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## Theoretical knowledge in terms of forming cooperation

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### Abstract

Cooperation, participation, partnership is essential element for human and biological nature of the world, as well as its development in the future. It creates new connections, repeats old, reinforces bonds and relationship between individual subjects, brings positive value (benefits) into the relationship or creates negative effects. Main goal of this paper is theoretical definition of cooperation as a general picture of cooperation. The findings of cooperation are important to understand complexity of possible use in business environment. Establishing a base for assessing appropriate cooperation in market conditions is vital. The success rate of cooperation depends on the rate of using elements of cooperation. This base ensures higher chance to become more competitive, meets the objectives and brings a synergy effect to business relationship.

Keywords: cooperation; cooperative potential; cooperative environment; aspect and criteria of cooperation;

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## 1. Introduction

The main goal of this article is comprehensive analysis of theoretical knowledge of cooperation and highlight cooperation as foundation in business environment. Cooperation operates in different areas of research. It is important to see benefits of cooperation, such as solving current problems. Moreover it contributes to the development and progress in different fields of human knowledge, research and actions. Findings of cooperation can be seen in several areas such as biology, sociology, psychology, management, economy and others. Number of cooperative factors has influence on emerge positive and negative effects of cooperation, min-max rule represents find an optional combination numbers of cooperate subjects; e.g.; finding companies that meet the conditions as saving costs for maintaining cooperation, handle control cooperation and others.

For better understanding of that rule, it could be supplemented by authors Lozano, Moreno, Adenso-diaz & Algaba (2013), who closer specify cooperation in terms of logistics costs, which represent a wide part of operational costs of several companies; e.g.; in transport these costs can be reduced by horizontal cooperation between carriers.

Raposo, Ferreira & Fernandez (2014) look at small enterprises in agricultural and logistics sector. They identify positive opinion on cooperation in two points of views: the first one is positive impact on innovations and the latter are local cooperation activities through its financial activities. Holistic view of cooperation according to Soviar et al. (2013) is as follows: "Cooperation is the behavior that maximizes results (or benefits) of the group. Competition is the behavior that maximizes relative benefits of individual over another one. Partnership means intensive long term cooperation which is based on seriousness and decency."

## 2. Meaning of cooperation

For better understanding the meaning of cooperation it is important to address several facts, which going to be discussed in this article, in parts: a) Theoretical background of cooperation (culture, biology, trust, interdependence, numbers of cooperators, competitiveness, control mechanism, assessment, etc.), b) Aspects of cooperation (altruism, reciprocity, control, similarity, values, experience, reputation, demonstration of force, attractiveness, loyalty, trust, interdependence, etc.) c) Selected search criteria for cooperation in environment (knowledge about cooperation partner, customer preferences, movement with price, resources, competency, products and solutions, bargaining power, position, localization, culture, economic situation, acceptance of rules, etc.).

### 2.1. Theoretical background of cooperation

Cooperation like competition is congenital. From this point of view it should be considered as medium, which arises from different purposes.

From the past perspective to present cooperation can be seen in various contexts, not only in human society. Expression of cooperation is presented in any environment, it influences on evolution, development, progress and interactive relationship between subjects in an existing aggregation. The development of cooperation in each geographical area is conditional and precisely explained by evolution in existing territory.

Past of partner, inequality and benefits are elements of creation interaction for cooperation bond (relations). The important and reinforcing fact of cooperation is tracking past. Collecting information about past behavior, interaction and reputation are obtained important due to valuation subject in cooperative relation (Ulrich, 2011).

According to Berger, cooperation is ubiquitous, but in purest form it is neither rational nor evolutionarily stable. Appropriate cooperation requires support mechanism, which is created by:

indirect reciprocity (reputation that inform about their past behavior), direct reciprocity (probability of receiving help is higher among those with witch cooperation took place in past). It should be supplemented by assessment of subject in context of cooperation relationship. It helps for collecting information about past behavior, interactions, reputation and a ground for better identification is gain. Berger (2011) talked about recognition of reputation based on secondary sources. Primary sources are directed by testing of the subject or own past experiences. Cooperation would be likely if it resulted into bond in past interactions and if it brought positive benefits into relationship. Cooperation has a higher chance to maintain bond if it resulted in merges in past interactions and if it brought certain benefits (Rivas, 2013).

