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Determinants Influencing the Growth of Women-Owned Micro and Small Businesses: A Quantitative Study of Rural Areas in Sindh Province

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Abstract
This study looks into the multi faceted drivers that determine the development of women owned micro and small businesses in rural Sindh Province in Pakistan. Following a quantitative approach, where data was gathered on 300 nascent female entrepreneurs in various rural districts of Sindh area, the analysis has been done using SPSS in its preliminary analysis and hence structural model and moderation analysis using smart PLS-SEM. The seven significant hypotheses in the research are the direct effects of the skills of the owner, family, social, market, and technological variables on the development of the business, as well as the modifying activities of the type of the business sector and governmental support. The findings support the hypothesis of innovative ability of the owner, the family support mechanism, and the digital adoption as key contributors to the growth of the business with significant and positive effects, whereas social aspects manifest a more complicated dual effect. Market factors indicate indirect and not direct effects. Notably, the examined study determines that the statistical significance of the moderating effects of both business industry and government subsistence has been important to multiple growth associations. These results offer the empirical evidence of the intersectional nature of the entrepreneurial success in conservative rural areas and present specific advice to policymakers, development organizations, and support organizations. The study enhances the use of the Resource-Based View and the Institutional Theory in the understanding of women micro-enterprises in third world economies and provides practical information necessary in the designing of context sensitive interventions, which can mitigate the never-ending obstacle women entrepreneurs in various fields of business.

KEYWORDS: - Micro, Family, Social, Market Factors, Women Owned.

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Introduction

The increase in the number of women who are engaging in business and economic activities has completely changed the entrepreneurship world over. In the third world countries such as Pakistan, women in business are not merely the source of empowerment at the personal level, but also the agent of economic development, job creation and individual poverty reduction. Nonetheless, the entrepreneurship experience among rural women is interwoven with complicated challenges, which are not easy to encounter in such places as Sindh Province mainly because of the social-religious norms social norms, limited resources, and barriers in the system. The FEs practice has existed and in fact flourished in rural Sindh where the economy of need interrelates and comes into collision with ancient gender roles to fashion a paradoxical terrain composed of restraints and possibilities in which it exists. This paper, thus, aims at defining and assessing the determinant variables that drive the growth of women DESCOs in such rural settings (Ayaz, D. 2024).

Although more academic efforts focus on women entrepreneurship around the world, the vast knowledge gap has not been bridged over the past decades on the exact variables that help and trigger business growth of women in rural Sindh. Though the socio-cultural processes of urban centers have been successfully reviewed by the previous studies and broader countrywide sampling has been applied, the country rural dimension should be individually investigated. In its turn, the current research closes this gap as it considers seven dimensions of critical aspects that are supposed to affect business development: skills and innovation capacity of the owner, family, social (cultural norms, networking) and market dimensions., There is a technological factor and moderators are type of business sector and support of government. We obtain empirical data on the relative significance of these determinants by use of strong quantitative methodology that incorporates SPSS to conduct preliminary analysis and Smart PLS to do the structural equation modeling. (Kaleri, N. A. (2025)

The study has theoretical basis on the Resource-Based View and Institutional Theory which on the whole give a thorough framework on how internal abilities and external institutional milieu interact to influence entrepreneurial results. When applied to women owning micro and small enterprises in rural Pakistan, these theoretical lenses can be used to describe how the interactions between the resources available to an entrepreneur (skills, technology, family support) and the institutional situations (cultural norms, policies of governments, market structures) engage to give rise to different business growth patterns. The research work adds to the elaboration of these theoretical points of view to the particular environment of women-owned micro-enterprises in rural Pakistan, where women struggle to handle not only business but also socio-cultural challenges. (Parmar, V. (2023).

Literature Review and Theoretical Framework

Theoretical Foundations: Resource-Based View and Institutional Theory

Resource-Based View (RBV) and the Institutional Theory offer the study an alternative theoretical approach. RBV focuses on the fact that competitive advantage is due to valuable, rare, and difficult-to-imitate resources the firm has control over or

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in the case of micro-enterprises, to the entrepreneur. In the case of women-owned businesses in the rural areas of Sindh, those resources include individual capabilities (skilled, knowledge, innovativeness), technological resources (digital tools, information access), and relationships resources (family support, social networks). The concept of RBV being extended to the situation acknowledges that women entrepreneurs tend to create particular resource sets that are conditioned by their own status in house and community setups. (Ayaz, D. 2024).

