
Thriving Through Informality: Multidimensional Capital and Growth Resilience of Informal Micro and Small Enterprises in Bangladesh

S.M. Khan ^a, M.N. Alam ^a, I. Masroor ^b, M.H. Ahmed ^a, M.N.U. Nabi ^{a,*}

^a Business Administration Discipline, Khulna University, Khulna, Bangladesh

^b Human Resource Management Discipline, Khulna University, Khulna, Bangladesh

A B S T R A C T

Informal micro and small enterprises are central to livelihood generation, local production, and labour absorption in Bangladesh, yet their growth trajectories remain poorly explained by conventional SME frameworks and finance-centred assumptions. This study advances the understanding of informal enterprise growth by examining how multidimensional capital, specifically economic, human, social, and cultural capital, shapes growth resilience and determines enterprise movement across stages of decline, stagnation, and growth. A quantitative cross-sectional design was employed, drawing on survey data from 550 informal micro and small enterprise owner-managers selected through stratified random sampling. Growth trajectory was operationalised as an ordered dependent variable, and capital dimensions were measured using multi-item constructs. Generalised Ordered Logistic Regression was used as the primary analytical technique, with Ordinal Probit Regression applied as a robustness check to confirm the stability of the estimates. The results establish human capital as the most consistent and statistically robust predictor of growth trajectory, significantly increasing the probability of moving beyond decline and reaching the growth stage. Economic capital produces a positive coefficient but does not show a statistically significant independent association after the control variables are included. Personal savings and owner age also register significant associations with growth outcomes. These findings contribute to informal entrepreneurship theory by demonstrating that resource possession alone is a limited predictor of growth; what matters more decisively is the owner-manager's capacity to mobilise and convert available resources into productive outcomes.

Keywords: Emerging markets and developing economies, Generalised ordered logistic regression, Growth resilience, Informal microenterprises, Multidimensional capital

1. Introduction

Informal micro and small enterprises are a quintessential part of the economic landscape in Bangladesh. They create jobs and provide labour and local exchange in areas where there is not much formal employment (Piperopoulos et al., 2021). The magnitude of informality is

* Corresponding author: nnabi.m@ba.ku.ac.bd

significant, as the Bangladesh Labour Force Survey 2022 shows that the majority of employees and households rely on non-contractual and non-institutionalised activities, which is a measure of the extent of informality (Bangladesh Bureau of Statistics [BBS], 2023). They are also hard to measure with the traditional business register because many of them are not fully registered, have no formal accounting systems, or are not able to use state-supported services (Roy, 2025). The World Bank's Informal Sector Enterprise Survey acknowledges this measurement challenge and treats unregistered businesses as a distinct category of enterprise inquiry rather than a statistical residue of the formal economy (World Bank, 2025). This study adopts that logic and considers informality a particular form of organisation where entrepreneurs seek survival, stability and growth within an institutional constraint.

The literature on enterprise growth has gone far beyond finance-centred explanations for performance. The Resource-Based View suggests that the outcome of the firm depends upon the resources and capabilities it possesses and the ways it uses them, especially when they are heterogeneous, leading to performance differences (Barney, 1991). Bourdieu's theory of capital takes this further by demonstrating that capital can take economic, social and cultural forms, which can all influence access to opportunity and the reproduction of advantage (Bourdieu, 1986). This is corroborated by recent research on entrepreneurship, which shows that the impact of financial, human and social capital is collectively responsible for shaping entrepreneurial outcomes, and their effects are contingent on the institutional setting and the entrepreneur's ability to transform resources into action (Sahasranamam & Nandakumar, 2020). Informal entrepreneurship also indicates that business success is not only dependent on the basis of owning a particular type of capital but also on the interaction between various types of capital (Fourie et al., 2025).

The research on SMEs and entrepreneurship in Bangladesh has generated significant findings related to resources, institutional aspects and firm performance, but most of the studies are focused on formal or semi-formal enterprises. The study by Masroor et al. (2024) indicates that service ecosystems and value co-creation can positively influence the performance of IT SMEs in Bangladesh, but institutional voids can have a negative effect on such links. Alam et al. (2020) also prove that entrepreneurial risk perception and the decision-making process are useful in explaining internationalisation behaviour of firms under uncertainty. But their empirical contexts are very different from those of informal micro and small businesses, where growth is based on small savings, real-life experience, family labour, trust, reputation and community and culturally shaped business ideas (Haq et al., 2024).

There are a number of unfilled gaps in the current literature. First, research on SMEs in Bangladesh has largely been limited to registered SMEs, digital SMEs, export-oriented SMEs, and women-led SMEs, with little empirical work done on the informal micro and small enterprise sector, which is less visible and more complex to capture (Masroor et al., 2024; World Bank, 2025). Secondly, studies have focused on a single resource, whether it be economic, human or social, whereas informal entrepreneurs constantly engage with a mix of these resources in their daily decision-making (Sahasranamam & Nandakumar, 2020; Fourie et al., 2025). Third, cultural capital remains underdeveloped in enterprise growth research, despite evidence that risk attitudes, social expectations, business identity, and community acceptance can determine whether an informal enterprise remains stagnant or moves toward growth (Bourdieu, 1986). Finally, enterprise growth is commonly treated as a simple performance outcome, although informal enterprises may move across ordered stages of decline, stagnation and growth (Baier-Fuentes et al., 2023).