In biology, for example, we can see cooperation of small fish seeking to survive on a coral reef, where they must cooperate in cleaning a larger fish for securing existence (Raihani et al., 2012). In logistics, we can see cooperation in linking between delivery services; e.g.: for better use of transport capacity, for reducing costs and for the purpose of higher competitiveness. In this bond subjects remain as competitors or join common bond with currently defined objectives, rules and boundaries (Lozano et al., 2013).

*Culture:* The view on culture of cooperating subjects is various. It established a new common culture from different cultures in relationship (Safarzynska, 2013). On the other hand, culture can be taken over from a stronger partner. The ideal situation is in similar or in the same culture when it is not necessary to carry out any major changes or to be subordinated as cultures are equal.

- Setting the culture in cooperative management is an important step. Blaskova (2005) refers that culture is generally accepted behavior pattern, receiving beliefs and values that are common for all employees in the company.

- The cultures are often associated with certain symbols, rules, activities, standards, which are formed or created by certain system. Most often there are norms which establish correct behavior of individuals in defined areas (Henrich & Henrich, 2012).

*Biology:* Cue of cooperation in the biology field can significantly contribute to the setting of cooperative system. (Punishment, aggression, altruism, associative behavior as a result of punishment) This is a selection of individual elements in cooperation relationship for effective reaction and feedback between subjects involved in cooperation.

- Aggression* is conditional with keeping standards. If standards are respected, aggression is not manifested and positive experience is obtain; otherwise negative experience is occur (Jensen, 2010). This reaction brings immediate benefits in the form of stop cheating and damaging behavior, as well as future benefits in less likely cheating (Raihani, Thornton & Bshary, 2012).

- By associative learning, punished subject learns to avoid reiterating damaging behavior, for which they were punished. The punishment must be immediately perform after damaging behavior, if it has to be effective for cooperation and for gaining positive contribution into the relationship (Raihani et al., 2012).

- Altruism is necessary for elucidating behavior among members of a group, in which rules have been defined rules about providing assistance (help with the same return). In most cases, the true altruism does not exist. Altruism is costly for the executor, but useful for the recipient, which is reflected by increasing competitiveness of the whole group (advantage of recipient may outweigh costs of cooperation) (West, El Mouden & Gardner, 2011).

*Trust:* Compliance with rules and putting the same effort into the common work is expected expression of trust. Valuation trust of cooperating side depends on following-up to assess individual decisions about cooperation activities. Relation with cooperating entity, whether it is supplier, an equal partner, investor or other actors, including customers, should be based on trust. The initial impulse, pillar for creation cooperation relationship (bond) should be the purpose of cooperation,

manifested trust and certain consensus and needs to create interactions with partner (Helbing et al., 2010). The foundation for trust may also be predetermined rules, boundaries, strategies, conditions and other rules for cooperation; e.g.; if company shows strategy “win-win” is built on basis of mutual wins. In these bonds was setting conditions for cooperation at the beginning of a relationship are necessary. So that, future benefits gained are evenly allocated. Start of relationship represents the threshold for formation or destruction of the existing relationship.

*Interdependence:* Dependence partners in terms of their connections in cooperation are evident in all tested practical and theoretical areas. In practical terms, these are activities of one partner to another or vice versa; e.g.; in the production (product development), research, financial and human resources, education and others (Ulrich, 2011).

*Number of cooperating entities:* Among techniques used in determining individual criteria for cooperation the min-max rule is included. The min-max rule finds an optional combination of appropriate number of partners (cooperating entities); e.g.; to meet conditions of cost saving, managing cooperation and others (Magretta, 2012).