This view is supplemented by the Institutional Theory in that formal and non-formal institutions, laws, regulations, cultural norms, social expectations influence entrepreneurial behavior and consequences in a positive and negative way. In societies that are conservative in the rural areas, women are often affected by informal institutions in ways that are very strong on their economic participation. The combination of these theoretical approaches offers a powerful platform on which the investigation of both internal resource endowments and external institutional limitations can be identified in aggregate to specify business growth pathways to women entrepreneurs in rural Sindh.

Determinants of Women's Entrepreneurial Success: An Expanded Framework

Table 1: Key Determinants and Moderators of Women's Entrepreneurial Growth in Rural Sindh

Determinant Category	Specific Factors	Theoretical Basis	Expected Impact on Growth
Owner's Skills & Innovation	Technical skills, Business acumen, Adaptability, Creative problem-solving	Resource-Based View, Human Capital Theory	Positive, direct effect on business expansion and resilience
Family Factors	Household composition, Spousal support, Family labor contribution, Decision-making autonomy	Family Embeddedness Perspective, Social Capital Theory	Mixed effects (supportive vs. constraining depending on cultural context)
Social Factors	Cultural norms, Networking opportunities, Community	Institutional Theory, Social Capital Theory	Significant but complex (can be both enabling and restrictive)

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Determinant Category	Specific Factors	Theoretical Basis	Expected Impact on Growth
	acceptance, Social capital		
Market Factors	Customer access, Competition intensity, Supply chain reliability, Market information access	Resource-Based View, Market Orientation Theory	Positive effect moderated by infrastructural limitations
Technological Factors	Digital adoption, Information access, Mobile technology use, E-commerce capabilities	Technology Acceptance Model, Digital Divide Theory	Positive effect, potentially moderated by infrastructure and literacy
Business Sector Type (Moderator)	Agriculture-based, Handicrafts, Retail trade, Small-scale manufacturing	Contingency Theory, Industry-Based View	Differential effects across sectors with varying capital requirements and market structures
Government Support (Moderator)	Financial assistance, Training programs, Regulatory facilitation, Infrastructure development	Institutional Theory, Policy Support Theory	Positive moderating effect enhancing impact of other determinants

Owner's Skills and Innovation Capacity: Women entrepreneurial traits are an imperative base to the success of business. Research reveals that need to achieve, risk taking propensities and self confidence are very crucial determinants of entrepreneurial performances among women. Bringing together these psychological qualities and practical business abilities, such as financial literacy, marketing-specific abilities, and technical skills peculiar to local industries, in the setting of rural Sindh. The innovative capacity vital in the resource-limited environment is the capacity to create new products, services, or processes as a highly useful resource

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enabling businesses to stand out and cope with the dynamic market conditions. The(H1) hypothesis will be that these personal abilities directly and positively affect business development. (Ayaz, D. 2024).

Family Factors: The family aspects have dualistic nature in the occurrence of entrepreneurship in women in conservative rural society. On the one hand, the family members may contribute to the necessary resources in terms of labor, capital, and emotional support. Conversely, the conventional gender roles tend to give household duties, which are incompatible with business requirements, thus may restrain growth prospects. Other studies in similar settings have brought forth the effect of household structure, premature unions, and family size in influencing women to employ time and resources in the pursuit of businesses. Such limitations are especially high in rural Sindh, where the cultural demands of the female roles are still strong. According to the second hypothesis (H2), family factors have significant impacts on business growth, the nature of which can be positive or negative, but also which might differ depending on particular family patterns.

Social Factors: The social world that includes cultural values, religious dictates and the networked systems forms a complex ecosystem of women entrepreneurs in rural Sindh. Traditional society of Pakistan has their cultural norms that tend to limit the movement of women and the contact with male clients or suppliers, and this constitutes a serious hindrance to business. At the same time, the social networks, both formal and informal, may be a source of invaluable business information, mentor, and entry to the market. The reciprocal interaction of restrictive norms and enabling networks leads to paradoxical situation since social aspects can both limit and enable businesses to develop. The complexity of this is solved by the third hypothesis (H3) where it is proposed that social factors have a significant relationship with business growth. (Ayaz, D. 2024).

Market Factors: The market competencies in rural Sindh have been both supporting and a challenge to women operating businesses. The geographical isolation and the lack of infrastructure maybe a limitation to customer access, and competition can be formal and informal. Another important issue is supply chain reliability, especially when it comes to a business that requires constant supply of inputs. Studies have shown that women involved in businesses in the rural setting tend to have extra gender-related restrictions in the marketplace, such as discriminatory attitudes in business dealings and difficulty in accessing commerce areas. The fourth hypothesis (H4) is the one that focuses on the direct effects on the business growth by these market factors.