The research problem addressed in this study is that the growth resilience of informal micro and small enterprises in Bangladesh remains insufficiently explained by finance-centred and formal SME oriented models. Access to credit, savings and assets may support enterprise activity, but these resources may not produce growth unless the owner also possesses relevant knowledge, managerial confidence, market understanding and social legitimacy (Barney, 1991; Sahasranamam & Nandakumar, 2020). Likewise, social networks may help owners secure customers, suppliers or informal support, but such networks may be less effective when they are not accompanied by human capability or growth-oriented cultural dispositions (Bourdieu, 1986; Fourie et al., 2025). Therefore, this study aims to examine how economic, human, social and cultural capital influence the growth trajectories of informal micro and small enterprises in Bangladesh. The objectives are to assess the effect of each capital dimension on growth stage, examine movement from decline or stagnation towards growth and control for owner and enterprise characteristics.

This study makes three contributions that are closely related to the research of informal entrepreneurship. It is a conceptual approach which puts the Resource-Based View in conversation with Bourdieu's understandings of economic, social and cultural capital to explore the relationship between the various forms of resources and enterprise growth within the context of informality. It offers empirical evidence on 550 informal micro and small enterprises in Bangladesh, a sector which is less explored in the mainstream study of SMEs but has a significant role in employment, household livelihoods and local exchange. The study adopts a methodological approach that views enterprise performance as an ordered outcome of decline, stagnation, and growth, instead of dichotomising performance or using a single, continuous measure.

2. Review of Relevant Literature

2.1 Informal Micro and Small Enterprises in Bangladesh

Informal micro and small enterprises are businesses which are owner-managed and not fully registered, taxed and regulated, yet make a meaningful contribution to income generation, local exchange and employment (Salvi et al., 2023). Informal employment is the largest proportion of employment in Bangladesh, as reflected in the Bangladesh Labour Force Survey 2022, and similarly, informal sector enterprises are considered a specific population for empirical study rather than a residual of formal sector study as in the World Bank's Bangladesh Informal Sector Enterprise Survey (BBS, 2023; World Bank, 2025). Previous studies by the ADB also indicate that informal employment and informal production units are structurally important in trade, small manufacturing, services and transport in Bangladesh (Asian Development Bank, 2012). However, informal enterprises cannot be seen, first and foremost, as a regulatory failure (Saad et al., 2021).

2.2 Growth Resilience and Enterprise Trajectories

The notion of growth resilience is especially relevant when considering the development of informal micro and small enterprises, where the path of growth is often not linear (Salvi et al., 2023). Growth resilience, in this study, is defined as an enterprise's ability to not decline, to stay stable, and to progress toward growth regardless of limitations of resources or institutions. This is consistent with recent studies on SME resilience, where resilience is seen as a function of internal capability, social support and adaptive decision-making, rather than just financial resources (Tanner et al., 2022). It also mirrors the informal entrepreneurship research, which indicates that business success in informal contexts is related to the informal entrepreneur's motives, form of capital available to the business and the capacity to mobilise resources within an uncertain context (Fourie et al., 2025). Accordingly, decline, stagnation and growth may be

seen as ordered states of enterprise trajectory rather than unrelated states of enterprise business.

2.3 Resource-Based View and Multidimensional Capital

Barney's (1991) seminal argument is that firm performance is based on resources that are valuable, rare, imperfectly imitable, and non-substitutable, but this needs to be adapted when it comes to informal micro and small enterprises. While informal enterprises do not normally have formal strategic assets, patents or advanced managerial systems, they do, however, have meaningful differences in their savings, their practical experience, their supplier relationships, their customer trust, their family labour, their local reputation, and their entrepreneurial judgement (Shahid et al., 2022). Bourdieu's (1986) theory of capital takes this logic further by demonstrating that there are economic, social and cultural forms of resources, and that these can be transformed into each other. In informal settings, social relations can serve as an avenue for securing credit, cultural capital can help build customer trust, and human capital can be the deciding factor in whether or not scarce resources are used effectively (Barney, 1991; Bourdieu, 1986; Sahasranamam & Nandakumar, 2020).

2.4 Economic Capital and the Limits of Finance-Centred Explanations

Economic capital remains a necessary element of informal enterprise growth because working capital, savings, start-up funds, equipment and credit access determine an owner's ability to purchase stock, maintain production, absorb shocks and respond to market opportunities (Sobhan & Hassan, 2024). Sahasranamam and Nandakumar (2020) show that financial, human and social capital all matter for entrepreneurial entry, while Fourie et al. (2025) demonstrate that informal business success depends on capital availability and entrepreneurial motives rather than on economic resources alone. This distinction is important for the present study because informal enterprises may receive funds but fail to grow if owners lack record-keeping ability, market knowledge, confidence or growth-oriented decision-making. Economic capital is therefore best understood as an enabling resource whose value depends on its interaction with human capability, social embeddedness and cultural orientation (Dey et al., 2023).

