

Foundations of Team and Cooperation Management

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ABSTRACT

The present study is concerned with a realistic framework and model that managers can employ in order to increase the synergy of their teams (i.e. increase the cooperation between the members of a group) and to offer different devices for a proper team leadership. There are many elements that contribute to the profitability of a business and of a network, where the latter is dependent on the actions of actors involved in that specific network.

This research focuses on the analysis of interactions between members forming different teams and between the teams themselves, as well as on the leader's management of the teams, members of teams and environment. A detailed description and analysis of laws, thus, their meaning and modus operandi, is provided. Laws are obligations backed by incentives. In order to properly understand today's business environment, a quick overview of supply chains is offered: there is no firm that is not using or not part of a supply chain. The responsibilities that a manager has towards his teams and members of the teams are also portrayed.

The foundations of a mathematical (game theoretic) framework for the coalitions (teams) is presented in order to better understand the setting and also to build a model that can be used in different environments. An externality to which particular attention is given to is the deviation of teams' members.

Moreover, certain recommendations, along with the reasons and outcomes regarding the management and administration of everyone involved in teams, are also conferred.

KEYWORDS: *added-value coalition, deviator, laws, leader, supply chain.*

JEL CLASSIFICATION: *L20, L23, M12, M51, M54*

INTRODUCTION

Living in a globalized world that will continue to increase its efficiency in globalization, the foremost competition is between supply chains, not between firms (businesses or companies). If firms desire to stay in business, they have no choice but to adapt to a very change intense environment. There are many activities and projects that companies can undergo in order to increase their competitive advantages. One such area is related to teams, team work and the cooperation between the members of the designated teams.

There are many theories that treat and describe (theoretically) coalitions and coalition formation (i.e., behavior theories, group dynamics, social psychology, psychological studies, evolutionary studies, etc). This paper is one of the foundational building blocks for

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a proper understanding of the work-coalition reality (i.e., how coalitions are formed, maintained and terminated in the business world). Due to the intricate difference between the latter and theory, many elements/aspects need to be taken in consideration, thus, complicating the issue.

Any business must focus not only on productivity (or revenues), but also on its employees, their development and on the interactions between the latter. In order to accomplish this, companies converge on three general aspects for the betterment of their staff:

1. Key aspects of team behaviors that are critical for the team success;
2. Diagnosing team behaviors (identifying problematic behaviors);
3. Suggesting courses of action corrections, if need be.

Teamwork is critical for the success of any firm. Well-established companies do focus on the training and education of their employees. In today's dynamic, multi-level segregated information and interactions, and, simply put, complex economic-society, successful companies focus on the tangible aspects of their operations, as well as on the operations of the company's teams. It is through this global performance that the overall success of the company (and of the supply chain which the business is part of) is measured.

The environment that is studied has many similarities with general supply chain environments, where the latter's analysis is characterized by transfers of inventory (or information) between the different networks present in the chain. Other key aspects that must be considered and are part of the team and cooperation management 'foundation' are laws, the obligations of actors, how actors fulfill these obligations, the behavior of actors, either taken individually or collectively as a team, and the employee's added value to the company.

The aim of the current analysis is to provide: a realistic framework for managers and employees regarding the cooperation between the members of a group; practical tools that a manager can employ in order to increase the synergy of its team; and to offer devices for proper team leadership.

1. LAWS AND OBLIGATIONS

In human constructed environments, laws regulate social interactions and behavior (either individual or collective). Laws impose certain influence and constraints on the manner people behave in their social interactions, interactions where conflict is present between individual (or collective) interests and where the common good is at risk. As a result, laws are a mechanism of aligning individual and collective interests through operative behaviors (Galbiati and Vertova 2008, p. 147).

It is a known fact that companies have well-established rules and regulations. Thus, it is important to define and describe these vast terms. Anglo-Saxon jurisprudence tradition (Raz, 1980) refers to laws as '*obligations backed by incentives*'. Laws reflect certain rules of conduct, the obligations that are enforced by different means of penalties, and the rewards which refer to the incentives that an individual has. Obligations are people's *responsibilities* under the specific law, what people are asked to do (or not to do). Incentives represent the positive or negative *consequences* people face if they follow or do not follow the specific obligations. The implications of and how the latter influence individual behavior have been considered in different contributions of psychology and economics (e.g. Fehr and Falk, 2002).

