

FORMATION OF EFFICIENT COLLABORATIVE RELATIONSHIP IN SUPPLY CHAINS: A SHARED RELATIONAL IDENTITY BASED FRAMEWORK APPROACH

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ABSTRACT

Resources spent on forming a collaboration with desired partner firms in the supply chain is not a widely researched topic especially tie-ups between varying sizes of firms measured on the basis of their resources. There is a lack of frameworks for collaborative relationships between lesser powerful firms and more powerful firms, for improved performances. The paper proposes a framework based on proactive catalysing strategies for the efficient formation of collaborative relationships with prized partnerships for all firms. Three steps model for scale development for item generation was followed by EFA, CFA, and Path analysis was conducted using AMOS. A survey of 193 valid responses from 32 firms was conducted. The present paper proposes a framework based on proactive catalysing strategies for the efficient formation of collaborative relationships with prized partnerships for all firms. As the efficiency of the collaboration formation attempt influences the overall performance of collaboration, it is expected to improve the overall firm's performance. The standard path coefficients of the model show that they are highly related to the higher level construct of shared relational self.

KeyWords: Shared Relational Identity, Proactive Shaping of Network, Efficient Collaboration Formation, Improved Performance.

INTRODUCTION

Collaboration with the right partners brings in the scarce and complementary resources, information, and status, needed for improving performance (Davis & Eisenhardt, 2011; Sareen and Pandey, 2021). Network literature states that the formation efficiency of relationships is beneficial for achieving superior network outcomes and hence firm performance (Hallen & Eisenhardt, 2012; Singh and Kovid, 2023). As collaborations are nothing but relationships in a web of firms or a network, the efficiency of the effort directed at forming collaborations in supply chains (SC) will affect the overall performance of relationships. However, the current collaboration research on the initiation of the collaboration attempt, effort, and resources spent on this effort, i.e. efficiency, is not extensive. The efficiency of forming collaborative relationships is more important for the less powerful supplier firms due to limited resources and cannot waste time chasing numerous powerful buyers for collaborative partnerships. For them, it is crucial to improve the chances of proper outcomes for such attempts for operational performance. Currently, little insight exists for such firms. Hence, insight about the efficient and proactive relationship formation with the proper outcomes will help the less powerful firms to avoid losses of a failed attempt. This will also push a firm to a central position in a network and achieve access to resources early. This can remove the

negative effects of in-efficiency in relationship formation like reduced benefits, delay in access to resources (Baum et al., 2000; Yuan et al., 2020) etc., generally believed to be associated with supplier side attempt at collaboration in SCs. Ultimately the overall performance of such collaborative relationships will improve as collaboration is a process of related stages (Kim et al., 2010). Substantial research is non-existent to develop a managerial tool to help practicing managers to achieve this objective. Current theories like Resource dependence theory (Coleman, 1988), social network theory (Gulati, 1995), and information signals of quality (Ahuja, 2000) do not explain how the process of collaboration is initiated and give no clues regarding how to proceed for collaboration for higher chances of netting a worthwhile partner if one is asymmetrically positioned in terms of resources and power with respect to the target firm.

Additionally, the role of personal and social relationships of executives, whether existing or purposefully created, is scarce in current supply chain literature. While performance improvement due to successful collaboration is ascribed to the formation of social capital like trust (Handfield & Bechtel, 2002; Roden & Lawson, 2014); McAllister (1995) said that trust occurs in cognitive and affect-based forms. Cognitive forms are related to role playing, cultural– ethnic similarity, and professional credentials and affect-based forms are a function of “citizenship” behavior and interaction frequency. All these forms are a result of being a social entity and are derived from the relational identity that is shared with other members. One such relational form the boundary spanning capability of the purchasing agents is accepted by researchers to play a proactive part in the formation of trust (Zhang et al., 2011; Ireland and Webb, 2007). A similar set of relational roles for executives may also exist in the initiation and formation of collaborative relations. In such roles, cognitive and affect-based forms will play an important part and decide the outcome. But managerial usefulness of this knowledge will depend on how clearly the dynamics of these social relations is understood and how they can be operationalized in SC collaboration.

As a logical deduction from above, the research questions proposed are -

1. How to improve the efficiency of forming collaboration in SCs to improve outcomes of the collaboration process as a whole?
2. What role do personal or social relationships of the executives play in the extent of success such effort brings as an outcome?
3. Is there any possibility of a managerial tool for improved chances of success in collaboration efforts that can be available to less-powerful firms as well?
4. Can a comparatively resource-poor supplier entice a powerful buyer with resources and clout in SCs into forming a collaborative partnership?