Technological Factors: The digital technologies offer opportunities and challenges to digital technologies to women entrepreneurs in the rural Sindh. Rural Pakistan has moved much further in terms of mobile phone penetration, allowing the possibility of digital business tools and mobile banking as well as better access to market

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information. But there are gender inequalities in digital literacy, access to internet at lower costs, and cultural restrictions on technological access by women act as a limitation to digital uptake. Past studies indicate that once women break the shackles, technology has the potential to be a formidable leveler and decrease mobility factors and growing the market. Hypothesis (H5) is that technological factors influence the growth of business positively and significantly and it might be common conditional on availability of supporting infrastructure and digital skills.

Business Sector Type as Moderator: Women in business can make a significant contribution towards the impact of different determinants on growth owing to the type of business in which they engage in. The business environment of agriculture-related companies has varying opportunities and limitations in comparison to the handicraft production, the retail trade, or the small-scale manufacturing. There may be sectoral disparities in capital requirements, market structure, the complexity of value chains and cultural suitability to women participation, which may introduce different channels to business development. Hypothesis 6 (H6) assumes that the type of business sector substantially moderates the effect of other determinants on business development to establish circumstances-specific effects of determinants.

Government Support as Moderator: Government programs and policies could also be one of the possible discursively critical institutional determinants of women entrepreneurial performance. Pakistan There are several programs at the provincial and federal level which are committed to encouraging women entrepreneurs by providing financial assistance, skilling, and facilitation of guidelines. But more and more these initiatives have been unsuccessful especially in rural regions due to implementation gaps, bureaucracies, and a lack of awareness. Under the seventh hypothesis, (H7), the government support is said to play a significant moderate role in the effect of other determinants on the growth of the business, which may increase the beneficial effects in the presence and access.

Methodology

Research Design and Sampling

The research design adopted in this study will be a quantitative research design and a cross-sectional survey design to investigate the determinants that affect the growth in women-owned micro and small enterprises in the rural Sindh region. The target population will be women in the business with less than 20 employees (micro) and 20-50 employees (small), who have businesses in the rural districts of Sindh Province. Stratified sampling method was used to properly represent the various geographical locations and different four major business sectors that are common in the rural Sindh: Agriculture based enterprises, handicraft, retail trade and small-scale manufacturing.
This will include 300 rural Sindhi nascent female entrepreneurs (initially 200, which is now 300 to meet the moderation analysis demands), in line with the earlier studies that evaluate complex models involving moderating effects. To type out the possible obstacles encountered during accessing women business owners in conservative rural

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populations, the research team has done so with the local women business associations, community organisations and the Small and Medium Enterprises Development Authority (SMEDA) to identify and get in touch with possible respondents. The involvement was also voluntary with high levels of confidentiality applied to counter any kind of sensitivities that might arise when women discussed business issues amongst conservative communities.

Measurement Instrument and Data Collection

A questionnaire was tested with solved questionnaires of the studies conducted about the entrepreneurship of women with modification to the rural Sindh context. The questionnaire was originally written in English language, translated into the Sindh and Urdu (the major languages spoken by respondents) and translated back again, conceptually equal. The pilot study involving 40 women entrepreneurs aimed at testing the reliability of the instruments, their cultural suitability, and understandability; the small-scale test assumed some alterations in terms of terminology and format of responses. (Ayaz, D. 2024).

The questionnaires captured seven constructs which included (1) Business Growth (dependent variable), as calculated through indicators of revenue growth, employment, asset growth, and market growth during the last two year period; (2) Owner Skills and Innovation Capacity (measured by self-reported data of technical, problem-solving skills and adoption of new practices); (3) Family Factors (measured through spousal support, family labor contribution, domestic responsibility sharing and family encouragement); (4) Social Factors; (5) Market Factors; (6)

All the constructs (except Business Sector Type) utilised multi-item measures scales with 5-point Likert responses that ranged through firmly disagree to strongly agree. Business Sector Type was a categorical variable with four categories that are based on the stratification approach.

Data will be collected between January and May 2025 in the span of five months, where enumerators will be trained females to help women feel at ease to participate. Considering the differences in literacy of respondents, enumerators also used a verbal explanation and aid where necessary when the same question was explained using same words. In order to improve the quality of the data, the introduction of supervision and occasional verification of the filled questionnaires was performed during the entire collection. (Ayaz, D. 2024).

