Network Dynamics and their Impact on Startup Performance in Sri Lanka

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Abstract *- Innovations in emerging markets have a high risk because of lack of adequate funding, institutional support, and a high degree of market uncertainty. Social capital is crucial such an intangible resource in these settings which allows entrepreneurs to gain access to resources, knowledge and legitimacy that is not within their financial reach. Although it has been previously determined that social networks play a significant role in entrepreneurship, the synergistic effect of bonding, bridging, and linking social capital on the probability of startup success has only been received limited attention, especially in the context of the South Asian region. This paper examines the influence of three aspects of social capital bonding, bridging, and linking, on the success of start-ups in Sri Lanka. Quantitative research design was used, and 100 startup founders were included in the sample of data collection by combining physical outreach online methods of surveys. The data were analyzed with the help of Partial Least Squares Structural Equation Modeling (PLS-SEM). The results demonstrate that out of three dimensions, bonding social capital has a strong positive impact on startup success whereas both bridging social capital and linking social capital have a weak and statistically non-significant relationship. Theoretically, the results will be used to back the multidimensional view of social capital regarding entrepreneurship, and practically, it will help policymakers, incubators, accelerators on how to enhance the startup ecosystem of emerging economies.*

Keywords –Bonding Social Capital, Bridging Social Capital, Entrepreneurs, Linking Social Capital, Sri Lanka, Startup Success.

I. INTRODUCTION

Startups are now a major driver of innovation, economic growth, and job creation the world over. They are crucial in developed and developing economies in terms of filling closed market gaps, creating disruptive technology, and creating new sustainable development opportunities (Ahmad et al., 2025; Crowley & Barlow, 2022). In the case of the emerging economies like Sri Lanka, startups are starting to be seen as a driver of structural change, especially in information technology, e-commerce, fintech, agribusiness, and manufacturing. Government efforts such as Startup SL at the Information and Communications Technology Agency (ICTA), and industry associations such as SLASSCOM, have been encouraging entrepreneurship through provision of networking opportunities, policy support, and capacity-building. Nonetheless, even with these efforts, startups in Sri Lanka still have significant obstacles such as a lack of finance, uncertainty in the market, and inefficient institutions and a high failure rate within the first five years of operation (World Bank, 2022).

Another body of literature has maintained that in addition to financial and tangible resources, intangible resources like social capital are important forces in determining entrepreneurship success (Harraka, 2002). The social capital may be perceived as the resources available through networks of entrepreneurs, such as trust, reciprocity, information, and legitimacy. Innovators in the economies which are developing may face institutional gaps, poor financial structures and uncertain markets. Social capital in such settings may also replace the lack of formal structures by helping startups to mobilize resources, legitimize, and survive in uncertain conditions (Syamsu Rijal, 2024; Tanwne Sarker, 2023).

Historically, social capital has been studied in two types namely bonding and bridging. Bonding is the presence of strong relationships in close networks, relatives, friends, and bridging is the presence of weak ties in heterogeneous groups giving access to a variety of knowledge and opportunities (Burt, 2003). Nonetheless, other researchers, have added a third dimension: the connection of social capital. The linking means the vertical ties to institutions, policymakers, and organizations possessing authority and resources in providing the legitimacy and structural facilitation to entrepreneurial ventures. Bonding, bridging and linking together offer a broad spectrum through which the influence of social networks are analyzed to influence the results of entrepreneurship.

Although the social capital is becoming widely recognized, previously, researchers have tended to examine the dimensions of social capital separately, with bonding and bridging being better researched than linking. Additionally, a large portion of the empirical research has focused on more developed economies where institutions are more developed, financial markets are more established, and startups are started in resource abundant environments (Crowley & Barlow, 2022; Kopren & Westlund, 2021).Conversely, emerging economies such as Sri Lanka have different circumstances in which the level of reliance on informal networks and institutional connections by entrepreneurs is high in the effort to overcome the resource limitation and institutional inefficiencies. This generates a gap in theory and evidence: what is the collective impact of bonding, bridging and linking social capital on the success of startups in emerging economies?