The Proposed Framework for the Efficient Formation of Collaboration or Partnership

Figure 1 below displays the research framework. This framework can be used for forming collaborative relations with appropriate outcome while targeting powerful buyer firms in supply chains. The framework shows the inter-relationships between the various factors which are critical for achieving efficiency of relationship formation and their mutual reinforcement in the SC environment. Firms can always achieve highly efficient collaboration formation using existing strong direct working relations. However, extant research on network, supply chains, and organization theory proved that it is a prerogative of privileged firms (Baum et al. 2005). The proposed framework is based on catalyzing strategies to induce powerful prospective partners. Comparatively, it is a novel method as it is available for any firm including the not so resource rich and powerful firms. The framework makes extensive use of relational identity based on the personal relationships of the executive’s involved and proactive guidance for efficient use of the

same. The first step of the path of casual dating, an active strategy of molding relational identity, ensures a network of potential partners before the start of the relationship formation process by transforming indirect or weak relationships into an emerging identity of relations based on relational self which is in turn based on the concept of significant other. The concept of relational self and significant other is it is universal as a social phenomenon. One has only to understand the utility of using it in managerial situations.

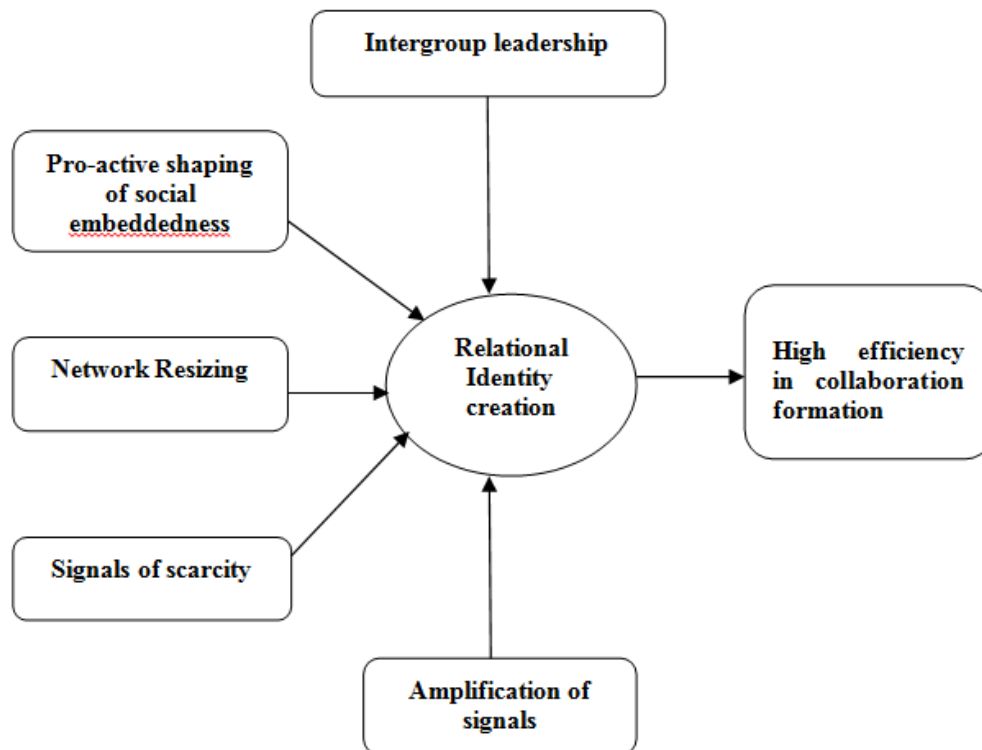


FIGURE 1
RESEARCH FRAMEWORK

Relationship Formation and Network of Organizations to form Collaboration Efficiently

Collaborative relations in supply chains create strategic advantages for firms (Cao & Zhang, 2010; JS et al., 2019). But forming relations is not easy for all the firms. Research has shown that forming and maintaining relations incurs costs. As a result, few links form among organizations or redundancy increases (Cowan & Jonard, 2009). These links are again distributed asymmetrically due to preference for organizations with scarce resources (Gulati & Sytch, 2007) like a dominant position in the market, attractive asset, fame, brand value, etc. Partner's partners are also preferred for link formation due to social capital like trust (Ahuja, 2000). Current successful collaborators have a higher probability of repeated collaborations in the future (Ramanathan & Gunasekaran, 2014). In conclusion, an adequate number of links with the right partners without wastage of resources is important to achieve superior outcomes for firms in a SC, but it is difficult for most of the firms. So, comparatively poorer firms are in need of a proactive approach towards this problem.

