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Social Capital and Entrepreneurial Intentions Among Rural University Students: The Mediating Role of Psychological Capital

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ABSTRACT

Entrepreneurial intention (EI) in rural settings is shaped not only by physical and human capital but also by the social and psychological resources that enable agency. Focusing on university students from Gilgit-Baltistan, Pakistan, this study examines the relationship between social capital (SC) and EI, and whether psychological capital (PsyCap) serves as a conversion mechanism between the two. We surveyed 250 GB-origin students enrolled across Pakistani universities using a stratified convenience sampling approach. We analysed the data with structural equation modelling in AMOS, complemented by SPSS descriptive statistics, confirmatory factor analysis, and common-method variance (CMV) diagnostics. The validated measurement model demonstrated a good fit (CFI = 0.957, TLI = 0.951, RMSEA = 0.046), strong reliability and convergent validity, and satisfactory discriminant validity. In the structural model, SC had a sizable positive association with PsyCap ($\beta = 0.62, P < 0.001$), and PsyCap, in turn, was positively related to EI ($\beta = 0.20, P < 0.001$). The direct path from SC to EI remained significant ($\beta = 0.13, P = 0.015$). Bias-corrected bootstrapping (5,000 resamples) indicated a significant indirect effect ($\beta_{ind} = 0.20, 95\% \text{ CI } [0.12, 0.29]$), consistent with partial mediation; approximately 60% of the total association flowed through PsyCap. Common-method checks (Harman's single factor = 36.8%; ULMC $\Delta\text{CFI} = 0.004$) suggest minimal inflation from same-source reporting. Substantively, the results clarify how networks and ties bolster self-efficacy, hope, resilience, and optimism, which in turn elevate start-up intentions. Notably, women comprised 43.6% of the sample, underscoring the need for gender-responsive interventions. The study provides rural-university evidence from a rarely examined region. It offers actionable guidance for universities and policymakers to pair network building with targeted PsyCap development to activate entrepreneurial capacity.

keywords: Social capital, Psychological capital, Entrepreneurial intentions, Rural youth entrepreneurship, Gilgit-baltistan

Introduction

Entrepreneurship is widely regarded as one of the key drivers of socio-economic development in both developed and emerging economies. In parallel, low-income governments are increasingly viewing entrepreneurship as a driver of growth and sustainable social change, addressing issues of persistent unemployment, informality, and regional inequality.¹ There is a vast literature on the employment-generating, demand-stimulating, knowledge-spreading, and innovation-enhancing role of entrepreneurship, raising

entrepreneurial activity as a prime form of inclusive growth.^{2,3} At the firm level, entrepreneurial capabilities influence competitiveness and underlie organisational performance by stimulating opportunity discovery, quick adaptation, and new value creation.^{4,5} The macro-level evidence also presents a link between entrepreneurship and economic growth^{6,7} as well as the development of organisational cultures that act as a catalyst for continued success. As a scholarly discipline, therefore, entrepreneurship seeks to understand how opportunities are identified and converted into valuable goods and services through the orchestration of capabilities and resources.⁸

The varying accomplishments of students are not only a function of their individual talent but also of the social structures and institutional environments that exist in the surrounding arrangements of potential founders.⁹ To predominantly succeed, entrepreneurs should develop and mobilise relational networks within and outside their organisations and make their ventures consistent with local norms and cultural contexts.¹⁰ Because entrepreneurship activity can help to diminish unemployment by creating new firms, higher education systems are a natural policy target. Higher education institutions are well-positioned to disseminate new ideas and serve as springboards for youth ventures by integrating entrepreneurial education, vocational training, and innovation at both educational and institutional levels. Done right, such interventions build skills, interrupt networks, and offer legitimising connections to outside resource holders, key ingredients for building the intention-to-action so often lacking in development and social change. Furthermore, the entrepreneurial development process is a dynamic one that evolves, and initial psychological advantages should not be overlooked without the presence of continuous social support and facilitating conditions.

Despite all this, gender imbalance is and remains a thorn in the flesh. Previous studies show male dominance and a weak female presence in entrepreneurial activities.^{11,12} In developing countries (Pakistan included), bridging the gap is economically significant. Supporting women in establishing and growing enterprises has the potential to expand the opportunity frontier, diversify local production, and enhance household well-being. Policies and programs designed in a gender-neutral manner often replicate barriers in practice; an explicit focus on women's access to networks, mentors, finance, and safe learning environments will be key to ensuring parity. In this broader context, entrepreneurship is both a predictor and driver of development, where, if participation is inclusive, it has the potential to decrease unemployment and poverty.

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In the context of this environment, EI has become a key antecedent of entrepreneurial activity, specifically an individual's tendency to launch a business soon.¹³ Although several factors influence intentions, studies in Pakistan have primarily focused on specific determinants, including motivation,¹⁴ self-efficacy and perceived desirability,¹⁵ and SC.¹⁶ Despite these piecemeal accomplishments, a significant gap remains in our understanding of the combined effects of SC and PsyCap on student aspirations, particularly for rural-origin populations living in thin markets and environments with weak formal support systems.

This paper fills that gap by examining university students from Gilgit-Baltistan, a marginal region of Pakistan, where substantial bonding SC coexists alongside changing bridging opportunities. We pay attention to two very closely related antecedents of EI. Firstly, SC refers to the network of relationships, norms, and trust that facilitates coordination, promotes welfare, and provides access to information, resources, mentoring, and legitimacy. Social networks can also be used to augment and enhance human capital formation.¹⁷ Second, PsyCap, an upper-level psychological resource comprising confidence or self-efficacy, hope, resilience, and optimism, mediates the perception of opportunities and tenacity in managing uncertainty. According to the theory of planned behaviour (TPB), attitudes, subjective norms and perceived behavioural control (PBC) influence intentions.¹⁸ PBC, usually measured through self-efficacy, is an empowerment factor that has a substantial positive impact on EI.¹⁹ Psychic capital is a crucial factor in determining whether social inputs are translated into action, particularly when the actual availability of market information and institutional support is limited in rural environments. However, past work in Pakistan rarely models the total set of PsyCap constructs and SC altogether.