This paper seeks to fill this gap by conducting an empirical study of the impact of bonding, bridging and linking social capital on the success of startup in Sri Lanka. We base our conceptualization of social capital on Resource-Based View (RBV), Social Network Theory as an intangible strategic resource that gives startups competitive advantage, access to opportunities, and increased survivability. In particular, the research aims at achieving three purposes: To explore the role of bonding social capital on the success of startups in Sri Lanka. To examine the role of bridging social capital on the success of startups in Sri Lanka. To examine the effect of the connection between social capital and the success of startups in Sri Lanka.

These goals result in the key research question: What contribution bonding, bridging, and linking social capital make to the success of startups in Sri Lanka? This study is important in two aspects. Theoretically, it adds to the

literature on entrepreneurship by promoting a multidimensional perspective of social capital that combines bonding, bridging, and linking at the same time. In practice, the results will give us actionable information to entrepreneurs, policymakers, and ecosystem builders in Sri Lanka. To entrepreneurs, the findings will be used to indicate the kind of networks that are most effective in growth and survival. Policy The findings can inform the policymakers and incubators on resource allocation, policy frameworks and ecosystem support systems to make startups sustainable. Placing the study in the context of the dynamic entrepreneurial ecosystem in Sri Lanka, the study contributes to the global discourse on the importance of social capital in startups and provides South Asia-specific results.

II. LITERATURE REVIEW

A. Social Capital as a Theoretical Foundation of entrepreneurship

1) Resource-Based View (RBV):The RBV points out that companies acquire competitive advantage not only based on the tangible resources but also intangible resources like knowledge, skills, and networks(Barney, 1991). The social capital is arguably a valuable, rare, inimitable, and non-substitutable resource, which meets the requirements of the RBV with strategic assets. With limited access to financial resources in an entrepreneurial setting, social capital gives the startups relational benefits to counter competition and survive (Ahmad et al., 2025; Crowley & Barlow, 2022).

2) Social Network Theory: The relationship between access to information and opportunities and network structures is explained by the Social Network Theory (Burt, 1992). Theories like strong ties, weak ties and structural holes explain the difference in the benefits of dense bonding networks and bridging ties between different groups of people to an entrepreneur. Bonding networks offer support and trust and bridging ties are the ones that provide access to new knowledge. This theory supports the importance of the analysis of bonding and bridging social capital in startups(Kopren & Westlund, 2021).

B. Bonding Social Capital and Startups

Bonding social capital is close and strong connections of trust with family, close friends and community members(Harraka, 2002). It is through these kinds of relationships that emotional assistance, resilience and access to simplistic resources are gained during the unpredictable initial years of the venture creation. As it has been researched, seed capital, advice, and moral support are obtained by entrepreneurs through family and small circles in a situation where the formal financing is limited (Xie et al., 2021). Empirical research proves that bonding resources contribute to the survival of startups, especially where there is an institutional void (Kopren & Westlund, 2021).Indicatively, business people in Asia and Africa tend to rely on family networks to share resources, mitigate

risk, and support businesses in their start up phases. But on the other hand, bonding social capital has its drawbacks. Increased reliance can result in information redundancy, decreased innovation and scaled opportunities (Syamsu Rijal, 2024).Thus, although bonding does help to survive, its effect on long-term development is sometimes less strong than that of bridging or linking types of social capital.

Hypothesis 1 (H1): Bonding social capital has a positive impact on startup success.

C. Bridging Social Capital and Startups

Bridging social capital includes weak ties, linking entrepreneurs in different groups, as business associations, work networks, or friends. Such connections open up to the heterogeneous knowledge, novel ideas, and strategic partnership (Burt, 2003; Crowley & Barlow, 2022) .It has been found that bridging networks broaden the scope of opportunities of entrepreneurs by helping them to enter new markets, achieve new partnering, and gain more knowledge emphasize that bridging ties are important when opportunities are considered, particularly in dynamic industries. In a similar way, (Xie et al., 2021)show that the wider the network of entrepreneurs, the more promising to launch innovative products and maintain competitive advantage. In emerging economies where formal institutions do not necessarily provide sufficient support to innovations, bridging ties offer an important knowledge and collaboration channel.

Hypothesis 2 (H2): Bridging social capital has a positive impact on startup success.