Entrepreneurship literature has explored how less powerful firms pursue proactive strategies

to form valuable investment relations with powerful partners (Lopez *et al.*, 2011; Hallen & Eisenhardt, 2012). Right partners help to improve firm performance by providing scarce resources, information, and status (Davis & Eisenhardt, 2011; Agarwal and Seth, 2021). For resource poor or less powerful firms' efficient formation of relations is more important for faster access to resources. Efficiency should result in adequate outcomes for firms in their attempt at collaborative relation formation in comparison to resources spent (Hallen & Eisenhardt, 2012). An attempt is most efficient when it nets a desirable partner by spending little resources, while a failed attempt is least efficient. However, literature on relation formation efficiency is scanty (Hallen & Eisenhardt, 2012).

Collaboration formation efficiency may be important in SCM to achieve superior performance; considering SCs are a network of firms (Kaurav and Gupta, 2022). It will enable the firms to reap the benefits earlier by creating a complete network (Gulati & Gargiulo, 1999) as well as a central position in the network to aid in performance (Ozcan & Eisenhardt, 2009). A less efficient collaborative relation formation will delay access to needed resources and is likely to help the competitors to catch the best partners first. Inefficiency will keep a firm at the network periphery and deprive it of information flow in the network and relational rent.

This implies efficiency of the collaboration formation is important in supply chains and for improving firm performance. Firms can use proactive catalyzing strategies to achieve efficient outcomes in their effort in forming collaborations with powerful firms.

Personal-Social Relations and Shared Relational Identity

Personality or identity is defined as a multi-level concept in psychology. One of the levels is defined in terms of individual's relations with significant others (Aron *et al.*, 1991). A significant other to anyone is a person with an influence on him and with whom he has some emotional connection (Andersen & Chen, 2002). They are generally family members, friends, co-workers etc. One's identity is defined in part by the individual's relationships with many significant other – self-relationship which captures various unique aspects of relationships (Baldwin *et al.*, 1990). One's behavior and actions often vary as a function of these relations. These relational experiences often resurface in similar situations and influence one's behavior in new relations (Andersen & Chen, 2002), based on the social-cognitive model of transference (Andersen & Glassman, 1996).

In instances of similarity, a new person may activate a mental representation of a significant other stored in memory and cause one to behave in a particular way (Andersen & Chen, 2002). The point here is even in a business situation, any executive's behavior and consequent outcome may be affected by his relational identity or every business decision will have a behavioral component derived from relational self. As relational representations are exacerbated by contextual signals (Andersen *et al.*, 1995), all types of encounters between any two people have a chance of being influenced by one of many significant-other relationships the two persons have. A significant-other relationship can also be formed deliberately over a period of time to achieve a sought after business objective at the end. Such a relationship can be used to mask or nullify a potentially adverse relationship that appears during business situations like negotiation by activating favorable emotions in participants in a programmed manner.

Catalyzing Strategy

Hallen & Eisenhardt (2012) defines catalyzing strategies as the proactive behaviors of executives by which they advantageously augment their firm's opportunities or others' inducements to form relations. They are either network actions that increase the opportunities for relation formation or signal actions to amplify the inducements for potential partners. For example, leaders of

organizations can purposively break away from the constraints of network structures to form advantageous relations (Chen et al., 2009). Zott and Huy (2007) in their research found proactive action of entrepreneurs using symbols of personal quality (e.g. high-status MBA) and firm quality to successfully form resource relationships with investors. Hallen and Eisenhardt (2012) define casual dating, a method of catalyzing strategy, as an executive's informal but deliberate, repeated meeting with a few potential partners prior to attempting a formal working relationship.