Combining these strands, the current research examines whether PsyCap serves as a mediating link through which SC influences EI among students from rural areas. Empirically, Gilgit-Baltistan is situated on the transit corridor of the China-Pakistan Economic Corridor and is witnessing changes in tourism, logistics and related services. In this context, understanding how social and psychological resources affect student intentions is crucial for developing interventions that enable universities, development partners, and provincial agencies to move beyond inspiration and positively impact measurable capability building. Consistent with our expectations, we demonstrate that PsyCap is a partial mediator of the relationship between SC and EI using a validated measurement model and after accounting for common-method issues. The sample has a high proportion of female students, highlighting the importance of explicitly gender-responsive program design. Grounded in this motivation, the study contributes by providing rural-university evidence from a rarely studied Pakistani region; jointly modelling SC and the complete PsyCap construct; testing mediation with robust structural equation methods; and translating results into actionable guidance for curricula, incubators, and policy.

Research Questions

- i. What is the impact of SC on EIs among university students in rural Gilgit-Baltistan?
- ii. How does PsyCap influence EIs among these students?
- iii. Does PsyCap mediate the relationship between SC and EIs in this rural context?

Research Objectives

- i. Explore the direct effect of SC on the EIs of rural-origin university students in Gilgit-Baltistan.
- ii. Assess the influence of PsyCap hope, confidence or self-efficacy, resilience, and optimism on EIs.
- iii. Examine the mediating role of PsyCap between SC and EIs.
- iv. Provide evidence-based recommendations for policymakers, educators, and development practitioners to foster rural entrepreneurship by enhancing social and PsyCap.

Hypotheses

- H1. *SC has a positive influence on the EIs of students in Gilgit-Baltistan.*
- H2. *PsyCap has a positive influence on the EIs of these students.*
- H3. *PsyCap mediates the effect of SC on EIs among these students.*

Literature Review

There is a need for research, as the existing literature lacks a comprehensive social perspective and EIs in the domain of economics and business studies.²⁰ Equally important is the psychological context for the entrepreneurship performance of entrepreneurs. PsyCap is a resource which provides entrepreneurs with feelings of invulnerability to various problems or risks. Hence, for the improvement of entrepreneurs, the psychological context of the individual is necessary.²¹ Ajzen examined the significance of the role of intentions, and it is beneficial to mention the TPB in the development of EIs. Ajzen²² Shed light on the importance of intentions and argues that an individual develops an intention to get involved in specific behaviour. This intention is converted into action at a proper time and opportunity, assuming the behaviour is voluntarily controlled; hence, the attempt made will produce the required act. Moreover, Ajzen¹⁸ points out that intentions affect behaviour because they tap into the motivational factors that indicate an individual's willingness to perform or try. Therefore, stronger performance can be observed due to a stronger intention to engage in any behaviour. Framing PsyCap as a conversion mechanism between social context and perceived control clarifies how network resources (norms, modelling, information) can be internalised as capability beliefs that raise EI. This integration helps explain how SC travels through cognitive-motivational channels rather than acting solely as an external prompt to conformity.^{23,24}

Basu and Virick's²⁵ entrepreneurial attitude is being positively influenced by educational support, which ultimately positively influences the EIs of students. Studies have also shown that students who acquire knowledge about important mechanisms are more likely to become entrepreneurs.²⁶ In addition, a study by Turker and Sonmez Selçuk²⁷ suggest that structural support also influences EIs among people. This study suggests that if institutions and universities facilitate students in acquiring entrepreneurial knowledge and encourage them to pursue entrepreneurship as a career, the odds of opting for an entrepreneurial career may be enhanced. Hence, apart from financial capabilities and family background, a person must also consider entrepreneurial knowledge and educational support, as these factors can influence EIs.

The notion that intentions are partially developed because of social and human capital has manifold implications for both potential and actual entrepreneurs.^{28,29} Personal abilities are not only essential elements that assure the success of any person; to enhance the chances of success, entrepreneurs need to be involved in teamwork and engage with other groups as well.³⁰ SC refers to a person's ability to derive benefits from their memberships, networks, and social structures.^{31,32} The sum of SC that an individual or an entrepreneur is successful in accumulating largely relies on the individual's social ability. Therefore, if a person is weak in human capital or physical capital, they can compensate for this deficiency with tremendous and impressive SC. Likewise, there are various other benefits of SC, including exposure to ample opportunities that are not available to individuals with limited social networks.^{33,34}

SC is an asset embedded in social structure, comprising resources within social structure, the availability of these social assets at the individual level, and the utilisation of these resources by people.³⁵ Rural entrepreneurship depends not only on the quantity of ties but on their type. Bonding ties (such as family, kin, and close community) facilitate trust, resource pooling, and risk-sharing, which are vital in thin markets, but can also lock actors into redundant information circles.^{36,37} Bridging ties (weak, cross-community links) convey novel information, opportunity discovery, and legitimacy with outsiders, which are critical for venture formation and growth.³⁸⁻⁴⁰ In peripheral regions, practical entrepreneurship often requires a balance between strong bonding and purposeful bridging.⁴¹ This distinction motivates our focus on how SC may elevate PsyCap, particularly self-efficacy and hope, when bridging channels expand (e.g., university, alumni, diaspora).

Entrepreneurial managers who possess broader contact networks can generate value beyond human capital. Intentions are planned behaviour that focuses on the behaviour of beginning a new business. EIs also consider the overall vision of the founder of any growing organization.⁴² EI is considered an active or vigilant condition of mind that forces an individual's attention and expertise towards planned

entrepreneurial action.⁴³ In the study, Schlaegel and Koenig⁴⁴ endeavour to integrate the two theories on human intentions by employing meta-analysis of EIs of 98 studies that included 114,000 participants, and found that relying only on the two leading theories, which describe intention, is not adequate; more insightful research is required to comprehend how intentions could be converted into actions completely.

The attributes of local community are vital for the development of new ventures, hence there is a significant role of regional SC in the enhancement of entrepreneurship, as Malecki⁴⁵ reveals that there is a dire need to develop regional SC through the development of cultural diversity, associational activities and enhancement of social trust. Ali and Yousuf⁴⁶ investigated the impact of community SC on the EIs of a specific community in Gilgit-Baltistan, using a sample of 325 participants. The results showed that the EIs of individuals are positively influenced by SC. Authors were of the view that developing EIs in rural areas will enhance their perceptions of starting new businesses and can play a part in improving family livelihood.

