

Identifying and Prioritizing Goals of Joint Venture between Manufacturing Cooperative Firms, using TOPSIS

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Abstract—In recent years, strategic alliances have taken increasing importance as a means to control competitive forces and to enter into new markets. Joint ventures are one of the most frequently used contractual forms in strategic alliances. There are various motivations for cooperation between two or more firms e.g., accessing to technical know-how, accessing to financial resources and managing risks. The firms must know about these motivations to encourage for establishing joint venture. So, it is important for managers to understand about these motives. On the other hand, the cooperation section is one of the most effective parts in each country. In this way, our study identifies goals of joint venture between cooperative manufacturing firms, and prioritizes those using TOPSIS¹. The results show that the most important of joint venture goals are: accessing to managerial know-how, sharing total capital investment.

Keywords—Cooperative, Joint Venture, TOPSIS

I. INTRODUCTION

IN recent years, more firms have turned to various types of cooperative arrangements as a strategic response to uncertainty relating to increased global competition, the emergence of new markets, and rapid technological change. Under such circumstances it is difficult for a single firm to possess all resources needed to develop and sustain existing competitive advantages whereas simultaneously trying to build new ones [1]. Research also has increasingly acknowledged that corporate venturing facilitates strategic renewal and increases organizational growth and performance [2]–[3]. Corporate venturing refers to the creation of new businesses within existing firms [4], and involves the creation of new competencies and capabilities underlying new products and services [5]–[6]. Despite these beneficial outcomes, scholars have argued that it is very complex and difficult to successfully manage venturing activities in incumbent firms [7]–[8]. However, corporate ventures may also benefit from leveraging knowledge and resources available within mainstream businesses [9].

This paper investigates joint venture between cooperative firms, considering important of the sixth principle of the cooperative principles namely “cooperation among cooperatives”. we draw joint ventures motives from past research and propose manufacturing cooperative firms to establish joint venture.

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¹ Technique for Order Preference by Similarity to Ideal Solution

In this way we selected manufacturing cooperative firms in Yazd² Township as the society of research. So, our study makes these managers able to identify what is important to implementing strategic alliances. Indeed, we determine the priority of joint ventures goals (JV formation motives) by using TOPSIS technique.

The rest of this paper is organized as follows. The next section identifies relevant literature and sets out the variables of the study. The third section sets out the research methods employed. The fourth section presents the results and the fifth section the conclusion and discussion.

II. LITERATURE REVIEW

A. Joint Venture

Corporate venturing is a widely used approach among established firms to foster growth. Strategic alliances can have a variety of organizational arrangements, such as JVs, licensing agreements, distribution and supply agreements, research and development partnerships, and technical exchanges [10]. Corporate venturing refers to the development of new businesses within existing organizations. Venturing activities require different ways of working, rewards, and organizational structures compared to mainstream activities [9].

There are many ways in which joint ventures could be defined for competition policy purposes. Here is a small sample:

...Joint ventures are entities that play a role in the marketplace in their own right and are owned or controlled by two or more persons that are neither ordinary investors nor commonly controlled [11].

Joint venture is an integration of operations between two or more separate firms, in which the following conditions are present: (1) the enterprise is under joint control of the parent firms, which are not under related control; (2) each parent makes a substantial contribution to the joint enterprise; (3) the enterprise exists as a business entity separate from its parents; and (4) the joint venture creates significant new enterprise capability in terms of new productive capacity, new technology, a new product, or entry into a new market [12].

Joint ventures are inherently superior, joint ventures tend to be more favorable in the face of high environmental uncertainty and knowledge dispersion because collaborations increase strategic flexibility and rapid learning [13].

Buckley and Casson (1988) defined cooperation as coordinated efforts achieved through mutual forbearance and understanding. In a cooperative situation, the joint goal of the JVs can be achieved, which will benefit all partners involved in the JVs.

² One of the Townships of Iran

However, this is only an ideal situation and it is hard to achieve in many cases [14]. Joint ventures can be divided into two categories: equity Joint ventures and contractual Joint ventures. An equity Joint venture entails a firm that is jointly owned by two or more independent firms, the most typical being between two parties with 50-50 ownership arrangements. The parties actively participate in decision-making activities of the new entity. A contractual joint venture is an agreement to cooperate in certain activities, but do not involve the creation of a new firm [15].