2.5 Human Capital as a Capability for Resource Conversion

Human capital refers to education, business experience, financial literacy, managerial competence and the capacity to recognise and act on opportunities (Hj Talip & Wasiuzzaman, 2024). In informal micro and small enterprises, human capital is especially important because the owner usually performs multiple roles, including purchasing, selling, accounting, customer management and risk assessment (Hong et al., 2022). Recent SME research after the COVID-19 disruption suggests that human capital, innovation and entrepreneurial orientation are closely connected to SME growth, particularly where firms face uncertainty and weak institutional support (Maingehama, 2025). In the Bangladeshi literature, Alam et al. (2020) show that entrepreneurs' risk perception and decision-making approach influence the speed of foreign market entry, which reinforces the broader argument that entrepreneurial judgement shapes strategic outcomes. For the present study, human capital is therefore expected to be a central mechanism through which limited resources are converted into resilient enterprise growth.

2.6 Social Capital, Networks and Embedded Support

Social capital refers to the networks, trust-based relationships and social obligations through which entrepreneurs access information, customers, suppliers, informal credit and support during disruption (Khan et al., 2021). In informal enterprise settings, social capital may partly substitute for formal institutions because many owners rely on family members, neighbours,

market peers and long-standing supplier relationships rather than contracts, banks or formal business associations. Sahasranamam and Nandakumar (2020) argue that social capital affects entrepreneurial activity, although its effect is conditioned by the institutional environment. Recent resilience studies similarly suggest that social capital can support business continuity by strengthening access to advice, resources and emotional support during crisis conditions (Tanner et al., 2022; Shan et al., 2022). Bonding ties may protect survival, but bridging ties are more likely to support market expansion, innovation and external opportunity. Therefore, social capital should be examined as a context-dependent resource rather than as an automatically positive determinant of growth.

2.7 Cultural Capital, Aspiration and Legitimacy

Cultural capital is less frequently examined in SME growth research than finance, skills or networks, yet it is highly relevant to informal entrepreneurship (Mehjabeen & Khan, 2024). Drawing on Bourdieu (1986), cultural capital may be understood as socially acquired dispositions, values, aspirations and forms of legitimacy that influence how entrepreneurs perceive opportunity, risk and acceptable business behaviour. In informal enterprises, cultural capital may shape whether owners view expansion as desirable, whether family members support risk-taking, whether women entrepreneurs face social restrictions and whether customers perceive a business as trustworthy or respectable. Fourie et al. (2025) show that informal entrepreneurs’ motives and different forms of capital are associated with business success, which supports the inclusion of culturally embedded motivations in the analysis of informal enterprise outcomes. Cultural capital may not always operate as a direct growth resource. Instead, it may influence enterprise trajectory indirectly by shaping confidence, reinvestment behaviour, legitimacy and the owner’s willingness to move beyond survival-oriented activity (Masroor et al., 2023).

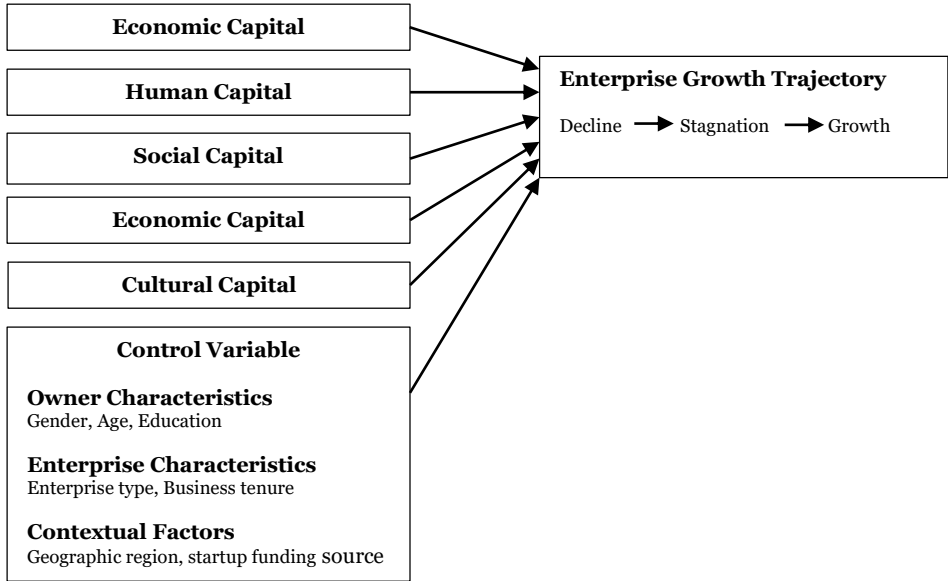


Figure 1: Conceptual Framework of Multidimensional Capital and Enterprise Growth Trajectory

The framework is based on the Resource-Based View and Bourdieu's theory of capital and places economic capital, human capital, social capital and cultural capital as distinct dimensions of resources which are linked to the economic development path of informal micro

and small enterprises. The dependent variable is determined as an ordered growth path, which includes a decline, stagnation and growth. It also acknowledges that the enterprise results can differ in relation to the characteristics of the owner, enterprise type, geographic location, enterprise tenure and start-up funding source. These are thus added as control variables for the estimation of the independent association of each capital dimension with enterprise growth trajectory. The study suggests, based on the conceptual framework in Figure 1, that there are positive relationships between the various types of capital and the ordered growth trajectory of the enterprise.