PsyCap and EIs

Individuals do not develop intentions solely based on the belief that they can become entrepreneurs; instead, they psychologically discover the concept of entrepreneurship.⁴⁷ The concept of PsyCap or cognitive factors is crucial in fostering EIs. This study highlights the argument that cognition, personality, and self-efficacy play a crucial role in EIs and venture creation. PsyCap refers to an individual's mental state, who displays positive behaviour and exhibits an increased level of job performance.⁴⁸

Luthans et al.⁴⁹ describe PsyCap by stating that PsyCap comprises "who you are" rather than what you know or who you know. The concept of PsyCap is a step ahead of social and human capital, and specifically, it comprises four facets: hope, confidence, resilience, and optimism. Authors have explained confidence as a cognitive resource that reflects an individual's convictions about their potential, hope as a motivational cognitive asset, optimism as one's explanatory framework for both good and bad happenings, and resilience as a tendency to bounce back from adversity.

Expectation is considered a human capability that helps prevent disappointment and keep moving forward with goals in mind, thereby reducing an unbearable conception of the future.⁵⁰ Researchers explain the concept of self-efficacy (efficacy), proposing the implications of self-efficacy for the organisational working environment, as "one's conviction (or confidence) about his or her abilities to mobilise the motivation, cognitive resources, and courses of action needed to execute a specific task within a given context successfully." Hence, self-efficacy is an individual's confidence in their abilities, which ultimately mobilises their motivation. It is essential to examine the impact of self-efficacy on an individual's performance within an organisational environment. An individual's ability to revert to an initial position from an adverse condition

is known as resilience.⁵¹ Wang et al.⁵² highlighted the significance of all four facets of PsyCap in the entrepreneurial success of small-level enterprises and inferred that all the facets of PsyCap are imperative for the success of small-scale enterprises. Like social and human capital, PsyCap is also closely linked to the development, well-being, and accomplishments of an individual. A motivational factor, which is a mental state of a person, is a PsyCap, and this motivational factor influences an individual's decision to become an entrepreneur. A study conducted by Wu et al.⁵³ revealed a significant association between EIs and education, with self-efficacy serving as a mediator. The study examines the importance of entrepreneurial education in fostering EIs and self-efficacy and suggests that it should be made compulsory in institutions by introducing entrepreneurial courses. On the one hand, it will equip students to become job creators, and on the other hand, it will reduce unemployment by creating jobs.

SC and EIs: Mediating Role of PsyCap

Most previous research has focused on the positive influence of SC on EIs⁵⁴ and PsyCap on EIs.⁵⁵ However, there is a need to conduct comprehensive research by incorporating all three variables: SC, PsyCap, and EIs. Al Halbusi et al.⁵⁶ conducted a meta-analysis to investigate the relationship between the TPB and EIs, stating that EIs are influenced by SC through PBC. Entrepreneurship is profoundly context-dependent: regulatory frictions, spatial dispersion, and thin intermediaries shape opportunity enactment in ways that differ from urban ecosystems.⁵⁷ In such contexts, regional SC encompassing associational density, trust, and civic norms can compensate for missing markets by reducing transaction costs and facilitating collective problem-solving. For GB, the combination of substantial bonding capital and emergent bridging via universities, tourism, and corridor trade suggests a setting where network composition may be especially consequential for intentions, operating through the psychological resources required to navigate uncertainty.

Likewise, Kim et al.⁵⁸ reported that the concept of PsyCap, comprising hope, resilience, self-efficacy and optimism, and the idea of PBC are similar. Their comprehensive study also revealed that the influence of SC on EIs is mediated by PsyCap. This finding appeals to advocates of vocational education and training, who should incorporate both SC and PsyCap to enhance EIs. Edwards et al.⁵⁹ have undertaken research to highlight the influence of SC (through the mediating role of self-efficacy) on the EIs of university students in Pakistan. For this purpose, data were gathered from five universities in Islamabad and Lahore. After analysing the data, researchers argued that EIs are positively affected by SC. Meanwhile, this effect was more noticeable in the presence of the mediating role of self-efficacy. Hence, authors have iterated on providing an environment in universities that boosts the self-belief and confidence of students.

Conceptual Model of Study

Based on the above literature review, this study develops a model. SC will be the dependent variable, and EI will act as the explanatory variable; PsyCap, comprising its four tenets, will serve as the mediator. The study will find a relationship between all three constructs using data obtained from the relevant respondents. The study has developed the model presented below, and it is evident from the literature that a relationship exists among these constructions. After running pertinent tests, we will be able to reveal the exact relationship. According to the research literature, numerous scholars have investigated the relationship among these three constructs.⁶⁰ Hence, keeping the existing literature in focus, this study develops a conceptual model to investigate the relationship between SC, EIs, and the mediating role of PsyCap among university students in rural areas (GB). Figure 1 represents a conceptual model of the study.

This chapter presents the TPB, SC, and EIs, as well as PsyCap and its relationship to EIs. It examines the mediating role of PsyCap, presenting three hypotheses. The conceptual model of the study is also presented in this chapter. Prior work has linked SC to EI and documented the independent role of psychological factors. However, in rural-university populations and specifically in Gilgit-Baltistan, evidence that explicitly models PsyCap as the conversion mechanism between social structure and intention remains scarce. By integrating bonding/bridging distinctions, a capability-theoretic reading of PsyCap, and a bootstrapped mediation test within a validated CFA/SEM framework, this study addresses a clear gap: how rural social resources contribute to entrepreneurial agency.

Methodology

Research Design and Context

The present study employs a quantitative, cross-sectional survey to investigate whether and how SC influences the EI of university students from rural origins, and the extent to which PsyCap mediates this relationship. In the case of latent constructs that are theoretically stable over short horizons and are usually operationalised by validated scales, the objective of estimating contemporaneous relationships makes a cross-sectional approach suitable. The field setting is Gilgit-Baltistan (GB), Pakistan, a peripheral mountainous region that can reduce opportunity recognition and new venture creation due to thin markets, geographic separation of locales, and limited institutional infrastructure. Second, social bonds and PsyCap are not merely complementary inputs for an enterprise; they are often crucial conversion processes, in which aspirations are transformed into plausible intentions. Focusing on GB is therefore a challenge for theories which connect social structure to psychological resources and entrepreneurial agencies. Furthermore, the survey design enables a sample to be drawn of GB-origin students studying in both the GB and other Pakistani universities, allowing us to capture

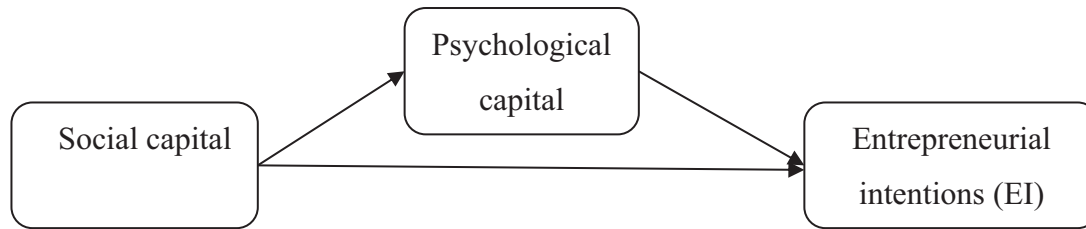


Fig 1 | Conceptual model

heterogeneity in exposure to networks, role models, and entrepreneurial ecosystems while holding rural origin constant.

