

The mediating effect of coopetition between the process of social alliance building and social innovation

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Abstract: Coopetition is a mechanism which combines the resources of firms competing and collaborating at the same time. It improves the access to resources and markets, particularly the knowledge and learning. An alliance strategy defines and communicates the targets and domains of a firm's external relationships and the firms can establish a dedicated alliance function. The alliance function refers to a specialized organizational unit in which expert knowledge and contacts for external relationships are pooled. Both Alliance Strategy and function is the process for Social Alliance Building (SAB), which results in cooperation, which can utilize both internal and external knowledge to make their competences more dynamic. Coopetition can reduce cost and improve the sharing of risks, particularly in the R&D field, and it is understood to achieve greater and reciprocal advantages for every firm with such an inter-organizational relationship. However, there are several risks associated with coopetition. The main objective of the study is to analyse the Social Innovation output as the consequences of the influence of SAB through Alliance strategy and Alliance function with Coopetition. The study respondents were 400 individuals in organisations where those involved in corporate social responsibilities and are engaged in organizing events for social purpose. Regression analysis along with hypothesis testing was done on the data collected and was finally interpreted that coopetition influences and has a mediating relationship between SAB and Social Innovation.

Index terms: Coopetition, Alliance strategy, Alliance function, Social Alliance Building, Regression, Social Innovation

I. INTRODUCTION

The concept of coopetition, introduced by Ray Noorda, the founder and CEO of Novell, and promoted by Nalebuff and Brandenburger (1996) has supplied a novel explanatory model of inter-organizational relationships. Coopetition has drawn a considerable amount of attention as it combines two opposing concepts: collaboration and competition. Coy (2006) explicitly puts coopetition as "sleeping with the enemy." Coopetition promises strong advantages (Bengtsson and Kock, 2000). The concept and its performance effects have been mainly elaborated in case studies and examples (Oliver, 2004). Hagedoorn et al. (2001) document coopetition between IBM and Apple resulting in a growing amount of alliances between the two for joint technological development. KONE and Toshiba formed a successful R&D coopetition (Watanabe et al., 2009). The competitors Sony and Samsung initiated the "S-LCD" to develop and produce 46 inches or smaller LCD panels (Gnyawali and Madhavan, 2008). Vertical coopetition projects cover partnerships with several competitors, e.g., Volvo and their suppliers (Dubois and Fredriksson, 2008). Canon, producer of laser printer-engines, gives core products to competitors, e.g., DELL, HP, Sony, and Matsushita (Watanabe et al., 2009). Canon's coopetition strategy allowed preventing technology spillover through increased patenting and improved its success. These examples unravel that coopetition can increase competitive advantages and innovation through the combination of specialized resources, competencies, and knowledge. However, coopetition partners face risks inherent to opportunism and a lack of trust that decrease their rate of success (Ritala, 2009) and innovation (Nieto and Santamaria, 2007). Thus, coopetition has two faces: it can foster performance and innovation but also is fraught with risks of opportunism and misunderstanding, thereby reducing performance and innovation.

Social innovations are that which seek to improve the well-being of people, communities and society (Mulgan, 2006). Unlike innovations that are driven by the profit motive or competitive business pressures, social innovations are generally triggered by a concern with people and communities rather than commercial gain. Although there is a clear overlap with social entrepreneurship (Bornstein, 2003) and social business (Yunus, 2007), especially in referring to innovative activity with a social objective [Austin et al., (2006), p.2], there are also a number of differentiating elements in for example, the collective sharedness of people driving and owning social change. Here, social innovation can be broadly described as the development of new concepts, strategies and tools that support groups in achieving the objective of improved well-being. In this article on social innovation, there is an examination of the growing interest in this phenomenon and to try to delineate the boundaries of interest in developing an understanding of what we mean by this new and emerging term. In drawing on some of the ideas and concepts from sociological studies of technology and innovation, a provisional model is developed for making sense of social innovation that integrates the two key knowledge domains of business innovation and social awareness.

II REVIEW OF LITREATURE

Coopetition Nalebuff and Brandenburger (1996) have embraced the idea of coopetition. Coopetition conceptualizes relationships consisting of two opposing elements: cooperation and competition. Arguing on the basis of game theory Nalebuff and

Brandenburger (1996) posit that coopetition strongly increases performance of firms. The logic behind is that firms operate in a value net of suppliers, competitors, clients, and complimentors. Firms in the value net take several different roles in their business games. Therefore, they can use collaborative and competitive relationships in the pursuit of success. In the net, coopetition occurs horizontally and vertically. Bengtsson and Kock (2000) narrowly refer to coopetition as the dyadic and paradoxical relationship that emerges when two firms cooperate in some areas, e.g. the strategic alliance, and at the same time compete with each other. Relationships vary and consist of more competitive or more collaborative elements. Ritala et al. (2009) agree that cooperation and competition co-exist in the same relationship but extend the definition. They assume that coopetition can occur in the inter-firm context, but also outside the organization, such as in interpersonal, intergroup, inter-unit and inter-departmental contexts. Here it is understood that coopetition is a relationship with varying degrees of competition and collaboration that is carried out horizontally between “classic” competitors and vertically between up-and- downstream partners that collaborate but also compete about their share of the pie.