Analytical Approach

The methodology applied was the two-step analysis method which also involved both Smart PLS (version 4) and SPSS (version 27). All analyses made were done with the help of SPSS to prepare preliminary data screening, descriptive statistics, reliability analysis, correlation analysis, and moderation analysis to ascertain the data quality and the basic relationship between variables under discussion. To test the construct validity, confirmatory factor analysis was carried out to verify the measurement model.

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Main type of analysis was Partial Least Squares Structural Equation Modeling (PLS-SEM) via Smart PLS that is especially powerful with a complex model with many constructs and moderators, and can work even with small samples. PLS-SEM was chosen instead of covariance-based SEM, because it is more appropriate in predictive research objectives, can accommodate both formative and reflective constructs, is less sensitive to normality conditions, and better at moderation effect to take into account, since the model is expanded with two moderators.

The analysis was conducted in three steps, namely (1) Testing the measurement model to obtain the evaluation of reliability (using the Cronbach alpha, as well as the composite reliability), convergent validity (using the average variance extracted), and discriminant validity (using the Heterotrait-Monomethod level), (2) Testing the structural model to test the hypothesized direct relationships on the basis of the path coefficient and significance values (through bootstrapping of 5000 subsamples) and the coefficient of determination (R 2) and predictive relevance (Q 2

In the case of categorical moderator (Business Sector Type), an analysis of the form of understanding the path coefficients in the four groups of the sectors was done using a multi-group analysis (MGA) and the difference in the results evaluated with permutation tests. In the case of the continuous moderator (Government Support), the interaction term analysis was done using product-indicator methods to reflective-reflective interactions.

Results

Measurement Model Assessment

The measurement model showed acceptable levels of reliability and validity in each of the constructs. All constructs had values of alpha that were above the recommended value of 0.70, with 0.73 (Market Factors) and 0.92 (Technological Factors). The scores of composite reliability also were strong with all constructs registered above 0.80, which showed strong internal consistency. The Convergent validity was attained by the realization that the Average Variance Extracted (AVE) of each construct was high enough to reach the required 0.50, with values of 0.52 to 0.71.

Table 2: Measurement Model Reliability and Validity Statistics

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Discriminant Validity Established
Business Growth	0.87	0.90	0.65	Yes
Owner's Skills & Innovation	0.89	0.91	0.68	Yes

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Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Discriminant Validity Established
Family Factors	0.83	0.88	0.59	Yes
Social Factors	0.79	0.86	0.53	Yes
Market Factors	0.74	0.84	0.56	Yes
Technological Factors	0.92	0.94	0.71	Yes
Government Support	0.81	0.87	0.57	Yes

Discriminant validity was established by using the Fornell-Larcker criterion whereby, the square root of AVE of each construct was found to be higher than correlations between the construct and others. Also, Heterotrait-Monotrait ratios (HTMT) were at all levels less than the conservative level of 0.85 an additional finding, which is in favor of discriminant validity. These findings are all indicative of the fact that the measurement model has sufficient psychometric properties that warrant structural model testing.

Structural Model and Hypothesis Testing

Structural model analysis studies indicated a lot of information regarding the determinants of business development among women-owned businesses in rural Sindh. That is why the coefficient of determination (R^2) of the endogenous construct (Business Growth) was 0.67, which is a significant cover of variance in business growth- in social science research, this is a huge explanatory power. The predictive relevance of the model was established based on the Stone-Geisser Q^2 value of 0.45 which is not zero and therefore shows that the model has medium to large predictive relevance.

Table 3: Structural Model Results and Hypothesis Testing

Hypothesis	Relationship	Path Coefficient	T-Statistic	P-Value	Hypothesis Decision	Effect Size (f^2)

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Hypothesis	Relationship	Path Coefficient	T-Statistic	P-Value	Hypothesis Decision	Effect Size (f^2)
H1	Owner's Skills → Business Growth	0.39	5.42	<0.001	Supported	0.25 (Large)
H2	Family Factors → Business Growth	0.28	4.03	<0.001	Supported	0.13 (Medium)
H3	Social Factors → Business Growth	0.16	2.22	0.027	Supported	0.05 (Small)
H4	Market Factors → Business Growth	0.10	1.38	0.168	Not Supported	0.02 (Negligible)
H5	Technological Factors → Business Growth	0.31	4.27	<0.001	Supported	0.14 (Medium)

Owner's Skills and Innovation Capacity (H1): The H1 is comfortably supported, and skills and innovative capacity of the owner have a significant positive impact on business growth (0.39, 0.001). This observation suggests the existence of significantly increased growth of business in women entrepreneurs who have better business competencies, technical skills and innovative approaches. The significant effect size (f 2 = 0.25) indicates that the improvement of owner capability is one of the strongest levers to use in increasing business in this scenario.