H₁: Economic capital is positively associated with a higher position in the ordered enterprise growth trajectory.

H₂: Human capital is positively associated with a higher position in the ordered enterprise growth trajectory.

H₃: Social capital is positively associated with a higher position in the ordered enterprise growth trajectory.

H₄: Cultural capital is positively associated with a higher position in the ordered enterprise growth trajectory.

2.8 Conceptual Synthesis and Research Gap

Despite the clear indication from the literature that informal enterprises are important economically, the growth of these enterprises is poorly understood through formal SME models and finance-centred policy assumptions. Empirical studies have been less prominent on informal micro and small enterprises in Bangladesh compared to registered SMEs, IT firms, women-led SMEs, and internationalising firms (World Bank, 2025; Masroor et al., 2024). Further, research often focuses on economic, human or social resources, whereas informal entrepreneurs regularly integrate monetary, skills, family, market, aspiration and local legitimacy in their day-to-day decision-making (Sahasranamam & Nandakumar, 2020; Fourie et al., 2025). Many studies still consider performance as continuous or binary, even though informal enterprises may go through ordered stages of decline, stagnation and growth (Somwethee et al., 2023).

3. Materials and Methods

3.1 Population and Sample

The aim of this study was to look at the association of multidimensional capital with the ordered growth path of informal micro and small enterprises in Bangladesh, and a quantitative and cross-sectional design was applied. The target population consisted of owner-managers of informal micro and small enterprises in the trading, service and manufacturing sectors. Informal enterprises were those that were not fully registered, did not have regular accounting systems or consistent access to formal enterprise support, and were owner-managed. The respondents were owner-managers as they have direct control over mobilisation of resources, the daily operations of the business, and reactions to business uncertainty. The data were gathered from an interviewer-administered field survey, which was carried out across selected geographical regions of Bangladesh from October to December 2025.

Cochran's (1977) formula for survey research (population size is large or unknown) was used to determine sample adequacy. The minimum number of respondents was estimated to be 384 respondents at a 5 per cent margin of error and 95 per cent confidence level, using the conservative population proportion of 0.50. In the first round of the study, 617 responses were received, with five responses excluded due to implausible or internally inconsistent business

tenure data. Of the 612 responses that met the study's validity criteria, the initial screening was followed. The final analytical sample consisted of an actual 550 cases derived from the pre-specified stratified random sampling procedure. Stratification was done according to growth stage, enterprise type and geographic region, and cases were randomly drawn within the strata to ensure that the analytical sample maintained the proportions of the cleaned data. Thus, the remaining 62 responses were not discarded due to data error, implausible values or observed growth outcomes, but were considered valid responses and not included in the final sample for analysis. Since the growth stage was part of the stratification procedure, the potential implications of outcome-based case selection are recognised as limitations. The same analytical sample of 550 cases was used for all regression and robustness estimates in this study.

3.2 Measurement of the Constructs

Table 1 provides a summary of the operationalisation of the dependent variable, the four capital constructs and control variables for the empirical analysis. Enterprise growth trajectory was captured with one ordinal question asking owner-managers to rate whether overall business performance had decreased, stayed the same or increased during the past year. Economic, human, social and cultural capital were measured using multi-item scales, which were converted to mean scores following reliability assessment. Prior to estimation, continuous predictors were standardised and categorical controls were entered using reference groups.

Table 1: Measurement Structure and Analytical Role

Variable or construct	Operational definition	Items or indicators	Measurement and coding	Cronbach's α	Analytical role
Enterprise growth trajectory	Owner-manager's assessment of overall enterprise performance during the previous year	Single ordinal item	1 = decline; 2 = stagnant; 3 = growth	N/A	Dependent variable
Economic capital	Financial and asset resources available to the owner-manager and enterprise	PE2 to PE4: inherited property, accumulated savings, and immovable assets	Multi-item scale; composite mean score	0.717	Main predictor
Human capital	Knowledge, experience, skills, and personal capabilities relevant to enterprise management	HC1 to HC6: education, technical skills, work experience, and self-management capacity	Multi-item scale; composite mean score	0.774	Main predictor
Social capital	Network relationships and trust-based resources available through social and community connections	SC1 to SC15: network interaction, trust, resourceful contacts, and community support	Multi-item scale; composite mean score	0.863	Main predictor

Cultural capital	Socially embedded dispositions and orientations shaping perceptions of legitimacy, aspiration, and business advancement	C1 to C14: growth aspiration, confidence, perceived legitimacy, social acceptance, and advancement orientation	Multi-item scale; composite mean score	0.838	Main predictor
Gender	Gender of the owner-manager	Male; female	Categorical; male as reference category	N/A	Control variable
Age	Age group of the owner-manager	Under 35; 35 to 44; 45 to 54; 55 or above	Categorical; 35 to 44 as reference category	N/A	Control variable
Education	Formal educational attainment of the owner-manager	Low or no formal education; middle education group; post-secondary education	Categorical; middle education group as reference category	N/A	Control variable
Enterprise type	Main sector of enterprise activity	Manufacturing; service; trading	Categorical; trading as reference category	N/A	Control variable
Geographic region	Geographic location of the enterprise	Dhaka; Khulna; other regions	Categorical; other regions as reference category	N/A	Control variable
Start-up funding source	Principal sources used to finance enterprise establishment	Personal savings; family, friends or relatives; institutional funding	Separate indicator variables; enterprises without the respective source as reference	N/A	Control variable
Business tenure	Length of enterprise operation	Reported business tenure	Continuous measure, logarithmically transformed	N/A	Control variable