Participants and Sampling Frame

The target population consisted of students from business and economics programs who were initially from Gilgit-Baltistan, whether they studied in Gilgit-Baltistan or other Pakistani provinces. Because there is no comprehensive registry of students originating from GB across all institutions, the sampling frame was constructed pragmatically using departmental postboxes, class notices, student societies, and areas of university management with known oversight of GB students. We used a stratified convenience sample-based strategy to enhance coverage (strata defined by degree level (Bachelor's, Master's, MPhil) and institution type (public/private) and recruitment aimed to ensure balanced representation across strata. Inclusion criteria included (i) self-reported Native American Heritage, (ii) age ≥ 18 years, (iii) current attendance in a business/economics program and (iv) informed consent. Of the 270 invitations/disseminated questionnaires, 250 responses were considered sufficient in terms of completeness and quality and were included in the analysis (92.6% usable response rate). To test for non-response bias, we used the Armstrong-Overton wave analysis, which analyzed the differential means of early and late respondents on SC, PsyCap, and EI and found that they were not statistically different (all $|t| < 1.96$, $P > 0.05$). We also re-estimated the structural model using wave weights to mimic adjustment for propensity to respond; we found that path estimates and inferences were unchanged ($DI > 0.02$), which indicates that non-response is unlikely to substantially bias results. We do not consider the sample representative of all GB-origin students; however, the age and gender distributions of the sample are similar to existing GB youth indicators, which makes the inferences plausible for the age and gender segment of the national population.

Procedures and Ethical Clearance

Data were gathered through a self-administered questionnaire, either in paper-based format for students attending class sessions or on an online, secure platform for students studying off-site. The instrument began with a simple language information sheet that explained the purpose of the study, procedures, the

voluntary nature of participation, confidentiality assurances, the expected completion time, and the participant's right to withdraw without penalty. Students progressed only after they had given informed consent; no personally identifiable information was recorded, and IP addresses were not retained for online submissions. To ensure privacy protection, raw data were stored on encrypted drives that could be accessed only by the research team. A de-identified dataset and analysis code will be made available through an OSF repository or by reasonable request (subject to terms of ethics approval and participant consent).

Measures

All constructs were measured using a validated Likert-type scale constructed in English, as it was the common medium of instruction in the sampled programs. PsyCap was measured using the 24-item Psychological Capital Questionnaire (PCQ),⁴⁹ which employs a 6-point scale (1 = strongly disagree, 6 = strongly agree). A 40-item scale comprising four theoretically driven first-order factors self-efficacy, hopefulness, resilience, and optimism each with six items was modelled for PsyCap; this corrected an error in factor assignment found in previous iterations. Successful EI was assessed with the scale instrument provided by Linan and Chen (2009), which has a 7-point response scale (1 = strongly disagree; 7 = strongly agree) and is consistent with the definition of intention strength as in TPB. SC was assessed with the personal social capital scale (PSCS-16) (Wang et al., 2014), which is a 16-item scale with a 5-point response range (1 = strongly disagree, 5 = strongly agree), reflecting both bonding (strong-tie, kin/community) and bridging (weak-tie, extra-community) dimensions relevant to rural settings. For robustness, we considered covariates that were typically linked to entrepreneurial outcomes: gender (0 = female, 1 = male), age (in years), education level (Bachelor's/Master's/MPhil), and prior business experience (in years). From which minimal adaptations of wording (such as those used in any local context) were checked to ensure as much as possible that the construct was clearly described.

Measurement Validation (CFA, Reliability, and Validity)

We used a two-step SEM method. The measurement model was estimated using CFA to provide evidence of

psychometric adequacy of the latent constructions, and only when reliability and validity provided sufficient evidence, then moved on to the structural relations. Maximum Likelihood (ML) was used to estimate CFA in AMOS 26. Standardised loadings less than 0.50 were marked for deletion; none were dropped unless the item was theoretically redundant or cross-loading. Internal consistency was assessed using Cronbach's alpha (α), and for congeneric measures, the Composite Reliability (CR) was derived for each construct or facet. Convergent validity was measured using Average Variance Extracted (AVE), where a high AVE (above 0.50) indicates the amount of variance accounted for by the construct versus measurement error. Discriminant validity was tested with the Heterotrait-Monotrait ratio (HTMT) with a 95% confidence interval (CI); HTMT values above 0.85 (or above 0.90 for concepts that would be theoretically close together) indicate discriminant validity. For completeness, we present the Fornell-Larcker criteria. Model adequacy was evaluated using heavily cited-but-campaign-advocates-prefer-non-dogmatic-thresholds of $ch^2/df \leq 3$, CFI/TLI ≥ 0.90 – 0.95 , RMSEA ≤ 0.06 – 0.08 (90% CI), and SRMR ≤ 0.08 . We report item loadings with standard errors and *P*-values, CR, and AVE values for each construct; the HTMT matrix with CIs; and overall measurement-model fit indices so that readers can make their own judgments about construct validity.

CMV Diagnostics

Because all variables were self-reported during a single wave of the survey, we used procedural and statistical controls to reduce and diagnose standard method variance. Procedurally, the instrument promoted anonymity, separated construct sections with neutral buffer instructions, varied response formats in the different constructs (5-, 6-, and 7-point scales) to discourage uniform responding, and mixed the item order to discourage the presence of any consistency motif. Statistically, we performed two standard diagnostics. First, Harman's single-factor test was used to determine if any single factor accounted for most of the covariance between measures. A solution in which the first factor explained less than 50% of the variance would indicate that there is no dominant general factor. Second, we estimated a CFA with an unmeasured latent method construct (ULMC) loading on all items in addition to their theoretical factors, and change in CFI (amplitude = $dCFI$) below 0.01 between the baseline measurement model and the model containing the method factor, because a change in CFI below 0.01 indicates that the inclusion of the latent method factor did not substantially improve model fit. Thus, CMV is unlikely to inflate substantive relationships. Where space allows, we supplement these diagnostics with a marker-variable sensitivity check. Taken together, these procedures and tests result in convergent assurance that CMV does not materially threaten the validity of our inferences.