The corner stone of a rule is the influence it has on individual behavior. Analysis has proven that legal rules (laws) can influence to a certain extent individual behavior through different material payoffs – the incentives (e.g. Cooter and Ulen, 2003; Polinsky and Shavell, 2000). However, this view is limited in understanding why, for example, political parties obey legal rules if by disobeying the laws, the certain party (or actor, in our case) can relatively improve its payoff (e.g. Kahan, 2002; Robinson and Darley, 1997; Tyler, 1990).

Of special note are certain findings that Galbiati and Vertova (2008, p. 155) arrive at regarding the obligations that affect the levels of average contributions to a public good. They explore different situations where an unexpected increase in the minimum contribution triggers a temporary re-start in the cooperation (that previously deteriorated) between the members, while an unexpected reduction in the minimum contribution does not alter the descending trend of cooperation (Galbiati and Vertova 2008, p. 159). Another very interesting conclusion that the authors have is that obligations have certain limits on individual behavior in social dilemmas.

It has been proven that there is an *expressive function* in laws. Thus, rules and laws provide a coordination device that helps in the understanding and comprehension of individual's beliefs about other's behaviors (e. g. Bohnet and Cooter, 2005; McAdams and Nadler, 2005; Cooter, 1998). Moreover, regulations have a strong impact on psychological individual preferences. If the actors see the rules as fair (meaning that the same rules apply to all in the same manner), then the actors are 'forced' to revise their values and, subsequently, their conduct (e.g. Cooter, 1998; Kahan, 1997; Galbiati and Vertova 2008, p. 147).

Furthermore, sanctions for non-cooperation could be understood through incomplete and very subtle contracts. This *second chance* method has the intention to encourage cooperation for the deviator (or the 'lawless') in order for him to have the opportunity for a remedy.¹ However, this strategy creates certain *precedence*, and it impacts the subtleness of (other) contracts that are now opened to interpretation. If the specific laws and contracts are not applied correctly, the manager, being responsible for all activity of his direct reports, can be perceived as *loosing his power* (or authority) of influence because the latter creates the perception that he is inefficient. Also, it is to be noted that the lack of managerial effectiveness and/or the illusion of it are almost equal in importance in a short time span.

Mainstream economic and psychology literature has shown that both intentions and incentives play a key role in the manner that sanctions unfold.² Houser et al. (2008, p. 510) note that incentives refer to impersonal rules of law, while intentions revolve around human beliefs and purposes. The lack of proper incentives is the main cause why threats of sanctions fail to induce cooperative behavior. In the same time, many researchers (Falk et al., 2008, 2003; Charness, 2004; Charness and Levine, 2004; McCabe et al., 2003; Charness and Haruvy, 2002; Fehr et al., 1993) not only proved that intentions are deterministic elements, but also that they play an important role in shaping decisions.³

One of the theories that explains certain aspects referring to the individuals' actions and restrictions is cognitive dissonance theory. The latter theory (Festinger, 1957), including self-serving biases (Babcock and Loewenstein, 1997), upholds the idea that people long to have consistent beliefs (resulting in consistent behavior) (Houser et al. 2008, p. 511). Consistent behavior, consistent beliefs, self-serving biases (and other concepts of cognitive dissonance theory) can explain partly why intentions have a strong influence on the actions

of individuals in economic environments (e.g. Charness, 2004; Charness and Levine, 2004; Falk and Kosefeld, 2004; Falk et al., 2003; Charness and Haruvy, 2002).⁴

There is a real need for analyzing individual behavior and the elements that influence cognition because they play an important role in today's regular interactions. Moreover, cognitive psychology literature has shown that actors have a tendency to find similarities (varying from outside environment(s) to internal cognition processes) even though there are no assurances of their existence (for examples and detailed analysis, see Arkes and Harness, 1983; Allan and Jenkins, 1980). Alloy and Tabachnik (1984) suggest that having such consistencies helps researchers understand past behavior and predict future ones (Sonsino and Sirota 2003, p. 390). Moreover, the same authors proved that certain types of obligations influence the rate of decline of cooperation over time, an aspect that is essential in our research.