D. Linking Social Capital to Startups

Linking social capital is the vertical relation between entrepreneurs and people or organizations in the position of authority like government agencies, banks, incubators, or NGOs(Woolcock, 1998).Such connections grant legitimacy, backing of regulations and access to funding channels to the start-ups. It is especially important that linking can be effective in the area of emerging economies where institutional barriers and the lack of access to formal resources are the key issues encountered by entrepreneurs(Ahmad et al., 2025) demonstrate that the connection of capital allows SMEs to find the contract, attract investors, and get the credibility. On the same note, (Ahmad et al., 2025)emphasize that the institutional ties offer the startups strategic benefits which cannot be attained by the bonding and bridging processes themselves. Social capital linkage in Sri Lanka can be via connection with ICTA programs or university incubators or personal accelerators where they contribute to the legitimization of start-ups in the market.

Hypothesis 3 (H3): Linking Social capital has a positive significant impact on startup success.

E. Startup Success

Startup success is a multidimensional concept, and it has financial and non-financial dimensions. On the financial aspect, it can incorporate profitability, revenue growth and ROI. In non-financial terms, it is frequently connected with the capacity to innovate, survive, gain market legitimacy, and be scaled up (Syamsu Rijal, 2024). Financial growth is likely to define success in developed economies, yet in emerging ones, staying afloat and remaining in power is just as important (Crowley & Barlow, 2022). As an example, finding institutional contracts or acquiring credibility because of government approval may make or break a startup in a situation where there is institutional void. Therefore, the assessment of the startup success in Sri Lanka needs to be approached subtly and combine both the financial and non-financial metrics.

F. Conceptual Framework

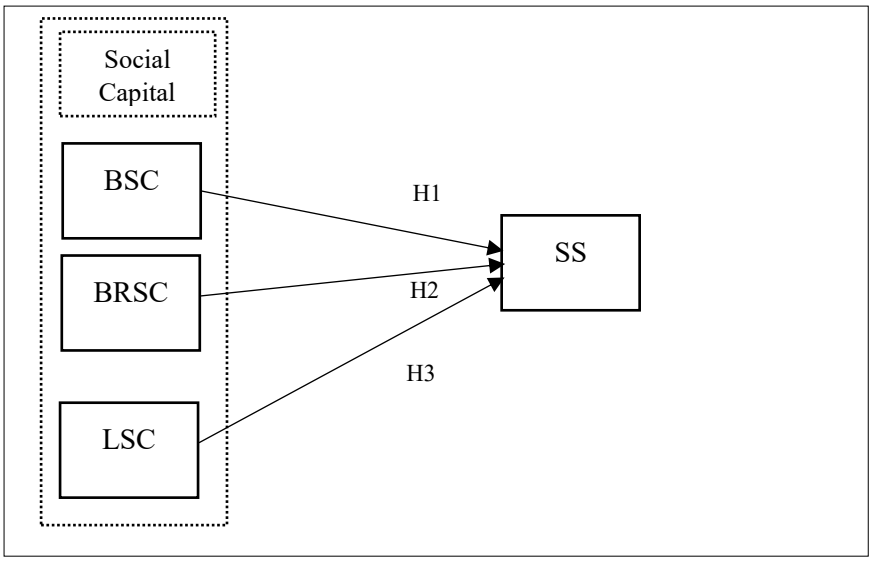
In line with the literature review, the current research hypothesizes a conceptual model, in which bonding, bridging, and linking social capital are independent variables that affect the success of startups. Both the hypotheses lie on theoretical arguments and earlier empirical studies.

H1: Bonding social capital has a positive impact on startup success.

H2: Bridging social capital has a positive impact on startup success.

H3: Linking Social capital has a positive significant impact on startup success

Figure 1. Conceptual framework



Source: Author's Compilation

III. METHODOLOGY

A. Research Design

To investigate the empirical correlation between three types of social capital including bonding, bridging, and linking and startup success in Sri Lanka, this research design was a quantitative and cross-sectional research design. Though it applied cross-sectional data, it was considered adequate to determine directional relationships since the theoretical basis was based on the established causal relationships in past empirical research Hair et al., 2019). In addition, the cross-sectional research design was suitable because the aim of the study was to make predictions and not establish causality overtime, due to time and resource limitations.