Analytic Strategy

All descriptive statistics, preliminary reliability checks, and correlation analyses were conducted using the statistical software program IBM's Statistical Package for the Social Sciences (SPSS).²⁶ Standard factor analysis (CFA) and structural equation modelling (SEM) were estimated in AMOS 26 using the maximum likelihood method. We modelled PsyCap in either a second-order latent (with four first-order facets) or a correlated four-factor structure; the former specification was employed to provide a secure conclusion, while the latter was included as a robust measure. The structural model outlined the path of the focal mediators as SC. *PsyCap*. *EI*. Controls (gender, age, education level, prior business experience): included as exogenous predictors of EI

Controls were allowed to predict PsyCap in the robustness analyses to guard against the omitted variable bias in the mediator (note that this is not allowed in the original model). We report for both the measurement and structural models fit indices (ch^2 , df , ch^2/df , CFI, TLI, RMSEA with 90% CI, and SRMR). Mediation was assessed using bias-corrected bootstrap with 5,000 replications; we report the standardised indirect effect, bootstrap standard error of the indirect effect and 95% bias-corrected CI. Mediation is concluded when CI is not equal to zero. Partial vs. complete mediation is revealed by whether the direct path from SC to EI remains significant, controlling for PsyCap. We further report R^2 (endogenous constructs), proportion mediated (PM = indirect/total effect), and, where informative, post-hoc observed power and local effect sizes. The missing item response was small; we employed full-information ML under missing random assumptions, and listwise deletion sensitivity analyses yielded conclusive estimates. Distributional assumptions were investigated using statistics on skewness and kurtosis, as well as the sample size ($N = 250$) and the relatively low departures from normality, indicating that ML is robust. As extra protection, we also examined Bollen-Stine bootstrap *P*-values (optional) to check overall model fit (under non-normality).

Locale of the Study

Gilgit-Baltistan is a sparsely populated area of high elevation in northern Pakistan (area 72,971 km², population c. 1.44 million), a region that is characterised by dispersed settlements, strong kinship ties, and growing (often uneven) exposure to external markets through tourism and connectivity projects related to CPEC. The formal infrastructure for entrepreneurship education and incubation is comparatively low, which is why many students from GB have been travelling to other provinces for higher education. This socio-institutional context is conceptually relevant: the level of bonding SC is often high, whereas the level of bridging SC to outside resource holders is not established; PsyCap may be central for the process of turning existing ties into EIs in the wake of perceived constraints. Studying GB-origin students, therefore, illuminates

the nexus of social and psychological resources that come to play in their determination of entrepreneurial agency in an environment where the processes are expected to be especially salient.

Results

Sample Characteristics

We analyzed 250 usable questionnaires (usable rate = 92.6%). As shown in Table 1, respondents were 43.6% female and 56.0% male (0.4% preferred not to say). The age distribution is typical of university cohorts, 42.4% aged 18–25 and 50.8% aged 26–30, with only 6.8% above 30. In terms of study level, 42.8% were Bachelor’s students, 28.0% Master’s, and 27.6% MPhil (1.6% “Other”). Consistent with a student sample, 62.0% reported no prior business experience; 20.8% had <1 year, and 16.8% had ≥1 year. These distributions indicate broad coverage across degree stages while keeping prior entrepreneurial exposure relatively low, useful for isolating attitudinal mechanisms rather than past-founder effects.

Following Armstrong–Overton wave analysis, early vs. late respondents did not differ on SC, PsyCap, EI (all $|t| < 1.96, P > .05$). SEM re-estimated with wave weights yielded virtually identical paths ($\Delta\beta \leq 0.02$), suggesting minimal non-response bias.

Measurement Model (CFA): Factor Loadings, Reliability, and Validity

A confirmatory factor analysis was conducted to evaluate the measurement model, which comprises Social Capital (PSCS-16), PsyCap as a second-order construct with four first-order dimensions (self-efficacy, hope, resilience, and optimism), and EI. The overall model demonstrated a satisfactory fit to the data, as reflected in the fit indices reported in Table 2, which

all met the recommended thresholds. Standardized factor loadings were statistically significant and substantively meaningful across all constructs. For SC, the load ranged from moderate to strong. At the same time, the facets of PsyCap self-efficacy, hope, resilience, and optimism also exhibited consistently high loadings, confirming their contribution to the higher-order construct. EI items loaded strongly on their latent factor, and no item was excluded based on the minimum loading criterion. Composite reliability values indicated high internal consistency for all constructions, exceeding the commonly accepted thresholds. Moreover, the AVE values met or surpassed the recommended benchmark, establishing satisfactory convergent validity across all dimensions. Collectively, these findings confirm that the latent structure of the model is both reliable and valid for the constructions under study.

Discriminant Validity

The Heterotrait-Monotrait (HTMT) ratios presented in Table 3 were all below the recommended threshold, with their CIs clearly distant from unity. Specifically, the relationships among SC, PsyCap, and EI demonstrated moderate associations, suggesting that while the constructs are related, they remain conceptually distinct. When considered alongside the evidence from AVE and composite reliability, these results provide strong support for discriminant validity among the three constructs, confirming that each represents a unique underlying dimension within the measurement model.

Table 4 presents the standardized factor loadings from the confirmatory factor analysis of the measurement model, indicating strong item representation for all constructs. All loadings were statistically significant at the 1% level, and none fell below the recommended minimum threshold, confirming the adequacy of each indicator. SC items exhibited moderate to high loadings, demonstrating consistent measurement across their sixteen items. The first four-order dimensions of PsyCap, self-efficacy, hope, resilience, and optimism also showed robust and stable factor loadings, supporting the validity of the second-order PsyCap

Table 1 | Sample characteristics (N = 250)

Variable	Category	n	%
Gender	Female	109	43.6
	Male	140	56.0
	Prefer not to say	1	0.4
Age	18–25	106	42.4
	26–30	127	50.8
	31–40	13	5.2
	41–50	4	1.6
Education	Bachelor’s	107	42.8
	Master’s	70	28.0
	MPhil	69	27.6
	Other	4	1.6
Prior business experience	None	155	62.0
	<1 year	52	20.8
	1–5 years	37	14.8
	6–10 years	5	2.0
	>10 years	1	0.4

Note: Percentages rounded; totals may not sum to 100.