2. ON SUPPLY CHAIN ENVIRONMENTS

Today, there is no business that does not either use a supply chain or is not part of one. It is for this reason that understanding supply chains (and their administration and management) is crucial: in order to increase the value, efficiency and performance of the firm and that of the supply chain. To be able to achieve this, all elements present in the system must act in concert. Moreover, any action that influences, may that be positively or negatively, the end result is part of the network chain.

Certain distinctions between a network, a chain and a network chain are required. A *network* is an interconnected group that employs any method of sharing resources (may those be tangible or non tangible) between members or systems of the group with the purpose of gaining strength (of any manner). A *chain* is a well-organized structure formed by a series of nodes that are connected, forming a whole, where one node is connected to at least two other nodes (excluding the first and last nodes). A *supply chain* (*supply network* or *network chain*) is a network of actors who coordinate the flow of information and/or resources, and cooperate in the process of converting materials (or data) into products (or services) that are to be delivered to a client. In the same time, the structure of the supply chain plays an important role in the manner success is achieved throughout the specific network.

Supply chain management (SCM) analyses mainly the integration of information and resources in the flow of a network. Yet, in this analysis, one must pay particular attention to essential elements, such as location, transportation and logistics, inventory and forecasting, incentives, reverse logistics, strategic alliances, and (the quality of) services. One of SCM's goals is to provide the best distribution of resources (whatever those may be). Also, the end-result of any supply chain is the creation of value to either the service or the product of which the chain specializes in.

In order to better comprehend the characteristics of a supply network and how it applies to any environment, one needs to analyze: 1) the *process*, which identifies the mission and the procedures of the network; 2) the *performance*, which takes in consideration the variations in productivity/production and its reasons; and 3) the *institution(al) perspective* that refers to the network's configuration and structure. Moreover, it must be noted that there must be a strategy for the implementation and realization of any imposed mission.

One of the potential problems that a network chain can exhibit is that certain companies function in silos. A silo-company does not possess a powerful internal supply chain management. There is an unsynchronized decision-making process and lack of communication between silos that does not aid the company to properly face the challenges of the 21st century's complex economy. The former brings unnecessary high cost activities to the specific business, thus losing the company's competitive advantage(s). Moreover, silos decrease the value of any supply chain.

Another difficulty, which is slightly challenging to grasp, is that companies must deliver to its clients a quality product, in a short time-span, at a good price. In order to accomplish this, pertinent information (accurate and adequate) must be available for those involved in the planning and execution of the different stages of the network. Yet, this information may not be accessible and/or user-friendly.

Even though Game Theory (GT) is useful regarding some SCM analytical aspects (it can help in expending the analysis and literature because GT is concerned with the study of environments where multiple agents are present and where diverging interests, objectives and directives exist), in the same time, certain procedural difficulties must be acknowledged. One such obstacle is the fact that managers have problems in determining: mixed strategies, the mechanisms to be utilized in their identification, as well as the actual implementation of the mixed strategies.

3. MANAGERIAL RESPONSIBILITIES

The leader, manager and/or protocol manager plays a central role in any team. He has two key responsibilities, of which the second has different sub-categories:

1. customer service (being a liaison between the members of a team, between the teams, between teams and members of other teams, and between his direct reports and other departments);
2. to oversee the good operation of his teams;
 - a) provide assistance to his direct reports and to his teams;
 - b) he is responsible for the performance of all the functions within his department.

The leader allocates and re-allocates the roles, duties and responsibilities of all the actors/employees. This information is common knowledge to all the team members. The leader effectiveness can be measured by the procedures implemented and by the level(s) at which actors follow them.

Moreover, planning and forecasting undergone by the manager are essential in the network. The accuracy of these two elements impacts the performance and processes of the network. The leader must also be flexible and must be able to implement customized tasks imposed by the outside system, i.e. properly respond to the demand(s) of the environment. He must adapt fast and bring the team(s) to accept and follow the specific change.