The guiding philosophy was a positivist as it allows objective measurement of constructs and statistical testing of hypotheses (Hair et al., 2019). Primary data collection tool was a structured survey questionnaire, which made it possible to capture a standardized set of responses which could be analyzed using high-order statistical methods including PLS-SEM.The reason behind the choice of research design is that PLS-SEM is especially effective in the research with a relatively small sample size, complex conceptual framework, and predictive research goals (Hair et al., 2019). The design was strong and offered results that were interpretable because the study aimed at determining the direct effect of three independent variables on the success of start-ups.

B. Population and Sample

This targeted a population of founders and co-founders of startups in operation in Sri Lanka. Startups were categorized based on the standards that the Sri Lankan government provides that less than five years old constitutes startups and that they have innovative or growth-focused goalsOne hundred valid responses were obtained. This is a sufficiently large sample to satisfy the popular ten-times rule of PLS-SEM that the sample should be ten times larger than the largest possible number of structural paths leading to a specific construct(Hair et al., 2019).Since there are three routes that led to Startup Success, the sample size needed was 30, a number that was easily surpassed in this study.

C. Data Collection Procedure

Physical Outreach: The research team was able to visit incubators, co-working spaces and startup networking events physically to identify and meet the startup founders face-to-face. The team initially created a list of the most comprehensive list of startups and made it in collaboration with the local incubators. All founders identified were approached and those that agreed to attend the survey had a face-to-face survey conducted.

Online Distribution: The survey was also shared online using professional startup networks and entrepreneurship forums to extend the reach. The physical

and online data collection methods were combined and this helped in increasing the diversity of response and enhancing representativeness.

D. Instrument Development

The survey questionnaire was two-fold. The initial data that was captured are demographic and venture data (e.g., age of founders, industry, founded date, etc.). The second measured the latent constructs:Bonding Social Capital (BSC): The questions were modified based on(Syamsu Rijal, 2024; Xie et al., 2021)which measured trust and close relationships with family and close friends. Bridging Social Capital (BRSC): (Burt, 2003; Crowley & Barlow, 2022) are related to weak ties and other external networks. Connection with formal institutions and governmental agencies: Items that are based on (Ahmad et al., 2025; Woolcock, 1998)that refer to having ties to the social power of formal institutions and government agencies. Startup Success (SS): It consists of growth, survival and innovation performance, according to (Ahmad et al., 2025)

A Likert scale with five points (1 = Strongly Disagree, 5 = Strongly Agree) was employed to make the responses and the statistical analysis easier.

E. Data Analysis Technique

PLS-SEM was applied to data of the SmartPLS 4 software. The choice of this technique was because it is suitable in complex models which involve more than one latent construct and has the strength in cases where the sample size is relatively small. It is suggested to be predictively oriented and flexible in non-normal data distributions (Crowley & Barlow, 2022; Hair et al., 2019). Since this research paper is devoted to the development of a theory and prediction, the PLS-SEM model was deemed suitable to investigate how one can relate bonding, bridging, and linking social capital to startup success (Ahmad et al., 2025)

The evaluation of the measurement and structural models were involved in the analysis. Internal consistency reliability was measured using Cronbachs alpha, rhoA, and Composite Reliability (CR), where all the constructs met the allowed value of 0.70. Convergent validity was checked with the help of the Average Variance Extracted (AVE) criterion, which demanded the value of more than 0.50, whereas discriminant validity was tested with the Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio that proved the distinctiveness of each construct(Kopren & Westlund, 2021; Xie et al., 2021). After the validation of the measurement model, the structural model was examined to test the relationship among the hypothesized constructs. The standard errors and t- and p-values used to test the hypotheses were created with bootstrapping with 5,000 subsamples in line with the established PLS-SEM practices(Hair et al., 2019).This methodological framework was allowed to gain a detailed insight into the overall role of various dimensions of social capital in relation to the success of startups in a vibrant entrepreneurial ecosystem in Sri Lanka.

F. Ethical Considerations

All the participants provided informed consent. The respondents were given confidence and anonymity. Participation was strictly voluntary, with the data being kept in a safe place, as only accessible to the research team.