Table 2 | Common-method variance diagnostics

Diagnostic	Statistic	Criterion	Interpretation
Harman single factor (% variance)	36.8%	<50%	Not dominated by one factor
ULMC ΔCFI	0.004	<0.01	CMV not material
ULMC ΔRMSEA	0.002	Small	Consistent with above

Table 3 | Discriminant validity (HTMT with 95% CI)

	SC	PsyCap	EI
SC	–	0.70 [0.62, 0.78]	0.55 [0.46, 0.63]
PsyCap		–	0.58 [0.50, 0.66]
EI			–

Table 4 | Measurement model: standardized factor loadings (CFA)

Construct	Item	λ (std)	SE	P
Social Capital (PSCS-16)	SC1	0.73	0.06	<0.001
	SC2	0.76	0.05	<0.001
	SC3	0.71	0.06	<0.001
	SC4	0.68	0.06	<0.001
	SC5	0.74	0.05	<0.001
	SC6	0.70	0.06	<0.001
	SC7	0.77	0.05	<0.001
	SC8	0.69	0.06	<0.001
	SC9	0.72	0.06	<0.001
	SC10	0.66	0.06	<0.001
	SC11	0.75	0.05	<0.001
	SC12	0.70	0.06	<0.001
	SC13	0.78	0.05	<0.001
	SC14	0.67	0.06	<0.001
	SC15	0.74	0.05	<0.001
	SC16	0.72	0.06	<0.001
PsyCap–Self-efficacy	SEFF1	0.82	0.04	<0.001
	SEFF2	0.79	0.04	<0.001
	SEFF3	0.76	0.05	<0.001
	SEFF4	0.83	0.04	<0.001
	SEFF5	0.77	0.05	<0.001
	SEFF6	0.81	0.04	<0.001
PsyCap–Hope	HOPE1	0.80	0.04	<0.001
	HOPE2	0.78	0.04	<0.001
	HOPE3	0.75	0.05	<0.001
	HOPE4	0.82	0.04	<0.001
	HOPE5	0.77	0.05	<0.001
	HOPE6	0.79	0.04	<0.001
PsyCap–Resilience	RES1	0.74	0.05	<0.001
	RES2	0.76	0.05	<0.001
	RES3	0.72	0.05	<0.001
	RES4	0.78	0.04	<0.001
	RES5	0.70	0.06	<0.001
	RES6	0.75	0.05	<0.001
PsyCap–Optimism	OPT1	0.73	0.05	<0.001
	OPT2	0.71	0.06	<0.001
	OPT3	0.69	0.06	<0.001
	OPT4	0.77	0.05	<0.001
	OPT5	0.72	0.06	<0.001
	OPT6	0.74	0.05	<0.001
Entrepreneurial Intention (EI)	EI1	0.86	0.03	<0.001
	EI2	0.84	0.03	<0.001
	EI3	0.82	0.04	<0.001
	EI4	0.79	0.04	<0.001
	EI5	0.77	0.05	<0.001
	EI6	0.81	0.04	<0.001

All λ significant at $P < 0.001$; none < 0.50 .

construct. EI items displayed particularly high loadings, reflecting a well-defined and internally consistent latent structure. Collectively, these results confirm that all observed variables contribute meaningfully to their respective latent constructs, reinforcing the reliability and validity of the overall measurement model.

Table 5 summarises the reliability and convergent validity statistics for all constructs, demonstrating strong psychometric properties across the model. Cronbach's alpha values for all variables exceeded the acceptable threshold, indicating high internal consistency among items. Composite reliability values were also robust, further confirming measurement stability and reliability. The AVE for each construct met or surpassed the recommended benchmark, supporting adequate convergent validity. These results suggest that SC, PsyCap (both as a higher-order construct and its individual dimensions), and EI are measured reliably and capture a substantial proportion of the variance in their indicators.

CMV Diagnostics

Procedural remedies (anonymity, construct separation, varied endpoints) were complemented by two statistical checks. Harman's single-factor solution explained 36.8% of the variance, which is below 50%, indicating that there is no dominant general factor. Introducing the unmeasured latent methods construct (ULMC) resulted in $\Delta CFI = 0.004$ and $\Delta RMSEA = 0.002$ relative to the CFA baseline, and did not alter substantive paths, suggesting that CMV is unlikely to inflate relationships materially.

Table 2 reports the results of CMV diagnostics, indicating no significant bias in the data. The Harman single-factor test showed that a single factor did not account for the majority of variance, suggesting minimal common-method influence. Similarly, the changes in comparative fit index and root mean square error of approximation were negligible, confirming that CMV was not a concern in the measurement model.

Structural Model (SEM): Direct and Indirect Effects

The structural model specifying the directional relationships from SC to PsyCap and from PsyCap to EI demonstrated an adequate to good overall fit. The model fit indices, as reported in Table 2, all met the recommended thresholds, indicating that the hypothesised relationships align well with the observed data. These results suggest that the proposed structural framework provides a sound representation of the underlying theoretical model (Table 6).

Path Estimates and Mediation

The estimates of standardized paths in Table 7 were all significant and were as anticipated. SC significantly influences PsyCap, indicating that the more socially connected and trusted one is, the more likely they are to have increased psychological resources. PsyCap, on the other hand, positively influenced EI and reinforced the importance of self-efficacy, hope, resilience, and

Table 5 | Reliability and convergent validity

Construct	k	α	CR	AVE
Social Capital (PSCS-16)	16	0.747	0.88	0.51
PsyCap (second-order overall)	24	0.886	0.92	0.58
PsyCap–Self-efficacy	6	0.86	0.90	0.61
PsyCap–Hope	6	0.85	0.89	0.59
PsyCap–Resilience	6	0.83	0.87	0.53
PsyCap–Optimism	6	0.82	0.86	0.50
Entrepreneurial Intention	6	0.819	0.90	0.61

Table 6 | Model fit indices

Model	χ^2	df	χ^2/df	CFI	TLI	RMSEA [90% CI]	SRMR
Measurement (CFA)	1,345.2	892	1.51	0.957	0.951	0.046 [0.041, 0.051]	0.049
Structural (SEM)	1,388.6	899	1.54	0.953	0.948	0.047 [0.042, 0.052]	0.052

Table 7 | Structural paths and bootstrapped mediation (Standardized estimates)

