, and family support contribute to entrepreneurial success, whereas the effects of innovation and creativity on entrepreneurial success appear to operate through alternative pathways.

Moderation effects were tested by introducing product-indicator interaction terms (FS × each predictor) into the structural model. Family support significantly amplified four of the seven tested interaction terms: FS × RT (β = 0.277, p = 0.002), FS × EF (β = 0.271, p < 0.001), FS × SF (β = 0.134, p = 0.014), and FS × NFA (β = 0.123, p = 0.010). The interaction terms for FS × IN (β = 0.067, p = 0.360), FS × CR (β = −0.062, p = 0.310), and FS × RS (β = 0.033, p = 0.611) were non-significant, indicating that the intrinsic cognitive capabilities of innovation, creativity, and resilience operate with relative autonomy from the family support environment.

DISCUSSION

This study examined the determinants of women's entrepreneurial success in the agribusiness sector of Western Tamil Nadu through PLS-SEM, interpreting findings in light of Upper Echelons Theory and Conservation of Resources Theory.

Risk-taking propensity emerged as the joint-leading direct predictor (H5: β = 0.223, p < 0.001), consistent with Miller and Friesen's (1982) foundational theorisation and Khan et al.'s (2021) empirical confirmation. The substantial amplification by family support (FS × RT: β = 0.277, p = 0.002) implies that household networks perform a social-insurance function, attenuating the perceived downside risk of entrepreneurial decisions and enabling more ambitious venture strategies.

Innovation also registered a comparably high coefficient (H1: β = 0.217, p = 0.001), aligning with Huang et al. (2022) and Maziriri et al. (2023), who demonstrate that innovative capability substantially improves women's entrepreneurial performance in agri-contextual settings. The non-significant mediation through resilience (H8a: β = 0.010, p = 0.422) and non-significant moderation by family support (H10a: β = 0.067, p = 0.360) suggest that innovation operates as a context-independent, direct performance driver consistent with UET's proposition that cognitive dispositions translate directly into strategic choices and outcomes.

Resilience emerged as a statistically significant predictor (H7: $\beta = 0.217$, $p = 0.003$) and as a partial mediator of five pathways. This is consistent with Badzaban et al. (2021) and Luthans et al. (2007), who position resilience as a psychological capital dimension that enables entrepreneurs to sustain performance under environmental disruptions. The partial mediation pattern confirms that dispositional attributes retain direct performance effects beyond the resilience channel, supporting COR's resource gain spiral proposition rather than a simple sequential chain.

Family support's dual role direct predictor (H9: $\beta = 0.168$, $p < 0.001$) and significant moderator of NFA, SF, RT, and EF establish it as the most structurally versatile construct in the model. Its failure to moderate innovation, creativity and resilience indicates that intrinsic cognitive capabilities are psychologically self-sustaining and do not require social amplification, a distinction that has not been systematically articulated in prior agribusiness entrepreneurship research and constitutes a theoretically meaningful contribution.

The pronounced economic-factor moderation (FS × EF: $\beta = 0.271$, $p < 0.001$) indicates that credit access and government assistance generate substantially larger entrepreneurial payoffs when embedded within a supportive family environment, suggesting that household networks perform a complementary institutional function where formal financial channels remain inaccessible (Lindvert et al., 2017). The self-confidence moderation (FS × SF: $\beta = 0.134$, $p = 0.014$) implies that family encouragement functions as a confidence scaffold, empowering women to pursue more assertive business decisions.

6. THEORETICAL IMPLICATIONS

This investigation extends Upper Echelons Theory beyond its original corporate leadership context into women-owned micro and small agribusiness enterprises in an emerging economy, validating UET's explanatory scope at the individual micro-enterprise level. By demonstrating that entrepreneurs' psychological orientations, innovation, creativity, resilience, need for achievement, and self-confidence systematically shape venture outcomes, the present findings advance gender and entrepreneurship scholarship.

The study introduces a theoretically meaningful distinction between performance-accelerating attributes (innovation, $\beta = 0.217$; risk-taking, $\beta = 0.223$; need for achievement, $\beta = 0.141$) and performance-sustaining attributes (resilience, $\beta = 0.217$; self-confidence, $\beta = 0.114$). This gradient contributes a theoretically refined understanding of how distinct dimensions of psychological capital differentially contribute to women's entrepreneurial success.

The most substantive theoretical contribution lies in establishing family support as a dual-role construct functioning both as an independent success predictor and as a boundary-condition moderator positioning it as a socio-cultural amplifier of entrepreneurial outcomes particularly relevant within South Asian collectivist household structures. Economic factors transmit the highest proportion of their effect through resilience, suggesting that access to economic resources primarily strengthens women's adaptive capacity rather than enabling direct performance improvements, a novel finding with implications for resilience-as-mechanism theorising in entrepreneurship.