G. Demographic Profile of Respondents

The study involved 100 startup founders representing diverse industries and backgrounds. Table 1 summarizes key demographic characteristics.

Table 1. Demographic characteristics of respondents

Characteristic	Category	Percentage (%)
Gender	Female (95%), Male (5%)	100%
Age Group	20–29 (82%), 30–39 (18%)	100%
Nature	Manufacturing (31%), Retail (54%), Services (10%), Other (5%)	100%
Startup Age	Less than 1 year (35%), 1-3 Years (65%)	100%

Source: Authors' compilation.

IV. DATA ANALYSIS AND DISCUSSION

A. Assessment of Measurement Model

Table 1 is a summary of the results of the measurement model. All constructs have a Cronbach alpha and composite reliability (CR) value that is over the recommended value of 0.70, which means that the constructs are highly consistent internally. The values of average variance extracted (AVE) are over 0.50 which ascertains convergent validity.

Table 2. Construct reliability and validity

Construct	Cronbach's Alpha	rho_A	Composite Reliability (CR)	AVE
Bonding Social Capital (BSC)	0.895	0.933	0.917	0.614
Bridging Social Capital (BRSC)	0.812	0.842	0.868	0.570
Linking Social Capital (LSC)	0.887	0.924	0.911	0.595
Startup Success (SS)	0.876	0.897	0.909	0.668

Source: Authors' compilation.

These findings indicate that all the measurement items are sound, and constructs are satisfactory to define the intended concepts.

B. Discriminant Validity

The Fornell-Larcker criterion was used to measure discriminant validity. Table 2 indicates that, the square root of AVE of every construct (diagonal) is higher than its correlation with other constructs, which imply good discriminant validity.

Table 3. Fornell-Larcker criterion

	BRSC	BSC	LSC	SS
BRSC	**0.755**			
BSC	0.550	**0.783**		
LSC	0.499	0.473	**0.771**	
SS	0.352	0.457	0.288	**0.818**

Source: Authors' compilation.

The results do prove the fact that no two latent constructions are identical.

C. Structural Model Results

Bootstrapping (5,000 subsamples) was used to test the structural model. The summary of the path coefficients, t-values and p-values are summarized in table 3.