The items C1 to C14 constituted the structured questionnaire that was used in collecting data during the fieldwork, which measured cultural capital. The construct was developed based on Bourdieu's conceptualisation of cultural capital as embodied dispositions that shape one's perceptions of opportunity, legitimacy, and acceptable means of action. In this study, cultural capital was separated from human capital as it was based on orientations and perceptions that are shaped by culture and not education, technical skills or work experience. It was also distinct from social capital, which is the network of relationships, trust, resourceful contacts and community support. It was decided, therefore, to keep the C1 to C14 items as a separate composite construct in the empirical model and not to add them at the analytical stage. The Cronbach's α coefficient of the resulting scale was 0.838, which is acceptable.

3.3 Preliminary Data Screening

Of the 617 cases, 612 were deemed to be valid for sampling and analysis, as the reported business tenure values were either implausible or internally inconsistent in 5 cases. The screening procedure was based more on plausibility and consistency of the recorded information rather than rejecting observations that were at the extreme of the distribution of a variable. Central tendency and dispersion of the main study variables were then explored by using descriptive summaries. Normally, the dependent variable was ordinal, and the main estimation method was Generalised Ordered Logistic Regression; therefore, the normality of explanatory variables was not considered as a preliminary condition for the estimation of the model. Thus, formal normality testing was not employed as a method to retain or exclude observations.

3.4 Analytical Approach

The analytical approach was chosen to take account of the hierarchical nature of the dependent variable: enterprise performance - decline, stagnation, or growth. Thus, an ordinary linear model was not appropriate, since the categories of the outcomes are naturally ordered and discrete. The main method used was Generalised Ordered Logistic Regression, which allows for the effects of the predictors to vary between the two ordered thresholds (e.g. movement beyond decline and movement from decline or stagnation into growth). The specification is less restrictive than a standard ordered logit model, which assumes that the effect of each predictor is the same on all outcome thresholds. All continuous predictors were standardised prior to estimation to facilitate comparisons of coefficients. As a robustness check, Ordinal Probit Regression with robust standard errors was then estimated to check for robustness of the substantive results with a different ordinal response specification.

4. Results and Discussion

4.1 Sample and Outcome Profile

This relatively high percentage needs to be taken with a grain of salt since the growth measure is not an independent check on financial or operational performance but rather an estimate by the owner-manager of enterprise performance. There can also be a wide variation in understanding of what growth means in informal enterprises, especially if they do not have formal accounting systems and growth is measured by the increase in sales activity, customer demand, income or the continuity of the business. Also, self-reported measures might be subject to recall error or a reporting bias of showing business performance favourably. Thus, the actual distribution is considered a reflection of the sample studied and not necessarily an indication of particularly good performance in the broader informal sector in Bangladesh.

Table 2: Outcome Profile by Enterprise Type and Region

Category		Decline	Stagnant	Growth	Total
Types Enterprise Type	Manufacturing	11	22	79	112
	Service	2	36	82	120
	Trading	28	91	199	318
Region	Dhaka	7	41	120	168
	Khulna	12	49	103	164
	Other regions	22	59	137	218
	Total	41	149	360	550

4.2 Descriptive Pattern of Capital Constructs

The descriptive results show visible differences in mean construct scores across the three growth categories. Enterprises in the growth category reported higher average economic capital than those in decline and stagnation. Among the four main predictors, human capital

displayed the clearest separation across the ordered outcome categories, with the highest mean score among growing enterprises. Kruskal-Wallis tests indicated statistically significant differences across the three growth categories for economic capital, human capital, social capital and cultural capital.

Table 3: Descriptive Patterns and Bivariate Tests for Main Constructs

Construct	Overall mean	Overall SD	Kruskal-Wallis χ^2	p-value
Economic capital	2.880	0.976	16.831	< 0.001
Human capital	3.941	0.600	74.576	< 0.001
Social capital	2.871	0.587	18.691	< 0.001
Cultural capital	3.935	0.460	49.563	< 0.001

4.3 Generalised Ordered Logistic Regression Result

Table 4 reports the Generalised Ordered Logistic Regression estimates. The overall model was statistically significant, with LR $\chi^2 = 187.236$, $df = 36$ and $p < 0.001$. The model produced a log-likelihood of -359.995, McFadden pseudo R^2 of 0.206, AIC of 795.990 and BIC of 959.767. At the first threshold, comparing stagnant and growing enterprises against declining enterprises, human capital was positive and statistically significant ($\beta = 0.932$, OR = 2.539, $p = 0.006$). Enterprise type also showed a significant coefficient for service enterprises relative to trading enterprises ($\beta = 2.226$, OR = 9.261, $p = 0.009$), and Dhaka showed a significant regional coefficient relative to other regions ($\beta = 1.565$, OR = 4.783, $p = 0.010$). Economic capital, social capital and cultural capital were not statistically significant at this threshold after controls were included.