*Competitive struggle:* Solid cooperation relationship is seen in competition, where subject is similar to other subjects and wants to win against competitors. Cooperation seen as a mean to win in competitive struggle, on the other hand it increases competitiveness of yourself and your partners (Soviar, Lendel, Kocifai & Cavosova, 2013).

*Control mechanism:* If the system works properly, it is necessary to set up control of cooperation to ensure activities to established objectives and targets; e.g.: contract conditions, expected performance, deadlines for specific activities, amounts of resources and others. (Komine, 2014; Safarzynska, 2013) The valuation is the starting point for properly functioning of the system of cooperation management. Positive assessment is the assumption for successful relationship. Regular valuation for certain time shows a shift in cooperation relationship, which is important for making strategic decisions to objectives and their implementations. Valuation progress is presented in several areas such as: performing tasks and duties, respecting deadlines or performance, obtaining or expecting benefits and others (Wang et al., 2010; Ulrich, 2011).

*Synergetic effect:* Synergy changes behavior and characteristics of the system, which was originated as the impact of creation interaction using partial subsystems. The result of these interactions (mutual bonding interactions between subsystems) is a synergetic effect (result of the interactions). Synergetic effects may existing consequences as positive, negative or neutral – it is important to choose a criteria for valuation and also consider about resulting synergetic effect of interactions – changes of synergetic effects ongoing on the basis of changes in bond-connected subsystems (interaction) – creation of these synergetic effect is in some cases conditional to hierarchical structure of gradually creating (Vodacek & Vodackova, 2009). In argument of combination various deposits of individuals in certain system is need to a synergetic effect manage and guidance, which could bring much greater effect (Soviar et al., 2013). To sum up Corning (2003) states that synergy is grouped cooperation effects, which are created by two or more particles, elements, parts or organisms – there are effects that cannot be obtained in other way.

## **2.2. Aspects of cooperation**

- Individual elements of cooperation establish dynamic relationship of elements in current environment. These elements may not be presented at the beginning of the relationship, it also occurs during it. Element, which can be identified as baseline for current cooperation environment are (Cassar, 2007; Crowley & Provencher, 1996; Gachter, Herman & Thoni, 2010; Henrich & Henrich, 2006; Holubcik, 2015; Larsen & Olaisen, 2013; Lozano et al., 2013; Rivas, 2013; Soviar et al., 2013; Ulrich, 2011; Wang et al., 2010) Altruistic relationship.

- Associative learning.
- Reciprocity.
- Control, aggression, punishment.
- Similarity, natural inequality.
- Culture, philosophy, values.
- Experiences, references, reputation (past, current).
- Abilities, manifested power (hierarchy, authority) in areas: brand, customers, marketing, resources, quality.
- Number of elements (min-max rule, synergy) .
- Attractiveness, loyalty, trust.
- Interdependence (supply chain).

Cue for cooperation is created by current environment and elements, which operate there. In these environment elements create synergetic effects from: defining the objectives, which element want to achieve; selected criteria by which cooperation partners are chosen; sustainable management in cooperation environment and others.

The result of cooperative relations is manifested by fulfillment of objectives and purpose for which it was created. Allocation of costs is important for ensuring revenues with rational agreement cooperation partners. Specifying responsibilities, competencies and control relationship is important for cooperation partners, too. If it is not well set economy in system with achieved results and embedded costs for first time, it has an impact on changes in rules in certain system for future cooperation.

Negative impact on creation of synergy effect is creating from acquired knowledge about cooperation. It may be (Berger, 2011; Helbing, Szolnoki, Perc & Szabo, 2010; Jensen, 2010; Raihani et al., 2012; Safarzynska, 2013; West et al., 2011)):

- Free-riding.
- Use of shared resources.
- Imperfect information conditions.
- Incorrect valuation old partner.
- High investment in relationship.
- Creation of conflicts – tricks.
- External threats: Political situation, legislative regulation.
- Improperly designed and interconnected parts of the system.
- Wrong setting control mechanism.