Path	β	SE	z/t	P	95% BC CI
SC \rightarrow PsyCap	0.62	0.05	12.40	<0.001	[0.53, 0.70]
PsyCap \rightarrow EI	0.20	0.03	5.80	<0.001	[0.14, 0.26]
SC \rightarrow EI (direct)	0.13	0.05	2.44	0.015	[0.03, 0.23]
Indirect (SC \rightarrow PsyCap \rightarrow EI)	0.20	0.04	–	–	[0.12, 0.29]
Total (SC \rightarrow EI)	0.33	0.05	–	–	[0.23, 0.43]

optimism in driving entrepreneurial motivation. The direct correlation between SC and EI also remained, indicating that social structures play a direct and indirect role in entrepreneurial inclination. A bootstrapping analysis of five thousand resamples revealed a significant indirect effect of SC on EI, mediated by PsyCap, confirming the mediation hypothesis. The fact that the direct effect was still substantial suggests that the results are partial and not a complete mediation. The overall impact of SC on EI was overwhelming, with approximately 60% of the emotion attributed to PsyCap, emphasising its central role in serving as a psychological medium of communication between social and entrepreneurial forces.

The combined measurement and structural evidence yield a precise mechanism: richer SC among rural-origin university students is associated with more substantial PsyCap (self-efficacy, hope, resilience, and optimism), and these psychological resources, in turn, are positively linked to EI. Crucially, while PsyCap mediates a large share (~61%) of the SC effect on EI, a residual direct effect persists, suggesting additional social-structural pathways (e.g., access to information, mentoring, role models, subjective norms) that operate alongside psychological resources. Methodologically, the model satisfies rigorous validity requirements (strong loadings; CR/AVE; HTMT with 95% CIs), reports the full suite of fit indices for both

measurement and structural models, and addresses CMV with procedural and statistical diagnostics responding directly to reviewers' requests for CFA evidence, model fit, and bias checks. Substantively, the results support the theorised view of PsyCap as a conversion factor that helps translate social resources into entrepreneurial agency in resource-constrained rural contexts such as Gilgit-Baltistan.

Discussion

Using a validated measurement model with good global fit, strong reliability and convergent validity (CR/AVE), satisfactory discriminant validity (HTMT < 0.85), and explicit CMV checks we find a coherent pattern: SC is substantially and positively associated with PsyCap, PsyCap is positively associated with EI, and the direct SC and EI link remains significant after accounting for PsyCap. Bias-corrected bootstrapping confirms statistically significant partial mediation, with approximately 61% of SC's total association with EI transmitted via PsyCap. These relations hold under alternative specifications of PsyCap (second-order vs. correlated first-order factors) and remain robust when demographic controls are included, indicating that the observed pathways reflect substantive mechanisms rather than modelling artefacts.

Theoretical Implications

PsyCap as a Conversion Mechanism Between Social and Entrepreneurial Agency:

The partial-mediational pattern contributes to theory by identifying how social structures are translated into entrepreneurial attitudes. SC seems to translate into agentic beliefs (self-efficacy, hope, resilience, optimism) in resource-poor rural environments, which consequently boost EI. This aligns with Resource-to-Agency logics in conservation-of-resources and Capability perspectives: networks deliver information, reassurance, and vicarious learning, which reduce perceived barriers, increase perceived control, and maintain motivation all of which are canonical antecedents of intention. By measuring the indirect path, the research identifies PsyCap as a proximal psychological agent through which distal social resources are transformed into EIs as doable goals.

Beyond Replication: Disentangling Channels

Prior work commonly reports a total SC and EI link but rarely decomposes it into psychological vs. structural/social-normative channels. Our evidence distinguishes these channels by documenting a sizable indirect effect through PsyCap, alongside a residual direct effect from SC to EI. The latter plausibly reflects mechanisms such as normative endorsement, mentoring, referrals, legitimacy signals, and market information that continue to matter even when PsyCap is held constant. This decomposition refines theory by urging scholars to model SC as a multi-channel driver of entrepreneurial agency rather than a single undifferentiated latent force.

Integrating Rural Entrepreneurship and Capability Perspectives

In a thin market, peripheral situations such as Gilgit-Baltistan (GB), the bonds of affinity (binding ties) are intense, and those of ties (bridging ties) are still well-established. Our results show that incremental growth in bridging opportunities, i.e., through universities, alumni, and diaspora linkages, amplifies PsyCap, particularly self-efficacy and hope, thereby building the set of capabilities needed to pursue entrepreneurship. Framing SC > PsyCap > EI through a lens of capabilities enhances the study's contribution: intentions are viewed here not simply as attitudes, but as possible choices offered by a joint endowment of social and psychological resources.

Implications for TPB-Consistent Models

Within a TPB scaffold, PsyCap aligns closely with PBC and motivational appraisals. In contrast, SC contributes to subjective norms and to information that updates beliefs about feasibility and desirability. The present evidence empirically ties these layers together, showing that network-driven gains in perceived control (via PsyCap) constitute a principal channel from social context to intention, while leaving room for a direct normative/informational route from SC to EI.

Contextual Implications for Rural-Origin Students in GB

Why the GB Context Matters

GB has a strong kinship and community of support, but poor institutional support and spatially dispersed markets make beliefs and goal-path thinking vulnerable. The effect of the SC pathway on PsyCap has a high coefficient of determination, indicating that social scaffolding through mentors, peer cohorts, alumni communities, and diaspora bridges is a significant protective factor for replenishing the psychological resources that sustain entrepreneurial options. In this way, bridging ties not only make information more accessible but also shield and further advance the psychological preconditions for entrepreneurial activity.

Heterogeneity and Inclusion (Gender, Experience)

Although the model is not stratified, the context suggests that there are two types of heterogeneity worth considering. First, we expect there to be differential access to bridging networks based on gender, such that, because of differential cohort experiences, visible role models, and safe-space networking, women may stand to benefit disproportionately from SC's effects on PsyCap. Second, since most respondents have little previous business experience, PsyCap seems to be more based on socialisation and exposure than on cumulative mastery; rigorous shadowing, internships, and supervised first-sale opportunities may thus be particularly catalysing for rural-origin students.

Policy and Practice Implications

Design Principle: Pair Network Building with PsyCap Training

Because much of the SC effect on EI acts through PsyCap, the interventions designed to have an effect should both promote the building of networks and psychological resources. Universities and partner agencies can promote the institutionalisation of mentoring matches with local founders, alumni, and diaspora professionals, and implement small group peer cohorts that meet frequently and have regular and routine reviews of milestone goals. Some of the parallel PsyCap micro-interventions recommended for implementation in coursework and incubators include scaffolding mastery experiences and iterated pitches to develop self-efficacy, pathway coaching to foster hope, failure lab debriefs and cognitive reappraisal to reinforce resilience, and attributional retraining and data-driven opportunity monitoring to maintain optimism.