In order for the teams (as well as the individuals) to perform at their best capacities (and capabilities), the leader must be capable to provide an adequate social engineering and instill a specific social identity in the network. It is to be noted that this social identity can be very different from the firm's culture. The cohesion of the teams' members, as well as between the teams themselves, is as important as beliefs learning and environmental adaptation in the daily behavior of actors. The manager must allocate and provide the

necessary time, resources, and tools that are needed for the development of his staff and of the latter's sets of beliefs (effective and appropriate).

Decisions must be accurate and taken in a timely manner by the leader. Due to the daily dynamic environment, there are continuous-time processes which are important in the normal flow of operations. Dynamic optimization of interactions is essential. The manager must create an environment that is prone to communication between the members of all teams as well as between the teams themselves. A lack of communication leads to a loss of added-value.

Another responsibility that the leader has is the payment of (positive or negative) payoffs⁵ to the actors and to the teams, as he is accountable for the overall performance (individual and collective). The payoffs are given based on the proficiency that the actors and teams fulfilled their obligations (which can be measured through the accuracy of procedural benchmarks and follow-ups).

There are certain restrictions and conditions that the leader imposes. For this reason, the protocol manager may be seen by the actors as dictatorial. One such example is the manner in which he assigns the members of the teams. The latter are pre-assigned (by the leader), i.e. actors cannot choose their own team. Individuals are brought into the specific environment based on certain competence matrixes, on their previous experiences, on their willingness and capacity to learn new tasks. All the information available must be properly analyzed by the leader. When creating the teams and when introducing a new member in the team, the leader must take in consideration the following aspects and characteristics of the actor(s) (yet, not restricted only to them): the competences of the new member, his ability (and willingness) to learn new tasks, his ability to adapt to a changing environment, to the team that he will be a member of (i.e., to function efficiently and effectively within that team), and the impact on the other team members. It is on this basis that the leader is considered the architect of the teams.

Once the actors are appointed, there are two aspects to be considered: 1) old team members must accept the new addition to the team; 2) the new member of the team must understand how the team works and adapt to the new team and environment. The leader can address the team as an entity by itself only when this is accomplished, and he must work closely with the team and with the new member in order to have an easy transition/integration.

Moreover, the manager must always address any challenges that an employee might have. These challenges might be personal, or might be imposed on the actor by the team or by the environment. The employee would surpass any expectations only by working together with the manager. The same rational also applies to the needs of a team.

4. GAME THEORETIC⁶ COALITIONS

It is common knowledge that politics, economics (and economy)⁷ are present in any corporation. In order to increase its chances of 'survival' in such an environment, an actor is aiming at becoming a member of an alliance (a coalition). Thus, teams are coalitions of different members that have a similar interest. The distinction between a *business coalitions* (strategic level), where business interests are at stake (over which a leader or manager has full authority) and *personal coalitions* (social level), which denote similar personal interests of the actors (over which there is no 'corporate' authority and control over them), is ought to be made.

In general terms, a coalition is a multi-agent system. It is an alliance among individuals or teams that engage in a common action for the accomplishment of a common purpose. We note that certain cooperative literature stipulates that coalition participants' self-interests must be present because there must be a valid reason for the formation of the specific coalition. However, personal interests have no relation with the creation of the work-coalition. It is the leader that forms the business coalition. The difference between self-interests/personal interests (which may be represented in the literature as private goods) and business interests (which may reflect the public goods rational) must be made. By a private good, it is understood a benefit that is only useful for a specific individual. A public good is a reward that is applied to a particular community (and to all members of that community).

Moreover, there are three stages within the life of a coalition:

- i. Members convey together and form a coalition;
- ii. Coalition maintenance, i.e. maintaining the coalition (excluding, replacing, and training members);
- iii. Coalition termination: end of the coalition.