A Proactive Action-Oriented Relational Framework for Efficient Formation of Collaborative Relationships in Supply Chains: Proactive Shaping of Social Embeddedness

The social embeddedness of firms is a reason for repeated collaboration (Gulati, 1995; Jose and Shanmugam, 2020). Existing indirect relations between two firms either increase the probability of future alliance or have a positive effect on the performance of the existing alliance (Gulati & Gargiulo, 1999). Hence suppliers can use existing lower level relations for an increased probability of success and efficiency of collaboration formation in SCs. Managers can use casual dating to create relationships and proactively shape the social embeddedness of their firms before starting their collaboration effort in the absence of direct working relations. Through casual dating, executives actually demonstrate their firms' ability to initiate a process to form a collective and shared relational identity with their potential partners which is essential for the success of all collaborations. It also shows the future ease of leading such collaboration by allowing the target firm to see itself as an extension of the latter (Hogg et al., 2012). Formation of a shared relational identity is possible due to casual dating as it distances participants from the adversarial negotiations of formal relationship formation and creates an environment for person to person interaction.

Hypothesis

***1a** Casual dating by executives proactively shapes the social embeddedness of their firms facilitated by the emerging shared relational identity among the firms.*

***1b** Firms proactively shaping their social embeddedness can achieve efficient outcomes in their effort to form collaborative relations with other firms.*

Amplifying Signals of Quality: Timing around Significant Achievements

Information signals of quality improve the likelihood of relation formation (Gulati & Higgins, 2003). In SC context, the addition of high status customers, crossing a benchmark in yearly turnover, production, or process breakthrough may be such important quality signals to attract partners. Hallen & Eisenhardt (2012) proposed the catalyzing strategy of timing around proof points. A 'proof-point' is a positive signal of a substantial organizational accomplishment of a critical nature. Proof-point is a social proof and it naturally takes cues from social proofs when not certain about the correct actions to be taken (Cialdini, 1993). Proof-point acts as a social indicator to motivate and influence other's actions in the absence of strong direct working relations. Firms can proactively plan their collaborative relationship effort to coincide with a proof point. Casual dating further magnifies the proof-point for the target firms as people see their own achievements as diagnostic proofs (Wentura & Greve, 2005).

***H₂:** Shared relational identity magnifies quality signals of firms to their prospective partners and is the cause of resulting efficiency in collaboration formation.*

Network Resizing and Scrutinizing Interest

Complementary resources are a necessity to form collaborative relations (Gulati & Gargiulo, 1999; Pao et al. 2015). But when the preferences are subtle, changeable over time, or not clearly known, firms may consciously deceive, exaggerate interests, or string along on their part. This may result in wasted effort and prove costly for the initiating firm. To face the challenge of assessment of genuine interdependence, firms may use a catalyzing strategy called scrutinizing interest. Scrutinizing interest is taking actions to find out potential partners' actual interest in a relationship. This improves efficiency by sorting out the non-interested partners early. Executives of the proactive firm can operationalize scrutiny by using network verification to prune the network for improved focus on the remaining firms. Overall relation attempts with scrutinizing are often efficient (Hallen & Eisenhardt, 2012). Scrutinizing interests is not necessary when there are already existing strong direct relations between the firms and a resultant existing shared relational identity.

H₃: *Firms can use scrutiny of the interests of potential partners to speed up the process of shaping shared relational self-identity and in turn, achieve higher efficiency of collaboration formation.*

Creating Signals of Scarcity by Crafting Alternatives

Firms may use the catalyzing strategy of crafting alternatives to achieve highly efficient formation of collaboration. It is a signaling act to motivate interested firms to commit early. It may be effective for those target firms which does not have any compelling need to commit due to perceived power asymmetry (Nyaga et al., 2013). Firms seeking collaboration may approach multiple firms including the target partner, even when other firms may be less desirable, to induce the target firm to commit. Crafting alternatives probably works due to the scarcity principle (Cialdini, 1993). Groups respond to resource scarcity in either of the two distinctive ways-competitively or co-operatively (Messick & McClelland, 1983). In the case of inter-group sharing, it is more likely to be competitive. Fear of losing out on something can work as an extremely powerful motivator for the executives of the target firm to commit. Further, the emerging shared relational identity provides the necessary preconditions for the signal of losing out on a prospective partner to be interpreted as real.