At the second threshold, comparing growing enterprises against declining and stagnant enterprises, human capital again remained positive and statistically significant ($\beta = 0.815$, OR = 2.259, $p < 0.001$). Economic capital showed a positive coefficient but was not statistically significant ($\beta = 0.159$, OR = 1.172, $p = 0.177$). Social capital and cultural capital were also not statistically significant at this threshold. Among the controls, age 55 or above was negatively associated with the growth threshold (OR = 0.387, $p = 0.021$), and low or no formal education was also negative and statistically significant (OR = 0.555, $p = 0.039$). Personal savings showed a positive and statistically significant association with the growth threshold (OR = 2.432, $p < 0.001$). The female control was retained in the model, but the threshold-1 estimate was unstable because female respondents had no decline cases in the reduced sample.

4.4 Robustness Results from Ordinal Probit Regression

The robustness model produced a log-likelihood of -404.020, AIC of 848.040 and BIC of 934.240. Human capital remained positive and statistically significant ($\beta = 0.379$, SE = 0.079, $z = 4.810$, $p < 0.001$). Economic capital was positive but not statistically significant ($\beta = 0.100$, $p = 0.115$). Social capital was also not statistically significant ($\beta = 0.062$, $p = 0.413$), and cultural capital was not statistically significant ($\beta = -0.019$, $p = 0.811$). Among the controls, age 55 or above was negative and statistically significant ($\beta = -0.488$, $p = 0.023$). The Dhaka region was positive and statistically significant ($\beta = 0.324$, $p = 0.025$), and personal savings were also positive and statistically significant ($\beta = 0.341$, $p = 0.009$).

This study examined whether economic, human, social and cultural capital explain the ordered growth trajectory of informal micro and small enterprises in Bangladesh. The findings show that human capital is the most consistent determinant of enterprise movement across decline, stagnation and growth. It remained positive and statistically significant in both thresholds of the Generalised Ordered Logistic Regression model and in the Ordinal Probit robustness model. Economic capital showed a positive but statistically insignificant association after

controls were included, while social and cultural capital did not show independent significance in the controlled models. Among the control variables, personal savings had a positive correlation with the growth threshold, and older age had a negative correlation with movement towards growth. These findings collectively support the main argument of the study that growth resilience of informal enterprises is not only driven by the resources owned, but also by the ability of the entrepreneur to transform limited resources into productive business action (Barney, 1991; Bourdieu, 1986; Sahasranamam & Nandakumar, 2020).

Table 4: Main Model Results from Generalised Ordered Logistic Regression

Predictor	Threshold 1 β (SE)	Threshold 1 OR [95% CI]	p-Value	Threshold 2 β (SE)	Threshold 2 OR [95% CI]	p-Value
Economic capital	0.269 (0.257)	1.308 [0.791, 2.164]	0.295	0.159 (0.117)	1.172 [0.931, 1.475]	0.177
Human capital	0.932 (0.341)	2.539 [1.302, 4.951]	0.006	0.815 (0.178)	2.259 [1.595, 3.200]	< 0.001
Social capital	0.323 (0.326)	1.382 [0.730, 2.616]	0.321	-0.018 (0.147)	0.982 [0.736, 1.311]	0.902
Cultural capital	-0.583 (0.383)	0.558 [0.263, 1.183]	0.128	0.104 (0.167)	1.109 [0.800, 1.538]	0.534
Female	14.073 (757.406)	1293520.993 [0.000, >1e300]	0.985	0.011 (0.525)	1.011 [0.361, 2.831]	0.983
Age under 35	-0.028 (0.731)	0.972 [0.232, 4.074]	0.969	0.456 (0.333)	1.577 [0.821, 3.032]	0.172
Age 45 to 54	0.506 (0.569)	1.659 [0.544, 5.064]	0.374	-0.396 (0.261)	0.673 [0.404, 1.122]	0.129
Age 55 or above	-0.494 (0.734)	0.610 [0.145, 2.575]	0.501	-0.950 (0.412)	0.387 [0.172, 0.868]	0.021
Low or no formal education	-0.058 (0.526)	0.944 [0.337, 2.643]	0.912	-0.589 (0.286)	0.555 [0.317, 0.972]	0.039
Post-secondary education	-0.461 (0.693)	0.631 [0.162, 2.454]	0.506	-0.442 (0.286)	0.643 [0.367, 1.126]	0.122
Manufacturing enterprise	-0.242 (0.515)	0.785 [0.286, 2.153]	0.638	-0.064 (0.290)	0.938 [0.531, 1.657]	0.825
Service enterprise	2.226 (0.856)	9.261 [1.732, 49.529]	0.009	0.197 (0.278)	1.218 [0.706, 2.100]	0.478
Dhaka region	1.565 (0.608)	4.783 [1.452, 15.760]	0.010	0.201 (0.289)	1.223 [0.694, 2.154]	0.487
Khulna region	0.288 (0.628)	1.334 [0.389, 4.570]	0.647	0.084 (0.300)	1.088 [0.604, 1.959]	0.779
Personal savings	-0.560 (0.514)	0.571 [0.208, 1.566]	0.276	0.889 (0.243)	2.432 [1.512, 3.914]	< 0.001
Family, friends or relatives	-0.963 (0.555)	0.382 [0.129, 1.133]	0.083	-0.152 (0.263)	0.859 [0.513, 1.438]	0.563
Institutional funding	-0.305 (0.490)	0.737 [0.282, 1.926]	0.534	0.402 (0.295)	1.495 [0.839, 2.665]	0.173
Log business tenure	-0.468 (0.319)	0.626 [0.335, 1.172]	0.143	0.078 (0.147)	1.081 [0.810, 1.442]	0.597