Alliance Strategy

An Alliance Strategy (AS) defines and communicates the targets and domains of a firm’s external relationships. It was found that an alliance strategy improves the success of inter-firm arrangements (Ireland et al., 2002). The strategy achieves a greater inclination of the inter-firm arrangement towards goals and clarifies them to the Coopetition Performance Implications and Management Antecedents of managers and staff working in the coopetition. It can improve the endeavour by breaking down goals into inter-firm tasks. A vertically and horizontally communicated alliance strategy further advances the understanding of goals and activities in coopetition. An alliance strategy is important for coopetition that faces high risks of opportunism, misunderstanding, and misallocation across collaborating competitors. It is argued that firms using an alliance strategy will find it easier to purposefully select partners and configure the government of coopetition and thus will carry out more coopetition.

Alliance Function

Firms can establish a dedicated alliance function. The Alliance Function (AF) refers to a specialized organizational unit in which expert knowledge and contacts for external relationships are pooled. Studies have shown that alliance performance increases through the use of an alliance function (Kale et al., 2002; Dyer et al., 2001). Coopetition having collaborative elements may use structures and expertise of alliance management provided by the alliance function. Coopetition requires a broad range of management issues, e.g., firms have to search for partners, select these, form contracts, establish coordination practices, build communication lines, and implement control for coopetition activities. Standardized procedures and routines are known to reduce uncertainty, failure, and costs in inter-firm relations (Dickson, 1996; Poppo and Zenger, 2002). We argue that expertise and routines in standardized procedures pooled in the alliance function will improve the scope, scale, and quality of coopetition activities. Standardized alliance procedures that range from an informal setting to codified guidelines ease the coordination across firms in coopetition. In sum, an institutionalized alliance management will accumulate experiences and best practices but also provide an information base of contacts to current and potential coopetition partners. Specialists can also improve portfolio management of coopetition and alliances, which was found to improve the success and innovativeness (Hoffmann, 2005). We argue the alliance function increases the use of coopetition by developing organizational structures that ease the management of current and future coopetition activities.

Hypothesis of the study

- H1:** Alliance Strategy has significant relationship with coopetition
- H2:** Alliance function has significant relationship with coopetition
- H3:** Coopetition has significant relationship with Social Innovation

III METHODOLOGY

Participants

The analysis sample was collected aimed at understanding how SAB comprising of alliance strategy and alliance function, results in coopetition which has a relationship with social Innovation. This is measured from the responses of individuals who are dealing with corporate social responsibilities and are engaged in organizing events for social purpose. In total, 400 individuals were surveyed. Such responses provided sufficient data upon which to evaluate data in response to the research question (Fosnacht et al. 2017; Gagne and Hancock 2006). Individual’s in the sample were also diverse by way of gender, race, and major field of study.

Measures

This study has used two independent variable (Alliance Strategy and Alliance function) and one dependent variable (Social Innovation). These variable were measured using the 5 point Likert scale(1= strongly disagree to 5= strongly agree). Details of the survey instrument measures are discussed below : Social Alliance building on Social Innovation were measured by the 6 items scale sample item are “Our alliance can actively carries out its work on developing new affordable social oriented products/service/ Technology”. The Cronbach alpha for the scale reliability was 0.859. Alliance strategy was measured by the 5 item scale. The Cronbach alpha for the scale reliability was 0.756. Alliance function was measured by the 5 item scale. The Cronbach alpha for the scale reliability was 0.784. Coopetition was measured by the 5 item scale. The Cronbach alpha for the scale reliability was 0.728

Proposed Framework

SAB Process

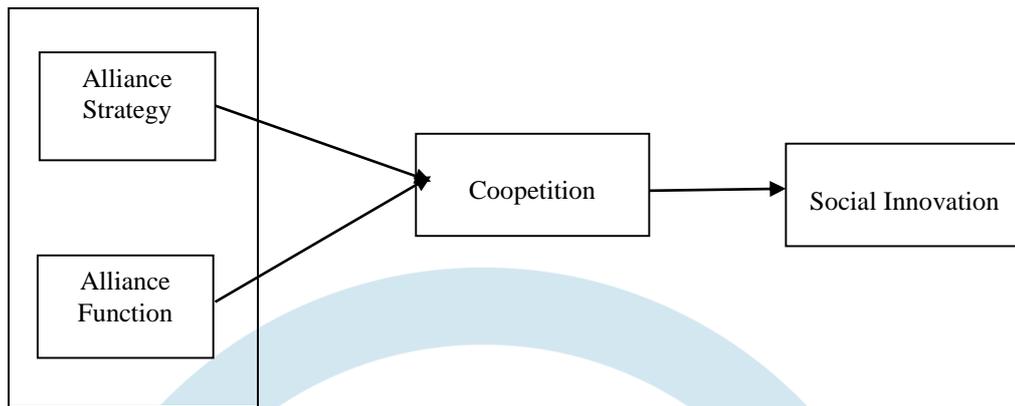


Figure 1: Proposed Model- Mediating effect of Coopetition on SAB Process with Social Innovation