Family Factors (H2): H2 is confirmed by the findings, and it provides significant positive and significant relationship between supportive family factors and business growth (= 0.28, p = 0.001). The medium effect size (f 2 =0.13) serves to exemplify

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the relevance of family dynamics in determining the outcome of entrepreneurship. The qualitative information on the applicability of family support is provided under the open-ended questions and indicates that family support comes in a range of forms such as shared domestic chores, economic support, and emotional get-up that facilitate women to put in more time and efforts in developing a business.

Social Factors (H3) The social factors demonstrate that business expansion is moderately and significantly affected (0.16 0.027) which nondeterministically supports H3. The little value of effect and qualitative data (f 2 = 0.05) however, points to 2-sided duality of the working of the social factors. Despite the opportunities that networking offers and acceptance of the community, which could be useful to build the business, the cultural norms and mobility restrictions restrain the growth of the business as well. This ambivalent role is what makes one explain the comparatively small direct effect that was witnessed during the quantitative analysis.

Market Factors (H4): Contrary to expectations, the market conditions exhibit a non significant direct influence (p = 0.168, 0.10) on the business growth and hence rejecting H4. This surprising result implies that market conditions might have the effect of running through less direct mediating processes, and not have an immediate impact. Post-hoc analysis suggests that there are market factors which have a profound effect on the development of the skills of the owner (0.24, p = 0.004) and which moderate the effect of social factors on the development of business but do not impact directly but with certain nuances.

Technological Factors (H5): It is in favor of H5 with a significant positive effect (= 0.31, p < 0.001) of technological factors on the growth of the business. This observation means that the digital adoption and access to information are enabling factors that can facilitate the growth of businesses in rural Sindh amongst women entrepreneurs. The medium level of effect size (f 2 = 0.14) can be taken to imply that the effects of technology have risen in prominence as predictors of entrepreneurial success, maybe to counter the ancient obstacles attendant to mobility barriers and gaps in the market information.

Moderation Analysis Results

Table 4: Moderation Analysis Results for Business Sector Type and Government Support

Moderating Relationship	Path Coefficient Difference	T-Statistic	P-Value	Moderation Effect	Hypothesis Decision

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Moderating Relationship	Path Coefficient Difference	T-Statistic	P-Value	Moderation Effect	Hypothesis Decision
Business Sector Type (H6):					
Owner's Skills → Growth	0.18	2.31	0.021	Stronger for retail/manufacturing	Supported
Technological Factors → Growth	0.21	2.67	0.008	Stronger for retail/manufacturing	Supported
Social Factors → Growth	0.15	1.98	0.048	Stronger for handicrafts/agriculture	Supported
Government Support (H7):					
Owner's Skills × Gov Support → Growth	0.17	2.24	0.025	Positive moderation	Supported
Technological Factors × Gov Support → Growth	0.23	3.02	0.003	Positive moderation	Supported
Market Factors ×	0.19	2.51	0.012	Positive moderation	Supported

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Moderating Relationship	Path Coefficient Difference	T-Statistic	P-Value	Moderation Effect	Hypothesis Decision
Gov Support → Growth					

Business Sector Type as Moderator (H6): Multi-group analysis demonstrates that the type of business sector describes some significant moderating effects on a number of relationships supporting H6. It is also found that skills of the owner have a more influential effect on the development of business in retail trade and small-scale manufacturing than on businesses operating in agriculture and handicraft (difference in path coefficients = 0.18, p = 0.021). On the same note, technological impacts on growth are greater in the retailing and manufacturing industries (path coefficient difference = 0.21, p = 0.008). On the other hand, social factors have more effect in handicrafts and agriculture based businesses (path coefficients difference = 0.15, p = 0.048) indicating that the businesses that are rooted more in traditional community structures enjoy the effect of social capital. These results underline the industry-specific ways to develop businesses, and it might be wrong to believe that the universal methods of supporting the female entrepreneurs are always efficient.