Notes: $N = 550$. Continuous predictors were standardised. Threshold 1 compares stagnant and growing enterprises with declining enterprises. Threshold 2 compares growing enterprises with declining and stagnant enterprises. Reference categories are male, age 35 to 44, the middle education group, trading enterprise, other regions and enterprises without the respective funding source. Estimates are reported with model standard errors.

Table 5: Ordinal Probit Regression Robustness Results

Predictor	β	Robust SE	z	95% CI	p
Economic capital	0.100	0.063	1.575	[-0.024, 0.224]	.115
Human capital	0.379	0.079	4.810	[0.225, 0.534]	< .001
Social capital	0.062	0.075	0.818	[-0.086, 0.209]	.413
Cultural capital	-0.019	0.080	-0.240	[-0.176, 0.138]	.811
Female	0.289	0.212	1.364	[-0.126, 0.705]	.172
Age under 35	0.286	0.169	1.694	[-0.045, 0.616]	.090
Age 45 to 54	-0.167	0.142	-1.171	[-0.446, 0.112]	.242
Age 55 or above	-0.488	0.214	-2.279	[-0.907, -0.068]	.023
Low or no formal education	-0.218	0.151	-1.443	[-0.514, 0.078]	.149
Post-secondary education	-0.216	0.170	-1.272	[-0.548, 0.117]	.203
Manufacturing enterprise	-0.032	0.162	-0.199	[-0.350, 0.286]	.842
Service enterprise	0.268	0.144	1.860	[-0.014, 0.550]	.063
Dhaka region	0.324	0.145	2.235	[0.040, 0.607]	.025
Khulna region	0.125	0.172	0.724	[-0.212, 0.462]	.469
Personal savings	0.341	0.131	2.601	[0.084, 0.599]	.009
Family, friends or relatives	-0.096	0.144	-0.664	[-0.378, 0.187]	.507
Institutional funding	0.065	0.165	0.390	[-0.260, 0.389]	.696
Log business tenure	0.018	0.071	0.256	[-0.120, 0.157]	.798

Notes: $N = 550$. Continuous predictors were standardised. Robust standard errors are reported. The model was estimated as a robustness check to assess whether the core findings were stable under an alternative ordinal response specification.

The most consistent empirical finding concerns the positive association of human capital with enterprise growth trajectory. This finding aligns with the findings of Maingehama (2025) on South African SMEs, which found that human capital is associated with growth in the post-disruption era, especially when the firm needs to adapt and access its internal resources. It is also consistent with Alam et al. (2020), who reveal that entrepreneurial risk perception and logic of decision-making influence strategic outcomes in an uncertain context. Human capital seems to be the actual process that informal entrepreneurs are using to transcend survival, cope with the constraints, and attain a higher growth stage (Alam et al., 2020; Taleb et al., 2023; Maingehama, 2025).

After the control variables were added, both of the economic capital estimates had positive coefficients in the Generalised Ordered Logistic Regression model, but neither was statistically significant. Results for the Ordinal Probit specification were similar, with no evidence of an independent statistical relationship between enterprise growth trajectory and economic capital in the adjusted models. This finding does not mean that financial resources, savings or productive assets are unimportant to the development of informal enterprise. Instead, the results suggest that the general economic capital measure applied in this study is not unique in differentiating enterprises in the ordered growth categories, controlling for the relevant owner, enterprise, geographic and funding characteristics and human capital. The strong relationship found with personal saving at the high end of the growth range also indicates that specific types of internal finance availability may be distinct from the overall level of assets.

The non-significant effects of social and cultural capital are theoretically important because previous literature often presents networks, trust, legitimacy and social support as valuable resources for small business resilience. Studies on SME resilience suggest that social capital can help firms respond to disruption by improving access to support, information and recovery resources (Tanner et al., 2022; Ozanne et al., 2022). Shan et al. (2022) also show that entrepreneurs' social capital can strengthen entrepreneurial resilience through psychological and behavioural mechanisms. In the Bangladeshi informal enterprise context, social and

cultural capital may support survival, legitimacy and continuity without independently predicting movement into growth once human capital and controls are included. This may indicate that bonding ties and community trust help firms avoid collapse, while growth requires more transferable capabilities such as financial judgement, technical competence, planning and adaptive decision making (Tanner et al., 2022; Shan et al., 2022).