IV RESULTS AND DISCUSSION

Correlation

Correlation is a statistical measure that indicates the extent to which two or more variables fluctuate together. Correlation (Pearson, Kendall, Spearman) Correlation is a bivariate analysis that measures the strength of association between two variables and the direction of the relationship. A positive correlation value means that the variables concerned increase or decrease in parallel as one increases or decreases so does the other whereas a negative correlation value indicates that as one variable increases the other decreases, or vice versa. Thus, the Table 1, shows Karl person coefficient of correlation with the reliability coefficients and correlations among the major study variables. The correlations between the study variables were in the expected direction (positive correlation) and statistically significant.

Table 1, Karl Pearson Coefficient of Correlation

Variables of Interest	Alliance Strategy	Alliance Function	Coopetition	Social Innovation
Alliance Strategy	1			
Alliance Function	.637**	1		
Coopetition	.447**	.436**	1	
Social Innovation	.376**	.623**	.639**	1

Correlation coefficients are significant at *p < .01; and **p < .001

Test of Multicollinearity:

Multicollinearity is the occurrence of high intercorrelations among independent variables in a multiple regression model. Multicollinearity can lead to skewed or misleading results when a researcher or analyst attempts to determine how well each independent variable can be used most effectively to predict or understand the dependent variable in a statistical model. Thus, the above Correlation Table 1, shows that Correlation between two independent variables are lower – Moderate.(0.3 – 0.7). There is no existence of Multicollinearity between the variables. Results are met the underlying Assumptions of Multiple Regression with Normally distributed data tolerance and VIF are below in Table 2.

Table 2 Coefficients

Model	Collinearity Statistics		
	Tolerance	VIF	
1	AS	.436	5.764
	AF	.659	4.872
	COP	.762	3.897

a. Dependent Variable: Social Innovation

Regression

Table 3 Alliance Strategy, Alliance Function and Coepetition Regressed on Social Innovation

Independent Variable	Social Innovation			
	Beta	t-value	Sig	VIF
Alliance Strategy	0.568	2.341	.043	7.32
Alliance Function	0.653	2.265	.002	7.54
Coepetition	0.436	2.107	.021	6.67
R Square	.672		.000	
Adjusted R Square	.615			

Overall our model showed a good fit to the data as evidenced by the R-squared (R^2). It is a statistical measure that represents the proportion of the variance for a dependent variable that's explained by an independent variable or variables in a regression model. It may also be known as the coefficient of determination. Whereas, the adjusted R-squared compares the descriptive power of regression models two or more variables that include a diverse number of independent variables known as a predictor. Every predictor or independent variable, added to a model increases the R-squared value and never decreases it. Thus dependent variable of Intent to use has Adjusted R Square 0.672 with significant p value ($p < 0.05$)

Table 3 explained the results of Multiple regression is an extension of simple linear regression. It is used when we want to predict the value of a variable based on the value of two or more other variables. The variable we want to predict is called the dependent variable (or sometimes, the outcome, target or criterion variable) Here, predicted variables are alliance strategy (beta =0.568, $p < 0.05$), Alliance Function (beta = 0.653, $p < 0.05$), Coepetition (beta = 0.436, $p < 0.05$). Thus, social innovation is found as significantly predicted in an organisation.

Table 4 Acceptance/ Rejection of hypothesis table

Hypothesis	Supported/Not Supported
H1: Alliance Strategy has significant relationship with coepetition	Supported
H2: Alliance function has significant relationship with coepetition	Supported
H3: Coepetition has significant relationship with Social Innovation	Supported

V CONCLUSION

The study shows that coepetition strongly improves social innovation of firms among those who are interested in social welfare activities. Alliance strategy incorporates that their goal orientation and their awareness of coepetition is higher. Therefore the alliance strategy used for coepetition might improve the purposeful selection of partners. It also guides the establishment of coepetition structures and the development of dynamic capabilities. Therefore the study bring new insights into the coepetition search and the findings are extensions of alliance research. Former studies have found that firms can improve their success through alliance management (Dyer et al., 2001; Hoffmann, 2005; Kale et al., 2002). We show that the use of an alliance function is also beneficial for coepetition. A professionalized alliance management improves the development of expertise that helps firms to select partners, manage their portfolio of partners, improves the visibility of their alliance management, and eases the setoff of contracts, communication lines, inter-firm teams, project stages, control stages, knowledge flows, and project dissemination procedures. Alliance Strategy and function that enables Social Alliance Building, help a strong coepetition partnership which results in Social Innovation.

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