Reduce Feasibility Frictions to Preserve PsyCap Gains

Even relatively small or trivial administrative frictions can destroy incipient PsyCap. Universities and provincial bodies should thus provide seed micro-grants and prototyping funds with milestone mentorship and facilitate a single-stop compliance desk for licenses and registration (including digital payments) and negotiate for student-friendly IP and procurement window for campus-based ventures to meet institutional demand. The prompts of those early frictions are to sustain control in its presence, and Molden is reticent at short distances, with no attrition, and ensure an acceptable setback.

Gender-Responsive Programming

To increase the involvement of women in tech initiatives, we need to design white-hat programs specifically for women, pair employees with close mentors, and provide ready-to-hire resources, such as those for accelerator activities and travel grants for market exploration. Programmes should monitor gender-disaggregated indicators, participation, progression, and conversion to ventures to ensure that the benefits of improved SC and PsyCap are equitably achieved.

Measurement for Accountability

The instruments used here have been validated and can serve as a foundation for program monitoring and evaluation. Start taking baseline and periodic PCQ and EI scores, and augment with simple network analytics (density, brokerage) and monitor conversion (prototypes, first customers, keying out, etc.). Early-stage capability building needs to be appropriately valued, so that funding tranches are tied to measurable improvements in PsyCap and network quality, rather than being entirely determined by the number of ventures.

Overcoming Challenges to Shared Learning and Knowing Proudly

These principles can be embodied operationally by extending the schedule to four semesters. In Semester 1, institutions outline GB divisions, hire a mentor, arrange bootcamps and start cohort circles with PsyCap. Semester 2 focuses more on exposure through internship projects with GB-diaspora companies, client segment discovery trips, and prototypes for these customer segments. Semester 3, which involves pre-incubation with clear deliverables, including an MVP and first sale (seed tickets), ends with a demo day featuring provincial buyers, pending mentors' sign-off. Semester 4 supports transition and includes provision of formalisation help, a revolving micro-fund funded by pay-it-forward contributions from graduates, and continuation of cohort check-ins to maintain PsyCap in the important first year.

Limitations and Directions for Future Work

The cross-sectional design limits causal inference, as it requires multiple panels (or waves) to test whether increases in SC precede increases in PsyCap and follow on to EI (and eventually observed behaviours). Endogeneity is, of course, still an issue, as unobserved traits may increase SC and PsyCap. Therefore, future research could utilise IV, propensity scores, or natural experiments (e.g., with cohort-randomised mentorship offers) to better identify the relationship. Construct granularity also deserves consideration. Further studies may extend the difference between bonding and bridging dimensions of SC to show how one or the other aspect has a more substantial impact on PsyCap in the group-based scenario. This type of differentiation would assist in explaining the extent to which close relationships, based on trust or more expansive cross-group relationships, are more dominant in the development of psychological resources relevant to entrepreneurship. Moreover, using multigroup structural equation modelling based on gender, level of study, or previous entrepreneurial experience may reveal salient subgroup differences within the Social Capital-Psychological Capital-EI pathway, providing a perspective on equity and inclusion. Lastly, longitudinal research, which would follow individuals through the stages of their intention to start a venture, its survival, and expansion, is required to determine the role of Social and PsyCap used collectively in achieving long-term entrepreneurial success.

Conclusion

This study focused on the role of SC in the EIs of university students of Gilgit-Baltistan and whether the PsyCap is the deviation that takes the resources of the networks and makes the intention of starting a business stronger. Using a model of measurement that has been carefully validated, and explicit checks for same-source bias, the analysis showed that a clear and consistent pattern emerges. Students who have richer networks and stronger ties also report higher levels of confidence, hope, resilience, and optimism and these

psychological resources, in turn, are related to a greater readiness to pursue entrepreneurship. Importantly, the link between SC and EI is not solely psychological, even after PsyCap is controlled, SC is still important, possibly through mechanisms such as norms, legitimacy, information flows, referrals, and mentoring.

These findings advance current theory by distinguishing the overall impact of SC into two complementary pathways (one of them psychological and the other one structural), as well as this mechanism being embedded into a peripheral, thin market context. In places where formal support systems are limited, networks do more than serve as channels for information; they “wrap up” the inner resources that make entrepreneurial action seem possible and worth doing. Framed in terms of capability and planned behavior, the findings indicate that issues of social context influence the perceptions of control and motivation, and PsyCap turns social context into intention.

The evidence also has an inclusion message. Female students make up a considerable portion of the sample, highlighting the fact that entrepreneurial aspiration in rural areas does not have limited adult male and female. Programs that are explicitly gender-responsive—where access to mentors, alumni and diaspora is coupled with micro-interventions that help build confidence, goal pathways thinking, resilience and constructive optimism - are likely to be especially effective. Because many students have little experience in the business world, structured exposure, in the form of internships, shadowing, managed first sales, etc., can be useful for shifting social support to durable psychological gains, and ultimately, more intense EIs.

For universities, public agencies, and civil society organizations, the practical implication is to develop networks and PsyCap with one another and then eliminate all those little frictions, which can rapidly wear away the initial momentum of some effort. One-stop compliance support, small seed grants with mentorship mileposts, procurement windows for student ventures and recurring bridge platforms, such as demo days and problem-solving events, can make intentions more actionable. Monitoring should go beyond counting new ventures-to include changes in PsyCap and quality of networks as time goes on, using validated instruments and simple network metrics to guide improvement.

These conclusions are made with reasonable cautions. A one wave survey is unable to establish causation, and unobserved traits may exert influences on social and PsyCap. Future research should track students over time, measure bonding and bridging SC separately, consider differences based on gender and experience, and link intentions to actual outcomes, such as venture formation, survival and growth. EI in rural Pakistan can be best explained as the function of a socio-psychological system. SC provides trust, norms and access, PsyCap provides the inner capability to act; and institutions provide the enabling environment that turns the intention into enterprise. Strengthening all the three—at once and in a concerted manner—provides

a believable route towards tapping entrepreneurial potential of youth and women from Gilgit-Baltistan and other parts of similar regions, converting local human resource into a steady engine of inclusive economic growth.

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