B. Joint Venture formation motives

In recent years, more firms have turned to various types of cooperative arrangements as a strategic response to uncertainty relating to increased global competition, the emergence of new markets, and rapid technological change. Under such circumstances it is difficult for a single firm to possess all resources needed to develop and sustain existing competitive advantages while simultaneously trying to build new ones [16].

Cooperative ventures are one of the main entryways for going abroad to build new markets [17]. In particular, three motivating factors have been investigated in regards to joint ventures. The first is that the joint venture is motivated by strategic factors, taking advantage of market power and operating efficiency [18]–[19]. Firms' strategic motivations are driven by the idea that the joint venture can capitalize on their abilities to offer products and services that are distinguishable from their competitors or from what they could offer independently of each other. The second motivation focuses on the effectiveness of the joint venture. These studies focus on the environment in which the joint venture will have the greatest impact and what will be impacted the most documented by McConnell and Nantell (1985) [20]. Finally there is the theory of efficiency in governance, suggesting that the joint venture is motivated by the superiority of the joint venture as a governance mechanism and belief in its ability to reduce costs [21]–[22].

Crouse (1991), on the power of partnerships, enumerated the clear advantages of a balanced partnership relationship: partnering provides the ability to leverage internal investments; focus on core competencies; leverage core competencies of other organizations; reduce capital needs, broaden products offerings; gain access or faster entry to new markets; share scarce resources; spread risk and opportunity; improve quality and productivity; having access to alternative technologies; provide competition to in-house developers; use a larger talent pool and satisfy the customer [23].

In a study focused on enterprises from emerging Latin America, identified the following as the main motivations for making use of strategic alliances [24]:

1. Access to a foreign partner's technical expertise
2. Access to a foreign partner's marketing expertise
3. Access to a foreign partner's financial resources
4. Direct access to foreign markets
5. Risk and cost reduction
6. Blocking or co-opting of potential competitors

Tiessen and Linton (2000) expressed the firms use joint ventures to enter markets for many reasons: 1) JVs enable partners to achieve economies of scale, 2) Reduce risk, 3) Shape their competitive environment, 4) Exchange complementary resources, 5) Engage in mutual learning, and 6) Lower transactions costs [25].

Dacin, Oliver and Roy also proposed the key reasons that have been attributed to the establishment of strategic alliances, were listed in the Table I by using past studies [26].

TABLE I
KEY REASONS OF ESTABLISHMENT STRATEGIC ALLIANCES (DACIN *et al.*, 2007)

ADVANTAGES
Entry into new markets
Increasing market power
Acquisition and exchange of skills
Acquisition strategic renewal
Sharing risk and investment
Access to economies of scale and scope
Reductions in liabilities of foreignness and government or trade barriers
Acquisition of institutional legitimacy

As a whole there are numerous strategic motives that partners can have to form inter-organizational relationships. Joint ventures (JVs) can act as a vehicle for learning; create economies of scale and scope; enable firms to address host government policies; facilitate entry into new product or geographical markets; help firms strengthen or consolidate existing market positions; or assist with risk management [27].

TABLE II
GOALS OF JOINT VENTURE FOR THE PAPER

GOALS
Sharing total capital investment
Sharing financial risks
Achieving economies of scale
Access to information technology
Access to market capabilities and opportunity
Blocking or co-opting of potential competitors
Product diversification and responding to customers' needs
Access to managerial know-how
Procurement of raw materials and intermediate products
Establishing credibility in local and international markets
Access to export markets
Obtaining fees (royalty, license fees, management fees, technical fees)

In this study we have investigated different researches for identifying goals of joint venture. Finally, after analyzing and merging these JV formation motives, considering cooperative firms circumstance, we selected 12 final goals for our article, in which the following these goals are presented in Table II.

C. Cooperative

Cooperatives, as economic enterprises and as self-help organizations, play a meaningful role in uplifting the socio-economic conditions of their members and their local

communities. A cooperative is a business organization owned and operated by a group of individuals for their mutual benefit [27].

Cooperation was thought as coordinated efforts of the partners involved working towards the common goals and mutual benefits of the partners [28].

A cooperative may also be defined as a business owned and controlled equally by the people who use its services or by the people who work there [29].

The International Cooperative Alliance (ICA) defines a cooperative as: "an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through jointly owned and democratically controlled enterprise" [30].

This definition and the ICA set out seven cooperative principles: voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training and information; cooperation among cooperatives; and concern for community.