Government Support as Moderator (H7): The analysis gives a strong support to H7 proving that the government support plays a great role in moderating a number of relationships in the model. The relationship between skills of the owner and the business growth is positively moderated by the government support (interaction effect = 0.17, p = 0.025), which can be explained as the skills development programs have more significant effects with the help of other types of government assistance. Not the least, the positive impact of technological factors on growth is somewhat enhanced by government support (interaction effect = 0.23, p = 0.003) which implies that the activities of digital adoption initiatives are especially effective when implemented in a larger government support settings. The interaction effect of market factors and growth is also the determinant that is moderated by government support (interaction effect = 0.19, p = 0.012), possibly assisting women entrepreneurs to overcome operating in adverse market conditions. These result indicators emphasize the effect of interventions (which are well coordinated by the government) that can fix several constraints simultaneously.

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Additional Analysis: Mediation and Interaction Effects

Considering that market factors did not significantly influence business growth, post-hoc studies were conducted to understand possible mediation and interaction effects. Market factors also show a significant impact on the growth of the business since they affect the development of skills of the owner (indirect effect = 0.08, p = 0.029) and technological adoption (indirect effect = 0.11, p = 0.014), indicating such an influence under partial mediation of the two. In addition, market considerations help to soften the connection between social reasons and business development, where the impact of social networks is higher in more advantageous business market (interaction effect = 0.14, p = 0.041).

Another significant interaction effect was also found between family factors and the skill of the owner, in which positive effect of the owner capabilities to the expansion of the business was more significant when there is a strong family support (interaction effect = 0.19, p = 0.011). This observation indicates that family support and personal capabilities work together and not independently, produced effectual complementary effects that increase business development even greater than the contributions made by the individual factors.

Discussion

Interpretation of Key Findings

Findings of this enlarged research offer empirical confirmation of the major role that is played by the skill of owner, factors in family, and factors in technology on the development of women-owned micro and small businesses in the rural Sindh and the determination of significant mediating effects of the type of the business sector and government supports. H1 (owner skills) and H5 (technological factors) have a high level of support as these two are in agreement with the Resource-Based View that highlights the strategic value of valuable internal resources to gain competitive advantage. Traced in terms of women-owned micro-enterprises in rural Sindh, human capital (skills, knowledge) and technological capital (digital tools, access to information) can be identified as especially significant drivers of extending the business.

The acceptance of H2 on the issue of family is a confirmation of how intrinsic women entrepreneurship in rural Sindh is towards business activities that cannot be decoupled to household activities. This conclusion builds upon existing studies that suggest that women entrepreneurs in cultures that endorse conservatism have to balance complicated transactions between business and household worries. The observed positive connection leads to the conclusion that when families support through labor sharing, financial support, or emotional support, a woman in business will be able to better allocate the available time and resources towards expansion.

The substantial yet lesser influence of the social factors (H3) indicates the dualistic character of the social environment of the rural Sindh. Although networking and acceptance of community members may be used to sustain business, the cultural norms or views on the proper gender roles may tend to enlist limitations that restrict the opportunities to expand. This counterintuitive result aids in understanding why

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social aspects reveal a smaller effect size than expected- the enabling and constraining effects at the same time counterbalance in some extent.

The rejection of H4 on market factor gives a counter-intuitive result that should be interpreted well. The fact that this outcome came about superceding the fact that the conditions in the markets are unimportant indicates that they are affected by more complicated mechanisms than direct effects on growth. The mediation analyses indicate that the market factors have great influence on the growth of business indirectly through the way of development of skills and adoption of machinery. The result is consistent with resource-based views that some entrepreneurs operating in a tough business environment can acquire some compensatory abilities that eventually result in improved business performance despite its limitations.

The high level of support of H5 on technological consideration, is quite timely discovery with the accelerated digitization in Pakistan. Digital adoption has been shown to have a significant positive impact on the growth of a business, which implies that it can be used as an effective equalizer by women in rural areas running a business, which may decrease some of the traditional barriers of the mobility restrictions, lack of access to information in the market, and access to financial resources. The significance of this finding in recovery strategies that follow the pandemic and gain more weight on digital inclusion can be concluded.

The strong moderating influences that have been found in both type of business sector (H6) and government support (H7) are important contextual adjustments that we can add to what we know about women entrepreneurial growth. These findings create a problem with the universalistic models of entrepreneurial success and point toward the need of distinguishing approaches that consider spectral peculiarities and institutional contexts. The more significant role of technological influences in the retail and manufacturing divisions, e.g., implies that the digitalization strategies should be implemented in these sectors first, yet the consideration of the fact that the agriculture and handicrafts can be served better with the development of social capital should be made.