H₄: *Achievement of efficiency in relationship formation by crafting alternatives for resource needs is possible due to speeding up of culmination of the process of shared relational identity formation among organizations.*

Relational Leadership for Efficiency in Collaboration Formation

Intergroup leadership is the leadership of more than one formal group. As intergroup efforts often cross national and cultural boundaries, it poses challenges for effective collaborations (Hogg et al., 2012). Hogg et al. (2012) are of the opinion that effective intergroup leadership which recognizes the different group memberships is required for realizing the full potential of collaboration. Such leadership has to focus on intergroup relational identity involving all the actors (Brickson, 2000). Relational leadership which focuses on creating an identity based on relationships rather than affiliation to a particular organization is better adaptable for efficient outcomes of collaboration formation. Such an approach toward leadership may be important in overcoming identity clashes in intergroup relations by creating an extended sense of self or relational identity (Hogg et al., 2012).

H₅: *Organizations can achieve high efficiency in collaborative relationship formation under a relational*

leadership approach as it facilitates the creation of a mutually shared relational identity among organizations.

RESEARCH METHODOLOGY

Item Generation

Three steps model for scale development (Churchill, 1979) was used for item generation in the absence of precedence. Construct's domain was defined and operationalized with a list of 35 items. Validated and reliable scales were adopted from the existing literature. Dimensions were operationalized with relational and outcome specific items in business situations to increase the scale's validity. Items were measured using a five-point Likert-type scale, ranging from 5 (strongly agree) to 1 (strongly disagree). After establishing content validity, the instrument was pretested with six academicians well-versed in behavioral research to pre-assess content reliability and validity. As behavioral aspect in business is being measured, experienced academicians can be used as experts (Parasuraman et al., 2005). Based on their recommendation a number of items were dropped and a few were reworded or suitably modified to remove ambiguity. Finally, a list of 27 items was retained for a large scale survey.

Data Collection

Data collection was done in two stages. In the first stage, responses were collected from a group of professionals in person. All the respondents were from the national capital region of India. Out of 90 responses, 73 were found to be complete and usable. Rests were rejected for incompleteness. In the second stage, 120 responses were collected using convenience and snowball method of sampling. Responses were collected using Google Forms and direct e-mails. Personal contacts and references from friends were used extensively to get responses for the survey. Out of the total 193 valid responses from 32 firms, 12 were from manufacturing, 10 from consumer durables, 5 from auto-components, and 5 from the textile sector.

Data Analysis

Exploratory factor analysis (EFA) was carried out in SPSS 16.0 to explore the underlying factors of the measurement. The EFA results are in line with the assumptions. Table 1 provides the components and descriptions of each factor. The five factors with 22 dimensions accounted for 71.95% of the cumulative variance with the Eigen values higher than 1.

Factor	Mean	Std. Deviation
Proactive_Shaping	3.8185	0.36505
Amplifying_Signals	3.7699	0.47425
Network_Resizing	3.7123	0.63682
Signals_Scarcity	3.7055	0.48712
Relational_Leadership	3.6493	0.49836

The second order factor validity in confirmatory factor analysis (CFA) is proposed as proof of the concept of shared relational self as a higher order construct (Cao et al., 2010). As higher order factors represent a construct more parsimoniously, it can surmise it as proof for the framework. For this work a structural equation modeling was used with AMOS 16.0 within SPSS.

A first order, all-factor correlated measurement model (Figure 2) was specified for the five factors representing the proactive methods.