Game theory does not provide specific formulas that agents can employ to form coalitions. The former focuses on asserting, verifying, and validating stability and fairness by Kernel concepts, and on calculating the corresponding (side-)payments to (and between) agents. Taking in consideration reality, one circumvents certain aspects and problems that mainstream coalition literature has through a mechanism by which the leader appoints the members to a specific coalition. As the practicality of (work-) coalitions are of interest, agents are not allowed to form the work-teams that they desire (besides a deviation coalition). One simplifies the coalition processes by granting the leader full control over steps i) and iii).

In order to provide a general framework that can be applied in many work environments, the subsequent mathematical definition for a coalition is presented:

Definition 1: The following elements are needed for a coalition to be possible:

- a finite set T of players t_i , where $t_i \geq 2$;
- uT is the value of the coalition, where $u(\emptyset) = 0$.

In the GT format, the value of a coalition (uT) and the payoff provided to the coalition are analogous. The following definition for the core of a game is also presented:

Definition 2: The utility vector π_{t_1}, \dots, π_T is in the core of the game if it satisfies

$$\pi(T) = u(T), \text{ and for } \forall C \text{ we have } \pi(C) \geq u(C),$$

where T is the set of actors, having as subsets/coalitions $C \subseteq T$, $u(C)$ is the characteristic function that specifies the value created by any subset of actors in T .

The core, the set of un-dominated strategies, is the most utilized solution concept in cooperative game theory. From a GT perspective, having an empty-core game, therefore the absence of the core, signifies that there are no stable coalitions.

GT analyzes the payoff(s) of the team, the members' portion of the team's payoff, thus what an actor gains being (or becoming) a member of the coalition versus what he can achieve by himself (as a non-member of that coalition), as a singleton, or part of another coalition. In the presented business format, this is not allowed to happen. As stated before, the leader has full control over the membership of a work-coalition.

4.1. Coalition structure

Once a team is formed, the leader must be aware of the specific coalition structure for he is responsible for the overall operations. Yet, he is not required to monitor *all* the team's interactions. The latter has a life of its own. If the leader becomes a fully active member of the team, having equal responsibility with his direct reports, the leader would lose his *leader* authority. His role is to lead the specific team, and only occasionally to give a helping hand 'as equals'.

In order to ensure a high performance level of the chain, open information exchanges are required. The information must be available to all actors as soon as it is available. Moreover, the negative implications of poor coordination can have very drastic consequences, which can bring the destruction of the individual teams, or even that of the entire network. We note that information flows both ways: top-down (leader informs the actors); and, bottom-up (actors inform the leader).

The leader must implement programs that result in efficient and effective coalition structures. These programs must induce the coalitions to be farsighted and the actors must have an attitude free of (procedural) deviation. The overall success of the coalition (which is based on the final payoffs) is the principal objective.

The behavior, actions and involvement of one member of the network influence (and has a direct impact on) the production and performance of all other members (or teams) in the specific network; thus, one member has a direct influence on the profitability of the network. Moreover, the overall value of the coalition (uT) depends upon the actors' actions. In the same time, the team's strength is determined by what it can achieve on its own; nonmembers of the specific team are not taken into consideration in the assessment of the aforementioned value.

The value of the coalition is constant. uT would increase if (and only if) the members of the teams are faced with difficult (out of the normal) situations and they address the latter in an adequate manner. The leader would increase the payment to both teams and members only in out-of-the-ordinary situations⁸. Once the environment regains its equilibrium (normal state of affairs), uT would regain its original constant value. uT can also decrease if (and only if) one of the following conditions occurs: a) there is a deviator; b) there is a deviator coalition; c) the members are not following procedures, thus incurring mistakes; d) a team excludes a member. In all these cases, the leader would diminish the value of the payoff payments, which in turn would negatively affect the value of the coalition.