Theoretical Implications

Practical Implications

This deepened study serves some key contributions to the theoretical knowledge of women entrepreneurship in conservative rural settings. First, it elaborates Resource-Based View by showing how various kinds of resources (human, social, technological) interrelate together to generate a competitive advantage in resource-limited situations. The immense influence of owner talents and technological issues confirm the role of RBV original stress on the core capabilities of companies, and the great modulating importance of government assistance emphasizes the influence of the external institutional factors on the transformation of resources into performance results.

Second, the paper contributes to the knowledge of contingency variables in entrepreneurship of women based on the substantive moderating role of business sector type. These results are consistent with the views of contingency theory that various entrepreneurial approaches and resource efficacy are contingent on factors

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relating to the context, including industry characteristics. The industry patterns that we can see indicate that the theoretical models of entrepreneurship among women must take into consideration industry contingencies instead of postulating general relations among all types of business.

Third, the study adds to the institution theory by showing that the government assistance moderates the correlation between personal assets and commercial performance. This observation underscores the importance of the formal institutions in enhancing or limiting the efficiency of the entrepreneurial resources. Even those individual resources that are valuable might not translate to the growth of the business in an environment where there is poor institutional support, and a high institutional setup can enhance its effects.

Fourth, the research contributes to the theoretical knowledge on the digital divide and its effects on the entrepreneurship of women in the developing economies. Such a pronounced positive role of technological factors, in combination with its mediating role by government support, is an indication that digital inclusion is not just a challenge of technical characteristics but an institutional, resource-intensive challenge that demands simultaneous actions on the three issues of access, skills, and supportive ecosystems.

The results provide numerous practical implications to policymakers, development organizations, and support institutions trying to make rural Sindh more entrepreneurial by women:

Sector-Specific Skills Development: Since the skills of the owner are differentially affected by business sector, the training programs ought to take sector specific applications and not the general entrepreneurship training. Advanced technical and digital skills would be most beneficial to the retail and manufacturing industries, whereas the traditional craft improvement and social capital growth would be more beneficial to the agriculture and handicraft industries.

Family Engagement Strategies: Considering the hugeness of family factors, an intervention must have a household-based approach but not solely target women in business. This could involve sensitizing relatives on the economic advantage of women entrepreneurship, training women on negotiation skills to help them win over their families and programs aimed at rewarding families that are supporting in the society.

Digital Inclusion with Institutional Support: The strong positive effect of technological factors, amplified by government support, suggests the importance of integrated digital inclusion strategies. These should combine affordable access to digital devices and connectivity with digital literacy training, relevant local content development, and supportive policies (e.g., digital payment systems, e-commerce regulations). Special attention should address gender-specific barriers to technology adoption in conservative rural communities.

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Differentiated Government Support Programs: The buffer of government support implies that policies can no longer afford to operate under uniform strategies on differentiated support packages based on the needs and growth strategies in sectors. Technology adoption incentive and market linkage programs may be most helpful to retail and manufacturing businesses, whereas collective marketing, quality certification, and preservation of traditional skills may be more important to agriculture and handicraft business.

Market Environment Improvements: Market factors did not have a direct impact, but the indirect impact of these factors in terms of skills and technology is that better infrastructure of the market place is of significance. Examples of these initiatives may be rural market development, development of transport infrastructures, market information systems, and discouraging gender-based discrimination on transactions in the market.

Social Network Enhancement with Cultural Sensitivity: Although social factors prove to have a great impact, they have to be implemented with cultural sensitivity. The interventions must operate within the current cultural systems to increase the networking of women using female-only business forums, mentoring systems where experienced and novice entrepreneurs engage and using online communication platforms that are observant of cultural norms concerning gender interaction.

Integrated Support Packages: The effects of interaction that we witnessed in the analysis indicate that holistic interventions that combat a number of determinants at the same time might have significant effects compared to single-factor interventions. It can be illustrated by an example of interaction synergy between skills training and family engagement, access to technologies, and governmental support and provision of subsidies that would enhance personal gains.

Limitations and Future Research Directions

Although this study is a valuable source of information, a few methodological limitations must be accepted. To begin with, because of the cross-sectional type of design, causal rather than definitive causal relationships can be argued to have been observed as a relationship. Future studies using long run designs would better prove causal relationships between the determinants and the business growth trends.

Second, self-reporting techniques cause the possibility of common method bias, especially on highly sensitive issues such as family dynamics and cultural restrictions. The proposed areas of investigation may use mixed methods studies that would utilize quantitative surveys with qualitative interviews to offer more contextual data whilst slowing down measurement constraints.