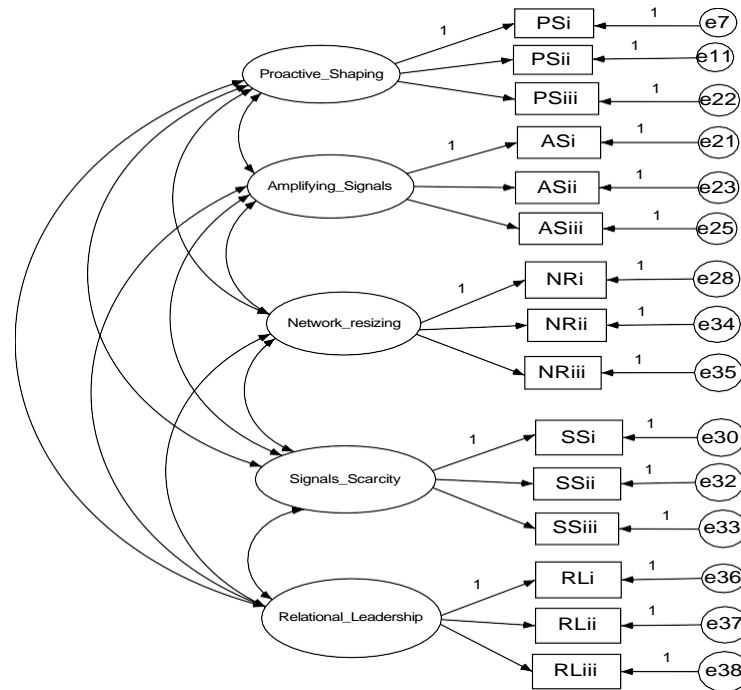


FIGURE 2
FIRST-ORDER CONFIRMATORY FACTOR ANALYSIS RESULTS FOR SHARED
RELATIONAL SELF-IDENTITY

Initially, five factors and 22 items were used to represent the measure. Following the first estimation, iterative modifications were carried out by examining modification indices and loadings to improve the model fit statistics (Hair et al. 1995). Refinements were done only after theoretical justification and only one item was deleted at a time (Hair et al. 1995). The final model is represented by five factors and 15 items. In CFA, model fit indices assess uni-dimensionality and convergent validity as represented by the significance of t-values. Convergent validity and reliability of the factors are demonstrated by the value of the composite or construct reliability, t-values, and average variance extracted (AVE) extracted (Hair et al., 1995). Composite reliability >0.6 and AVE >0.5 indicate the construct’s internal consistency (Fornell & Larcker, 1981). Composite or construct reliability is a better measure of internal consistency than Cronbach’s alpha. The measures are well within acceptable limits for convergent validity and reliability (Table 2). For discriminant validity, AVE for each pair of sub-constructs was compared with the square of the correlation between them to ascertain that they are larger than the later (Fornell & Larcker, 1981). As a more rigorous method for discriminant validity, the study constructed 95% confidence intervals for each pair of constructs using formula $\Phi + 2\sigma_e$ where Φ is the correlation between each pair of factors and σ_e is the associated standard error in an all factor correlated model.

Table 2 FIRST-ORDER CONFIRMATORY FACTOR ANALYSIS RESULTS FOR SHARED RELATIONAL SELF	
	Standard first-order loadings

Items	Proactive Shaping	Amplifying Signals	Network Resizing	Signals of Scarcity	Relational Leadership
PSi	0.46 (--)				
PSii	0.28 (1.944)				
PSiii	0.87 (2.791)				
ASi		0.71 (--)			
ASii		0.55 (3.626)			
ASiii		0.63 (3.983)			
NRi			0.44 (--)		
NRii			0.37 (2.162)		
NRiii			0.78 (2.654)		
SSi				0.39 (--)	
SSii				0.88 (2.348)	
SSiii				0.41 (2.344)	
RLi					0.55 (--)
RLii					0.60 (3.184)
RLiii					0.65 (3.287)
AVE	0.62	0.5	0.62	0.64	0.52
Comp.	0.64	0.68	0.65	0.64	0.64

Reliability

As none of the intervals include 1.0, discriminant validity is achieved (Table 3) (Anderson & Gerbing, 1988). Acceptable convergent and discriminant validity indicate the validity of the factors.

Factors	Proactive Shaping	Amplifying Signals	Network Resizing	Signals of Scarcity	Relational Leadership
Proactive Shaping	0.62	0.42	0.05	0.17	0.18
Amplifying Signals	0.64 (0.15)* [0.34, 0.94]**	0.50	0.2	0.2	0.04
Network Resizing	0.22 (0.19) [-0.16, 0.60]	0.45 (0.25) [-0.05, 0.95]	0.62	0.16	0.44
Signals of Scarcity	0.41 (0.17) [0.07, 0.75]	0.45(0.15) [0.15, 0.75]	0.40 (0.22) [-0.04, 0.84]	0.64	0.17
Relational Leadership	0.41 (.27) [-0.13, 0.95]	0.33 (0.28) [-0.23, 0.89]	0.65 (0.13) [0.39, 0.91]	0.41 (0.15) [0.11, 0.71]	0.52

Source: Authors' Own Analysis (Using SPSS 22).

Notes:

1. Values in bold along the diagonal are AVE for each factor;
2. *Values are correlations (Φ) of each pair of factors with standard errors (σ_Φ) in parentheses;
3. **95% confidence intervals ($\Phi \pm 2\sigma_\Phi$) for correlations.