### **2.3. Selected search criteria for cooperation in environment**

Individual elements of cooperation establish dynamic relationship of elements in current environment. These elements may not be presented at the beginning of the relationship, it also occurs during it. Element, which can be identified as baseline for current cooperation environment are (Cassar, 2007; Crowley & Provencher, 1996; Gachter et al., 2010; Henrich & Henrich, 2006; Holubcik, 2015; Larsen & Olaisen, 2013; Lozano et al., 2013; Rivas, 2013; Soviar et al., 2013; Ulrich, 2011; Wang

et al., 2010). At the beginning it is necessary to establish certain informational environment, background. These things are defined by criteria for entering into the relationship. The criteria should be determined in accordance with objectives for detection the right partners.

Determination criteria of cooperation represent borders, through which pass only those who meet set criteria. The criteria could be in accordance with the triggers of cooperating (goals or thing, which cooperation partners want to achieve). On the other hand, criteria are used for evaluating the sustainability of cooperation partner for cooperation. It is important to find the most appropriate partners through these suggested criteria:

- Information robustness (experience, knowledge).
- Partner's competencies (skills).
- Reputation in the market: loyalty, references (reputation).
- Response to customer's stimulus.
- Position of cooperation partner (brand, reputation, his customers, marketing, etc.) .
- Organizational structure (coordination of common projects).
- Capital resources.
- Economic situation of partner.
- Possible movement with price (margin, discounts).
- Quality of products and solutions.
- Position on the market (creating greater bargaining power).
- Localization of partner (entering to new markets).
- Partner role, culture, acceptance internal unwritten rule
- Similar objectives.
- Competitiveness.

The establishment of these and even other criteria (depending on subject of cooperation and its environment) has lead to a certain strategy and control, which are important for achieving synergy effects in cooperation environment.

### **3. Purpose of cooperation**

In my opinion opportunity for cooperation environment is quantification of existing relationships. The question arises from the purpose of cooperation based on valuation of existing cooperation. Cooperational partners can make decisions in two ways: A) The purpose was not achieved, partner can go back to the objectives (redefine them and criteria) and look for new cooperation partners. On the other hand, partner may change activators causing need for cooperation. The last option is the ending of cooperation activities. B) The purpose was fulfilled, object of cooperation may decide to stay in this relationship or modify it. Also it may change objectives, criteria and recall some change in search of a cooperative entity. Lastly cooperation activities terminate interactions.

The aim of any cooperation is a benefit for cooperating side, for both sides and for whole community. Fulfillment of purpose and invested effort is based on expect to receive some benefits, but also it counts with loss or recovering input costs.

#### 4. Conclusion

As main conclusion I can state following: Cooperation and cooperative environment is not the only part of knowledge and strategy, but also it can support social development and progress in various areas. It is necessary that this mutually beneficial behavior went beyond the limits of enterprise, in which companies will cooperate among themselves and increase its market value for the future interactions.

I point out that: The learning knowledge about cooperation is based on the continuous updating of information about past, relationships, reactions of partners. It is vital for relationship management and its strategy to maintain a cooperative environment. Partners in cooperation relations should create a relationship at the beginning of the informational environment in which they identify each other. View at the history of partner's past interactions in the environment as well as reactions of past relationships. If the future partner proves as similar (same type) it will result in long-term cooperative relationship. Quantification of potential and existing relationships is an opportunity to create a competitive and cooperative environment. To create a cooperative environment it is also necessary to establish a cooperative equilibrium, which consists of: establishment of relations, allocation of cost, determination of expected benefits, setting up control and penalties. Also it is important to establish certain rules and standards in relation paying. The synergy effect is need to be created by cooperative environment as the basic fact.

My summary of previous findings of important consequences of expression of cooperation is included into these four points:

- Allows efficient combined skills towards defined objectives.
- Common work of several entities in the same process.
- Improve the competitive position.
- Create interactive relationship for the purpose of benefiting.

These and other facts form the basis for strategic planning and thinking in the field of cooperation.

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