7. PRACTICAL IMPLICATIONS

Given that innovation and risk-taking emerged as the strongest direct predictors, District Industries Centres and national MSME agencies including SIDBI and the Ministry of MSME should embed structured innovation and digital-technology training within existing programmes such as the Prime Minister's Employment Generation Programme and the ASPIRE scheme, with particular attention to value-addition activities, agri-processing applications, and digital marketplace access for women agripreneurs.

The substantial amplification of risk-taking by family support (FS × RT: $\beta = 0.277$) highlights the value of family-inclusive entrepreneurship workshops designed to build household-level risk tolerance by engaging spouses and other family members as co-stakeholders in women's business decisions. Because economic enabling conditions yield substantially greater returns when family support is present (FS × EF: $\beta = 0.271$), financial institutions should consider combining credit delivery with social capital activation through peer-group formation and family sensitisation, rather than treating credit access as a standalone intervention. The National Bank for Agriculture and Rural Development's Self-Help Group model offers an established structural vehicle for such integrated support.

At the community level, Krishi Vigyan Kendras and state agricultural extension services should deliberately incorporate family encouragement as a programme-design element. Women's entrepreneurship collectives and District Industries Centres should establish peer-mentoring networks that systematically address self-confidence and achievement motivation, given that family support demonstrably amplifies the entrepreneurial returns to both attributes.

8. Limitations

Several limitations warrant consideration. First, the cross-sectional design precludes causal inference; reverse causation where by entrepreneurial success itself strengthens psychological attributes, cannot be eliminated. Second, the sample is confined to three Western Tamil Nadu districts (Coimbatore, Tiruppur, and Erode), which are relatively industrialised. This geographic concentration limits the transferability of findings to more agrarian or resource-constrained districts within Tamil Nadu, to other Indian states, or to international agribusiness contexts

characterised by markedly different institutional conditions. Third, reliance on self-reported Likert-scale items introduces the possibility of social desirability effects, notwithstanding procedural and statistical CMV remediation.

9. Future Research Directions

Future research should prioritise longitudinal designs to establish causal sequencing and document how success determinants evolve as ventures mature. Comparative studies spanning multiple Indian states and cross-national investigations involving women agripreneurs in Sub-Saharan Africa or Southeast Asia would clarify how agro-ecological conditions, cultural gender norms, and institutional architectures moderate the relationships established here. Future model specifications should incorporate entrepreneurial self-efficacy, network capital, and financial literacy within moderated-mediation frameworks. Family support warrants disaggregation into emotional, instrumental, and social legitimacy sub-dimensions. Digital technology adoption mobile banking, agri-fintech platforms, and e-commerce integration constitutes a frontier variable of growing policy salience whose interaction with psychological and familial enablers merits dedicated investigation.

10. CONCLUSION

This study has systematically examined the multi-factorial architecture shaping women's entrepreneurial success in the agribusiness sector of Western Tamil Nadu, India, drawing on Upper Echelons Theory and Conservation of Resources Theory to interpret PLS-SEM findings obtained from 180 Udyam-registered women entrepreneurs across Coimbatore, Tiruppur, and Erode. The empirical evidence confirms that entrepreneurial success among women agripreneurs is neither reducible to a single dominant determinant nor explained adequately by either internal psychological attributes or external enabling conditions in isolation. Rather, success emerges from a configured interplay of cognitive, motivational, dispositional, economic, and socio-cultural forces.

The model achieved substantial explanatory power, accounting for 63.5% of the variance in women's entrepreneurial success ($R^2 = 0.635$) with strong predictive relevance and acceptable model fit (SRMR = 0.040). All eight hypothesised direct-effect paths were confirmed, with risk-taking propensity ($\beta = 0.223$) and innovation capacity ($\beta = 0.217$) emerging as the most potent performance accelerators, and family support ($\beta = 0.168$) as the most structurally versatile construct by virtue of its dual role as both direct predictor and boundary-condition moderator. Resilience, confirmed as a significant direct predictor ($\beta = 0.217$), was also found to partially mediate the pathways from need for achievement, self-confidence, risk-taking propensity, economic factors, and family support to entrepreneurial success, substantiating its conceptualisation as the adaptive mechanism through which resource endowments are converted into sustained performance under adversity.