The overall model fit statistics of the structural model are: $\chi^2 = 79.95$, $df = 80$, $\chi^2/df = 0.999 (<2)$, $RMSEA = 0.000$ (LO 0.000 – HI 0.066) (< 0.6), $CFI = 1.000 (> 0.9)$ and $NNFI (TLI) = 1.000 (>0.9)$ which shows good fit for the model (Hair et al. 1995, Paulraj et al. 2008). NNFI statistics shows good relative efficiency of the model compared to other probable or competing models.

Validation of Second Order Factor

Second-order models have applicability if (a) the lower order factors are substantially correlated with each other, and (b) if a higher order factor can be hypothesized to account for the relations among the lower order factors. This study hypothesizes the concept of relational self-identity as an overall factor accounting for the substantially correlated five factors (Figure 3). The T coefficient, the ratio of first-order χ^2 and second-order χ^2 , is used as a measure to accept the second-order model as an effective embodiment of the associated factors (Marsh and Hocevar, 1985).

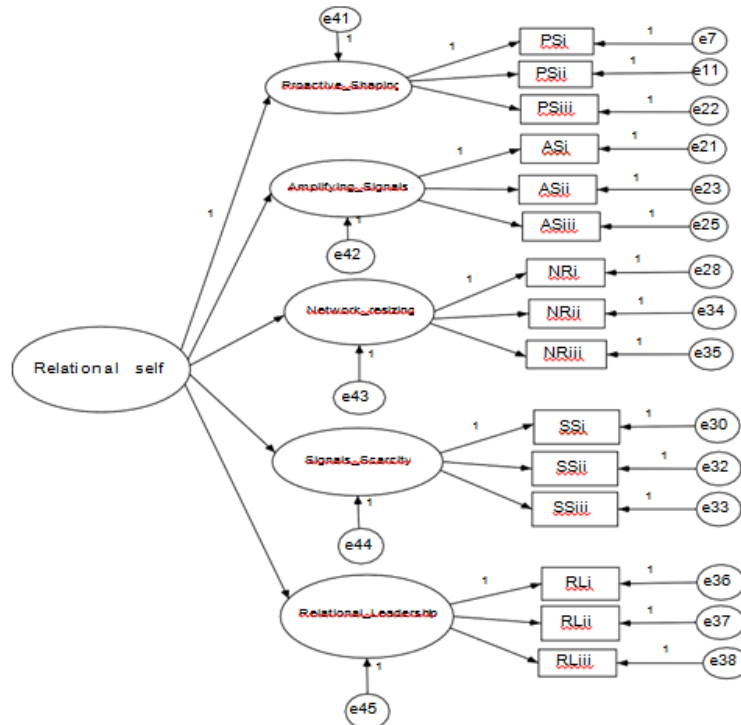


FIGURE 3
SECOND-ORDER CONFIRMATORY FACTOR ANALYSIS RESULTS FOR SHARED RELATIONAL SELF-IDENTITY

Fit indices for the second order model are $\chi^2 = 89.122.484$; $df = 85$; $\chi^2/df = 1.048$; $RMSEA = 0.026$, $CFI = 0.971$, and $NNFI (TLI) = 0.965$, which is worse compared to that of the first order model. This is expected as the second-order model explains the covariations among the first- order factors in a more parsimonious way (Table 4). The T coefficient, which is a ratio of the normed χ^2 of the first order model to that of the second order model, 0.953 is within the acceptable range of $0.80 < T < 1.00$ (Marsh and Hocevar, 1985). This shows the efficacy of the second order model to

represent the empirical data. Hence the contention of shared relational self-identity as a higher order latent factor accounting for the five sub-factors in the framework has validity.

Construct	Model	χ^2 (df)	Normed χ^2 RMSEA	T coefficient
Shared relational	First-order	79.95.39 (80)	0.999	0.00 (0.00-0.066) 95.32 %
self-identity	Second-order	89.122 (85)	1.048	0.026 (0.00-0.071)

RESULTS

It is proposed at the very beginning itself that efficient outcomes can be achieved by firms in supply chain situations by the proposed framework which uses proactive measures like catalyzing strategies and a relational leadership approach. The effectiveness of such proactive approaches by firms is a recognized fact in organizational research. In supply chain research the boundary spanning capability of purchase personnel can be one such example. However, the main contention in the framework was that these strategies work because of the relational self or identity of the executives involved from both the firms. Hence all these strategies must show a higher degree of relatedness among themselves as well as to a higher level concept of relational self. While the interrelations among the factors are demonstrated by the first order factor analysis, the result of the second order analysis is presented below (Table 5).