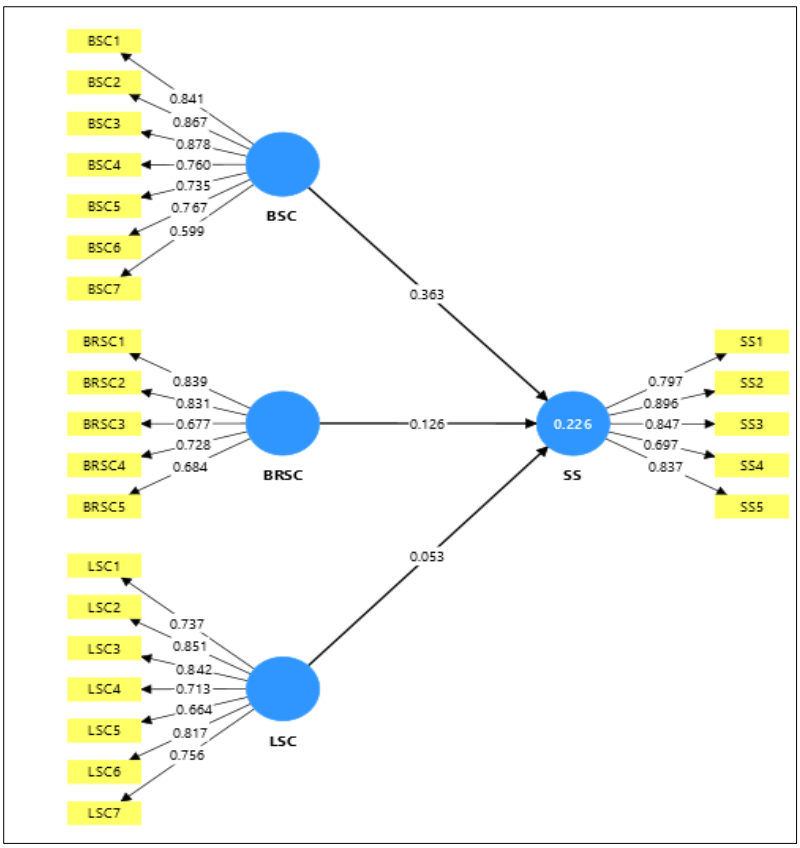
Table 4. Structural model results

Path	β (Original Sample)	T-value	P-value	Decision
BSC → SS	0.363	2.691	0.007	**Accepted**
BRSC → SS	0.126	0.959	0.338	Rejected
LSC → SS	0.053	0.541	0.588	Rejected

Source: Authors' compilation.

The model predicts 28.9% of the startup success (R 2 = 0.289), which is a fair explanatory power.

Figure 2. PLS Path Diagram



Source: Author Compilation

V. DISCUSSION

Findings reveal that bonding social capital is highly and positively correlated to the success of startups, which is a positive result to support H1. This observation aligns with the studies in the developing economies whereby intimate and trust-based relationship proximities grant important resources like financial aid, emotional motivation, and knowledge exchange (Kopren & Westlund, 2021; Xie et al., 2021).Family and community network are also critical to the survival of startups, especially at initial stages of growth in the Sri Lankan context.

However, bridging social capital and linking social capital were also proved not as important predictors of startup success. It implies that although the various and Azacitidine associations are productive in theory (Burt, 2003; Woolcock, 1998) they might not translate into practical advantages to startups unless they are facilitated by more powerful systemic processes. This is in line with the findings in(Ahmad et al., 2025) who concluded that the effectiveness of linking capital in weak institutional support in certain developing countries is restricted.

The contextual factors which may explain the rejection of H2 and H3 include the lack of access to external networks or bureaucracy that may not allow startups to use institutional resources. Moreover, the bridging of social capital can become even more important when scaling, as opposed to initial survival (Crowley & Barlow, 2022).

Nevertheless, it should also be noted that over dependence on bonding ties can also limit innovation and scalability. Extensive networks with high cohesiveness tend to restrict access to varied thinking and innovative thoughts which are vital in creative problem-solving and opportunity identification. In this respect, entrepreneurs who depend largely on bonding networks can have a problem with embracing innovative practices or going outside of the market they know (Burt, 1992). This underscores how network diversification must be balanced to ensure long-term entrepreneurship growth.

VI. Conclusion and Recommendations

The study examined the extent to which bonding and bridging and linking social capital affect the success of startups in Sri Lanka. The most prominent results are that bonding social capital alone is significant in terms of start-up success and that there is the need to relate well with others and establish known trust-based relationships at the incumbency levels of a venture. The relation between social capital and its linkage was not significant, and it was necessary to have more effective mechanisms of transforming these types of capital into real outcomes. The business owners are encouraged to develop a good personal network to survive in the now and build on weak ties to grow later. Accelerators and incubators should create programs which help bridge capital convert into real opportunities by linking startups with various external networks.

The access to institutional support and funding provided by policymakers should be simplified to facilitate linking capital. The training programs must be aimed at empowering the entrepreneur with skills to utilize

different types of social capital in a strategic way. These suggestions have the potential of enhancing the entrepreneurial ecosystem of Sri Lanka and increasing the sustainability of startups. Future entrepreneurial development programs should therefore integrate network diversification training, ensuring that founders not only build close support networks but also cultivate bridging and linking ties to foster innovation and scalability.

VII. Limitations and Future Work

Although this research is valuable in its information, some limitations need to be mentioned. The sample size of 100 startups is sufficient to perform the PLS-SEM, but the generalizability of the results is questionable because of the sample size. As the geographic scope, the information was gathered in Sri Lanka only it might not be relevant to other cultural and institutional settings. As there are no cross-sectional design, it is impossible to establish causal relationships without longitudinal data. As future research directions, longitudinal studies to be able to measure the changes in the influence of social capital over time. The comparison of results by different countries to examine the contextual differences. When discussing entrepreneurial orientation or innovation capability, add some moderators. Getting qualitative research to corroborate the quantitative results and fill out the insights.

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