4.2. Deviation

An actor can deviate from its team, from the collective unit rational. He can isolate himself, or he may not *support* his team, the members of his team, other members/teams, etc. The deviation can increase to such a level that the individual fully excludes himself from the team. In the case that there are two actors that are deviating in the same time, they can try to form a deviator coalition. This is a psychological effect that the deviator(s) have: they do not want to be singled out – forming singletons/being alone; thus, they look for an allegiance with someone else that has the same attributes, i.e. another deviator. If there is a deviator coalition, the leader would address the deviators individually, not the deviator coalition for it is easier to persuade an individual than a coalition.⁹

The deviator and the remaining members of team, as well as the deviator coalition (ΔT), are illustrated by (1) and (2) in the following *logical* manner:

$$t_{n_i}\delta \in \{t_{n_i}\} \mid t_{n_i} \rightarrow T_{n_i} \therefore T_{n_i} = \{(t_{n_i}\delta), [(t_{n_i}) - (t_{n_i}\delta)]\}; \quad (1)$$

$$t_{n_i}\delta \in \Delta T \text{ iff. } i > 1 \mid t_{n_{\forall i}}\delta \in \Delta T. \quad (2)$$

If a deviator coalition ΔT exists, then an additional negative payoff is paid by the leader to ΔT . It is to be noted that if $|\Delta T_{ii}| = 1$, creating thus a singleton, the deviator has a certain degree of pessimism regarding the structure that he is a member of, or regarding the environment in which he is placed. These are aspects that the leader must identify and address with the deviator as soon as possible.

Yet, a person might deviate unwillingly. This is a situation where the *not-work-related* environment has a strong influence on an actor. Due to human nature, one cannot fully dissociate personal-life from work-life. One must acknowledge the fact that an actor's work (and behavior) is influenced (positively or negatively) to a certain degree by events in his personal life. If the latter's influence is significant, then the actor would not be able to focus on his work, or he will be absent minded; the result will be an unwilling deviation, in addition to potential procedural mistakes that the actor might make.

There are also special situations where the team might exclude a member in order to receive a bigger payoff¹⁰. However, all members present must participate to the required work, information that is common knowledge. In this context, the leader would penalize the members of the team (not taken in consideration the member that was excluded). The rationale for the penalty is due to the fact that the team surpassed its role, farsighted strategies were not used, the team did not act as a collective unit, and it did not inform the leader of the need/want/willingness to exclude a member (the team's desire). It is the leader's responsibility to exclude (or terminate) a member of a team.

4.3. Stability and optimality

A manager is aiming for a coalition configuration (specific to each team) that is stable and optimal in terms of utility maximization. A core partition is stable in the sense that there is no reason for a deviation to take place, which refers to the presence of a Nash equilibrium. However, certain problems related to incentives of cyclical coalitional deviations might be present. It is optimal in the sense that not only the members of a team work in concert in order to accomplish a specific goal, but also the actors try to maximize the dynamic function of the payoffs (considering the conditions and regulations of the environment).

Any coalition requires a protocol (of specific duties) as well as strategies (that can be employed in order to achieve a specific goal). Moreover, we point out that a coalition may only be as strong as its *weakest* member. In the same time, uT for one coalition is not dependent on uT of another coalition. Each team has its own coalition value for members, environment, context (etc.).

CONCLUSION

People are complex and their needs change over time. There are different conditions (socio-cultural, technological, gender, age, etc.) which determine the dynamics and complexity of a department's environment. A leader must be aware of these conditions and he must always take them in consideration.

The employees need to be trained, thus acquiring the skills and competences that enable constant adaptation to a constant changing environment (an environment where information is introduced sporadically and where information can change part of the setup of the environment). Without these skill sets, firms are not reaching their full competitive potential. Acknowledging this aspect, companies invest considerable time, resources and effort in order for their employees to be prepared for any change that is introduced.

Increasing the flow of information, services, or products would increase the efficiency and effectiveness of the network. The flow increases only if all the elements in the network work in concert. In order for the latter to happen, proper team management is required. For a manager to effectively administer his team, he must understand the team's environment and apply the appropriate tools to lead the actors towards tomorrow's economic environment.

One realizes that deviation is to be avoided due to its negative implications. The following methods can be used in order to deter members from deviation:

1. increased communication – through communication, there is interaction; the teams know beforehand what is happening and what is expected of them;
2. team building exercises – having as end result the fact that actors increase their trust of other members; members have a different setting in which they interact, thus learning more about each other and about themselves as teams;
3. team recognition programs – leader recognizes good work of the members acting as a collective unit and of the team;
4. individual recognition – either the leader or another individual recognize a specific actor for a job well done.