The theoretical contributions of this investigation are threefold. First, the study extends Upper Echelons Theory to sole-proprietor women-owned micro-enterprises, demonstrating that UET's explanatory logic applies with heightened directness in owner-managed ventures where the entrepreneur herself constitutes the complete decision-making authority. Second, by integrating Conservation of Resources Theory into the mediation architecture, the study provides a theoretically coherent account of the generative process linking psychological capital to resilience to performance a process here to fore insufficiently specified in the agribusiness entrepreneurship literature. Third, the dual-role characterisation of family support as both predictor and amplifier advances contingency-theoretic entrepreneurship frameworks by establishing that certain intrinsic cognitive capabilities notably innovation, creativity, and resilience operate independently of the social support environment, while motivational and risk-oriented attributes are meaningfully conditioned by household resource endowments.

For policymakers and enterprise development practitioners operating within India's MSME ecosystem, the findings carry clear prescriptive implications: interventions combining innovation-oriented training, risk facilitation workshops, and family-sensitisation programmes are likely to yield substantially greater returns than single-lever credit or skills-focused policies applied in isolation. The National Bank for Agriculture and Rural Development, District Industries Centres, and state agricultural extension agencies possess the institutional infrastructure to deliver such integrated interventions at scale, particularly through Self-Help Group and Krishi Vigyan Kendra channels that already reach women agripreneurs across Western Tamil Nadu.

In summary, women agripreneurs in Western Tamil Nadu possess significant entrepreneurial potential that is activated most powerfully when psychological dispositions are supported by family encouragement and enabling economic conditions. Realising this potential requires coordinated action across household, community, and institutional levels an insight that carries relevance not only for Tamil Nadu but for the broader landscape of women's agribusiness entrepreneurship across South Asia and other emerging economies where family structures and resource constraints create analogous developmental challenges.

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Annexure 1. Measurement Items and Sources

Variables	Measurement items	source
Innovation (IN)	IN1: I regularly introduce new or improved products/services in my business.	Lai et al. (2010); Zhang et al. (2025)
	IN2: I actively seek innovative solutions to business challenges.	
	IN3: I adopt new technologies to improve business operations.	
Creativity (CR)	CR1: I generate original ideas to differentiate my business from competitors.	Shahab et al. (2018); Osmani et al. (2021)
	CR2: I use creative approaches in marketing and promotion activities	
	CR3: Creativity helps me identify new business opportunities	
Resilience (RS)	RS1: I continue to work towards business goals despite difficulties or failures	Kirmayer et al. (2011); Badzaban et al. (2021)
	RS2: I remain committed to my enterprise even during financial challenges	
	RS3: I view obstacles as opportunities to learn and improve.	
	RS4: I can bounce back financially and operationally from unexpected losses.	
Need for Achievement (NFA)	NFA1: I set challenging goals for myself and my business, and I am motivated to grow my business	Zeffane (2013); McClelland (1961)
	NFA2: I constantly work towards improving my business performance.	
	NFA3:I feel satisfied only when I achieve high levels of success	
	NFA4:I often put pressure on myself to achieve as much as I can	
Self-confident (SF)	SF1:I am confident in making important business decisions and believe in my capability to run the business successfully.	Twibell et al. (2008); Kirkwood (2009)
	SF2: I can handle unexpected business problems confidently	
	SF3:I trust my judgment while dealing with customers and suppliers	
	SF4: I am confident in my ability to overcome business challenges and achieve my goals.	
Risk-taking (RT)	RT1:I am willing to take calculated risks to expand my business.	Miller & Friesen (1982); Dalborg et al. (2015)
	RT2:I am open to trying new ideas or products in my business	
	RT3:I invest in opportunities even if the outcome is uncertain	
	RT4: I am willing to pursue business opportunities despite the possibility of failure.	
Economic Factors (EF)	EF1:I have adequate access to financial support from banks and other lending institutions, which helps me run my business smoothly.	Wube (2010); Lindvert et al. (2017)
	EF2: Government subsidies or schemes support my business growth.	
	EF3: Economic conditions in my region favors my business operations.	
	EF4: My business is offering a good product at a competitive price	
Family Support (FS)	FS1: My family members provide emotional and moral support.	Chu (2010);
	FS2: When I have problems with my business, my family will help me out	
	FS3: My family always supports me in all aspects of my business concerns.	

Women Entrepreneurs Success (WES)	WES1:I am satisfied with the increase in customer retention & satisfaction of the firm.	Khan et al. (2021)
	WES2: My business is offering high-quality products and services	
	WES3:Family income tends to increase	
	WES4: I am satisfied with the increase in the profitability of the firm.	
	WES5: My business have the capacity to develop new products and processes	