The findings also contribute to Bangladeshi SME research by extending prior evidence from formal, IT, social and internationalising firms into the informal enterprise setting. Masroor et al. (2024) show that service ecosystems can strengthen IT SME performance, while institutional voids condition the effectiveness of value co-creation. The present study supports this broader view but shows that, among informal enterprises, the most stable predictor is human capital rather than the wider support environment or capital possession alone. This distinction suggests that formal or technology-centric SMEs might be more directly affected by service ecosystems and institutional arrangements, while informal microenterprises might require first a basic capability formation to then be able to benefit from external service ecosystems and institutional arrangements (Alam et al., 2020; Xiao et al., 2021; Masroor et al., 2024).

While Barney's (1991) framework suggests that differences in performance are explained by valuable resources that are difficult to imitate, the current study's results suggest that, in informal settings, human capital might be the most actionable of resources, and this is because it can be used to translate other capitals into performance. The results also expand upon Bourdieu's (1986) capital theory and suggest that economic, social and cultural capital may necessitate human capability before they can have any measurable growth impact. In other words, it is not only a matter of having more resources that makes informal enterprise grow, but also the ability to interpret, combine and deploy the resources available. This is in line with the recent literature on entrepreneurship that considers capital as institutionally conditioned and contextually mobilised rather than being automatically productive (Bourdieu, 1986; Sahasranamam & Nandakumar, 2020).

While finance is important, especially at the higher threshold of growth, it is unlikely to be enough by itself unless entrepreneurs have the skills to budget, reinvest, evaluate demand, manage operations, and adjust to changes in market conditions. Hence, support programmes should be a mix of credit and practical business training, financial literacy, mentoring, market information and locally available advisory services. In the context of Bangladesh, these programmes must be tailored to the needs of informal entrepreneurs, many of whom are not formally registered, have no collateral and have limited access to institutions.

5. Conclusion

This study examined how economic, human, social and cultural capital shape the growth resilience of informal micro and small enterprises in Bangladesh. By treating enterprise performance as an ordered trajectory of decline, stagnation and growth, the study moved beyond conventional binary or finance-centred explanations of small business outcomes. The findings show that human capital is the most robust determinant of informal enterprise growth trajectory. It remained statistically significant in both thresholds of the Generalised Ordered Logistic Regression model and in the Ordinal Probit robustness model. Economic capital produced a positive coefficient but did not independently predict growth trajectory after adjustment for the control variables. These results suggest that informal enterprise growth depends not only on resource possession, but also on the owner-manager's ability to interpret, mobilise and convert available resources into productive business action. This finding is consistent with the Resource-Based View and Bourdieu's capital framework, while refining

their application in informal enterprise settings (Barney, 1991; Bourdieu, 1986; Sahasranamam & Nandakumar, 2020).

The study also illustrates the analytical usefulness of distinguishing decline, stagnation and growth when looking at informal businesses, which can perform very differently depending on the circumstances they are operating under. While these relationships are not necessarily causal, they do offer a valuable empirical foundation for more detailed study of the joint relationship between owner capabilities and resource conditions and informal enterprise development.

Enterprise support programmes for informal businesses should not rely solely on credit provision, grants or asset transfer. Although personal savings were positively associated with growth, the broader results indicate that finance is more likely to generate sustainable outcomes when combined with practical training, financial literacy, operational skills, market awareness and mentoring. A staged support model may therefore be more appropriate, where declining enterprises receive stabilisation support, stagnant enterprises receive capability-building assistance, and growing enterprises receive market expansion support. First, the measures were based on owner-managers' self-reports, and these responses can suffer from recall error, subjective judgment, or socially desirable responding. Second, the principal predictors were obtained from the same respondents as the growth outcome at one point in time, which could have resulted in common-method bias and perceptual consistency of measures. Third, the cross-sectional design does not provide any temporal ordering and thus does not permit causal inferences to be made about the relationship between capital dimensions and enterprise growth trajectory. Fourth, a stratified sampling process was used to choose the final analytical sample from the pool of valid responses based on growth stage, enterprise type and geographic region. This approach maintained the structure of the intended sample, but outcome-based selection of cases may impact the representativeness of the sample and should be taken into account when trying to generalise the results. Lastly, the distribution of the growth categories was uneven, with relatively few of the enterprises being in decline, which may lessen the accuracy of the estimates at the first cumulative threshold.

Declarations

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Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability Statement

The data that support the findings of this study were collected through a structured survey of informal micro and small enterprise owner-managers in Bangladesh. The dataset is available from the corresponding author upon reasonable request, subject to ethical restrictions relating to respondent privacy and confidentiality.

Ethics Approval and Informed Consent

Before field data collection, the study with human participants was reviewed and approved by the appropriate institutional authority responsible for research ethics. The survey was voluntary, and subjects were told the academic purpose of the survey, the nature of their involvement in the survey, and how the information they provided would be used. Respondents were also told that their answers would be kept confidential and that they would not have to give any personally identifying information in order to participate. All owner-managers were asked to sign an informed consent statement prior to answering the questionnaire, which was administered by an interviewer. The participants could refuse to take part in the study or to stop the survey without any effect. The research team adhered to the relevant institutional protocols regarding confidentiality, voluntary participation, responsible handling of data and protection of the information of the respondents throughout the study. Information that will identify the approving institution and associated ethics reference (if applicable) should be included as required by the conference for anonymous review.

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