Paths	R ²	Standardized path Coefficient	p-value
Shared relational self-identity - proactive shaping (Proposition 1a and 1b)	0.54		
Shared relational self-identity - amplifying signals (Proposition 2)	0.59	0.77	0.01
Shared relational self-identity - network resizing (Proposition 3)	0.37	0.61	0.06
Shared relational self-identity - signals of scarcity (Proposition 4)	0.35	0.6	0.09
Shared relational self-identity- relational leadership (Proposition 5)	0.44	0.66	0.03

Source: Authors' Own Analysis (Using SPSS 22).

The standard path coefficients of the model show that they are highly related to the higher level construct of shared relational self and the values are statistically significant at least at the level of 90%. This also shows that proactive shaping of embeddedness and quality signal amplification is more effective in creating a relational identity for a desirable business outcome.

DISCUSSIONS AND CONCLUSIONS

The present research made a few significant contributions. Exploration of the possibility to improve collaboration formation efficiency keeping in mind the less powerful firms is a first of its kind in SC research. The model is also applicable in supplier initiated collaboration, a field not very popular among researchers. But most important of all, the authors have strived to forward an explanation for the success of proactive measures of firms like catalyzing strategy, boundary-spanning capability, etc. The conceptual method based on relational self is a new and significant addition to supply chain collaboration research. The analysis of SC collaboration from a perspective of human relationships of the executives involved is also a first in SC literature. The model offers a dynamic strategy for firms in their effort to collaborate with desirable partners. As the study is a first of its kind to explain relationship formation and its efficiency in the supply chain, further research is required to refine the understanding of the application aspect of it. Future research can add control variables like the size of the firm, type of industry, location, etc. Validation through multiple researches will bolster the case of the framework as a managerial tool. Future research can further enhance this novel concept. Apart from the theoretical contribution, the proposed framework has good potential to become a managerial tool. It promises an insight unavailable before but universally accessible to all for collaboration with prized partners without wastage. The access is universal because every organization thrives in a social environment where every executive is a node in the social network of relationships sharing many relationships with other nodes. The knowledge that he or she can proactively reshape that position will energize and activate an executive to use his network productively. This may open a number of new avenues for proactive actions by executives due to the knowledge that relations can be developed using a number of social events or situations. This is of particularly high significance considering the emerging nations of Asia and other countries, as important sourcing destinations in SCs, which have a culture of according utmost importance on social and personal relations. The ability to harness the utility of these social bonds can help SC managers to find a new source of productivity enhancement in collaboration.

Appendix I. Instruments for the Construct of Shared Relational Self-identity

Proactive Shaping of Social Embeddedness and Network Position

1. PSi It helps to acquire some informal contacts for improved chances of success in a business deal as business deals depend a lot on trust.
2. PSii It is possible to influence the outcome of business deals by developing friendly relations with executives of other organizations.
3. PSiii It is easy to judge or verify the achievements of a person known to you compared to that of an unknown person and hence more authentic.

Amplifying Signals of Quality

1. ASi It is easier to appreciate someone's success or achievement if it is recent.
2. ASii Recent success stories can better motivate people compared to old stories of success although both may be equal in magnitude.
3. ASiii It is easier to judge the qualities in a friend than in a stranger.

Network Resizing and Scrutinizing Interest

1. NRi While selecting members of college basketball team, it helps to form a better coordinated team if the

- members are either friends or at least known to each-other.
2. NRii It will help to have a consistent performance if a person form long term business relationships with only those people/organizations that values relationships and believe relationships are the key to business performance.
 3. NRiii It is easier to accept a leader who focuses more on relationships than on numerical targets in a joint venture project by all the members in it.

Creating Signals of Scarcity

1. SSi A person should not hesitate to conclude a deal if he comes to know that the other party has started to look for alternative options in a pending business deal.
2. SSii One should be quick to strike friendship with a person if the person has other suitors.SSiii Sociability improves the chances of having more friends.

Relational Leadership for Collaboration formation Efficiency

1. RLi A leader in a joint project of two organizations is acceptable to participants of both the firms if he stresses on relationships rather than on outcome only.
2. RLii A leader who values relationships above all can win trust of a team in a joint project of two firms.
3. RLiii Commitment in a collaborative arrangement depends more on a trust based joint identity which a leadership focused on relationships only can create.

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