Third, the interest in rural Sindh, although introduces valuable specifics of context, restricts the generalization of results to other areas of Pakistan or other cultural backgrounds. A comparison of the studies across various provinces or rural and urban contexts would be useful in isolating the region-specific and more global tendencies.

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Fourth, the study has analyzed two significant moderators but there are other possible moderating variables like the age of women, the level of their education, the level of the business lifecycle, or the particular geographical feature of rural Sindh that should be investigated in the future.

Fifth, technological factors were operationalized, but adoption and access were considered rather than the specifications, or digital business models of particular technologies. Future studies can examine the effects of technology types whereby, communication technologies, financial technologies, e-commerce platforms and production technologies can be differentiated.

Lastly, the paper has investigated state support as an abstract concept; future research can interrogate particular policy processes (financial subsidies, training programs, regulatory reforms) to determine which kinds of government intervention should produce the most significant effect with different kinds of women entrepreneurs.

Conclusion and Policy Recommendations

This broadened study offers empirical support that skills and innovation capacity of the owners, family aspects, social aspects, and technological aspects strongly affect expansion of women owned micro and SME in the rural Sindh and market aspects have an indirect process. Notably, the paper indicates that both the type of business sector and government support have significant moderating effects, which are context specific to the success of an entrepreneurship. All the findings are indicative of the entrepreneurship of women being rooted in the depths of domestic structures, cultures, and institutional nature, and that numerous and interacting variables dictate business growth opportunities.

On the premise of these findings, the policy recommendations proposed to encourage the growth of women entrepreneurship in rural Sindh are as follows:

Table 5: Summary of Policy Recommendations Based on Expanded Research Findings

Target Area	Specific Recommendation	Expected Outcome	Implementing Agencies
Sector-Specific Skills Development	Develop differentiated training curricula for agriculture, handicrafts, retail, and manufacturing sectors	Enhanced relevance and effectiveness of skills development, leading to 30-50% greater impact	SMEDA, Sector-Specific Training Institutes, Industry Associations
Digital	Implement "Digital	Increased	IT Ministry,

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Target Area	Specific Recommendation	Expected Outcome	Implementing Agencies
Inclusion with Support Ecosystem	Sindh Women Entrepreneurs" program combining affordable devices, digital literacy, and e-commerce support	digital adoption (40-60%) leading to market expansion and operational efficiency gains	Telecommunications Companies, Women Business Centers
Family-Centric Support Approaches	Create "Family Entrepreneurship Ambassador" programs recognizing supportive families; develop household negotiation training for women	Increased family support reducing domestic constraint burdens by 25-40%	Community Organizations, Local Government, Religious Institutions
Differentiated Government Support	Design sector-specific support packages with tailored combinations of financial, technical, and market linkage assistance	More efficient resource allocation with 20-30% greater impact per intervention dollar	Provincial Government, SMEDA, Sector Ministries
Market Infrastructure Development	Improve rural market facilities with designated women entrepreneur spaces; develop gender-sensitive market information systems	Reduced transaction costs (15-25%) and improved market access despite geographical constraints	Local Government, Commerce Department, Private Market Operators
Social	Establish sector-	Expanded	Women Chambers of

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Target Area	Specific Recommendation	Expected Outcome	Implementing Agencies
Network Enhancement	based women entrepreneur associations with regular networking events and mentorship programs	business connections leading to 20-35% increase in collaborative opportunities	Commerce, Business Associations, NGOs
Integrated Support Packages	Pilot "Women Entrepreneur Growth Hubs" offering coordinated access to training, technology, finance, and market linkages	Synergistic effects enhancing overall impact by 40-60% compared to isolated interventions	Multi-stakeholder Partnerships (Government, Private Sector, NGOs, Donors)

The interrelated nature of these recommendations indicates the interrelated determinants and moderators in this study. Co-ordinated but differentiated consideration of individual capabilities, family, technological access and institutional support by considering sectoral particularities will allow policymakers and development practitioners to establish an enabling ecosystem that will facilitate sustainable development of women owned businesses in rural Sindh.

In the end, women entrepreneurship in the rural regions is not only an economic necessity to develop the region but also, the way to gender equality and empowerment of women in the societies of high conservativeness. Female entrepreneurship has many such positive diffused effects to the provision of employment, diversity of incomes, and defiance of historic gender stereotypes about women engaging in economies. With the application of the evidence-based policies based on the research findings like this one, the stakeholders have an opportunity to quicken the transition of the rural economies toward more inclusive and prosperous in.

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