Today's workplace environment is characterized by employees that have the ability to choose from a wide range of options. It is to be noted that if low moral is present (within the teams and within a department), personnel quits. This would result in a high turnover. New actors would need to be introduced to our system, and the former need to adapt to the latter. Moreover, the new employees need to be trained. Thus, a lot of resources are invested in the actors. It is recommended to keep moral high and avoid all other consequential problematic situations related to the implications of low moral of the teams and members of the teams.

The work environment and the work relations between employees are essential for the profitability of the firm, as well as the psychological health of the employees. Companies are starting to be aware of these important aspects and they already began to implement different programs to properly respond to today's employment requirements.

If one is to clearly understand the dynamical interactions of the leader-actor(s)-team(s) triad, one must comprehend the system from the leader's perspective (thus, understanding the environment where the leader establishes the variable(s) that influences the state of the system), as well as from the perspective of the teams' members (thus, understanding and analyzing differential games — using calculus of variables and optimal control theory (see Kamien and Schwartz, 2000) — where several individuals select the variables). The main objective of this analysis is the proper and accurate understanding and prescriptions of work-coalition maintenance.

The next step in the quest for insights in coalitions from a realistic point of view is to analyze certain characteristics that the actors have: their behavior, adaptation and learning levels, effort and willingness. Based on these elements, one could examine the actors' as well as the teams' performance by specific calculations that take into account most of the components determining the added value to the system.

One of the advantages of this approach is that it can be used to monitor the progress of the actors, as well as it can help in the identification of problematic aspects impeding in the creation of value for the system.

END NOTES

1. The following lesson is taken from psychology: if an actor has the 'initiative' of an action, the results will be longer lasting (and the actor will believe harder in it), than if the action is imposed on him from an outside actor or the environment. Moreover, if the lawless has the initiative (not imposed), then this enterprise will help the individual build his self-esteem faster.
2. Fehr and Schmidt, 2007; Fehr and List, 2004; Andreoni et al., 2003; Camerer, 2003; Fehr and Rockenbach, 2003; Fehr and Falk, 2002; Sefton et al., 2007; Dickinson, 2001; Fehr and Gächter, 2000a; Gneezy and Rustichini, 2000a, 2000b; Bewley, 1999; Falk et al., 1999; Ostrom et al., 1992; Yamagishi, 1986, 1988.
3. Falk et al., 2008, 2003; Fehr et al., 2007; Charness, 2004; Charness and Levine, 2004; Falk and Kosefeld, 2004; McCabe et al., 2003; Charness and Haruvy, 2002; Nelson, 2002; Offerman, 2002; Brandts and Solà, 2001; Fehr and Gächter, 2000b; Blount, 1995; Gordon and Bowlby, 1989; Greenberg and Frisch, 1972.
4. Extensive research has already been done on this topic. For some examples, see Konow, 2000; Rabin, 1994; Akerlof and Dickens, 1982; Festinger, 1957.
5. The payoffs are not required to have a monetary or material value.
6. "Game theory is a branch of mathematics devoted to the logic of decision making in social interaction" (Colman 1995, p. 3); "Game theory is a mathematical theory which deals with conflict situations." (Damme 1983, p. 1). The conflict situation, which actually is the game, is a situation where two or more people (payers/actors) interact and together they determine the outcome of the game.
7. The distinction between economy and economics is made in Popp, 2006.
8. *Out-of-the-ordinary* situations refer to: complicated demands; complicated documents; actors absent; spike in volumes; etc.
9. Different deviators have different reasons for their deviation. The leader must understand and address each individual need of the deviator(s), trying to bring him/them out of deviation. Moreover, addressing individual needs is easier than addressing the needs of the collective. Psychology and negotiation situations have provided different examples regarding this aspect.
10. Suppose that one member is doing procedural mistakes; this is translated in a low uT . If the team excludes that member ($t_x \notin T_x$), the work load is divided between the members of T_x , then uT would increase.

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