III. METHOD

A. TOPSIS

TOPSIS is a multiple criteria method to identify solutions from a finite set of alternatives based upon simultaneous minimization of distance from an ideal point and maximization of distance from a nadir point. TOPSIS can incorporate relative weights of criterion importance [31]. A relative advantage of TOPSIS is the ability to identify the best alternative quickly [32]. This paper applies TOPSIS to determinate the priority of joint venture formation motives. The idea of TOPSIS can be expressed in a series of steps [31].

1. Obtain performance data for n alternatives over k criteria. Raw measurements are usually standardized, converting raw measures x_{ij} into standardized measures s_{ij} .
2. Develop a set of importance weights w_k , for each of the criteria. The basis for these weights can be anything, but, usually, is ad hoc reflective of relative importance. Scale is not an issue if standardizing was accomplished in Step 1.
3. Identify the ideal alternative (extreme performance on each criterion) s^+ .
4. Identify the nadir alternative (reverse extreme performance on each criterion) s^- .
5. Develop a distance measure over each criterion to both ideal (D^+) and nadir (D^-).
6. For each alternative, determine a ratio R equal to the distance to the nadir divided by the sum of the distance to the nadir and the distance to the ideal,

$$R = \frac{D^-}{D^- + D^+} \quad (1)$$

7. Rank order alternatives by maximizing the ratio in Step 6.

B. Data analyzing

The study design was based on the compatibility of the methodological alternatives with the research methods and tools, the study population and sample, the sample size,

sample duration and data infrastructure. Quantitative survey data obtained through questionnaire.

We review previous literatures on joint venture and identify main reasons of creating joint ventures between cooperative firms. As a whole we consider 12 joint venture goals, and then design a questionnaire for determining importance of these goals. The data were collected from manufacturing cooperative firms in Yazd Township. These firms are active in 7 varied industries. The textile cooperative firms selected as the study sample. Data collection in the present study was executed through a questionnaire distributed to the sample population. We asked managers of manufacturing cooperative firms to express their idea about the importance of every JV goals.

C. Reliability of the Measures

The reliability of the measurement tools is described as a balance between the characteristics of the measurement tools, their stability and level and the sample response [33]. The reliability of the measurement tools in this study was based on the Alpha Cronbach method. We compute it using SPSS16 software and gain it 0/89, that it is reasonable.

IV. RESULTS

This paper has identified joint ventures goals between cooperative firms in Yazd Township. Our findings suggest that there are various JV formation motives that we classified them in 12 goals. Using TOPSIS technique, we can understand about the preferences of these JV formation motives. Table 3 shows these results.

TABLE III
PRIORITIZING THE GOALS OF JOINT VENTURE

Priority	Goals of joint ventures	Weight
1	Access to managerial know-how	0.112
2	Sharing total capital investment	0.107
3	Access to information technology	0.096
4	Access to market capabilities and opportunity	0.095
5	Blocking or co-opting of potential competitors	0.087
6	Access to export markets	0.083
7	Product diversification and responding to customers' needs	0.080
8	Achieving economies of scale	0.077
9	Sharing financial risks	0.075
10	Establishing credibility in local and international markets	0.071
11	Procurement of raw materials and intermediate products	0.064
12	Obtaining fees (royalty, license fees, management fees, technical fees)	0.053

The survey has shown that the main reasons for cooperative firms' collaborative relationships are "Access to managerial know-how" and "Sharing total capital investment".

In addition, our study indicates that two factors "Obtaining fees" and "Procurement of raw materials and intermediate products" were not ranked highly as reasons for creating joint ventures between cooperative firms.

V.CONCLUSION

Due to their increasing strategic importance in global competition, JVs have received considerable attention from researchers. Alliances provide opportunities for participants to tap into the resources, knowledge, and skills of their immediate partners in a portfolio of inter firm agreements. Theoretical conjectures and empirical investigations of strategic alliances over the past two decades reveal an accelerating proliferation of them. Firms enter into joint venture (JV) agreements in order to create new products and services, enter new and foreign markets, or potentially both [34].

With this research we set out to investigate the joint venture motives in cooperative firms. Our findings show that there are various reasons for creating joint ventures that most of them related to sharing resources or capabilities of each firm. It means joint venture can benefit from knowledge and capabilities present in mainstream businesses.

The results demonstrate that cooperative firms seeking to create joint venture for “accessing to managerial know-how” and “Sharing total capital investment”, that these are the most important influences on the joint venture creating. Whereas “procurement of raw materials and intermediate products” and “obtaining fees” had a much less important.

Finally, we are able to provide information to managers regarding the impact of joint ventures on achieving organizational goals in a best way.

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