

Research article

Corporate Governance Behavioral Approach and Cognitive Mapping Technique

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1. Introduction

The psychological biases of behavioral finance is a new paradigm that complements the traditional finance theory while introducing aspects "behaviorist" in the decision making process. Behavioral finance looks at how thinking among investors and help them understand and predict the psychology of decision. Moreover, it is based on the application of psychological principles to improve financial decision. There are quite a number of literatures interested in market anomalies that are not explained by traditional theory, these abnormalities are cited among the abnormal movements of the course following the first public offering or through a merger or to fragmentation of the capital. During the 80 and 90, statistical anomalies persist, suggesting that the existing of traditional models is incomplete. Investors seem not to follow a logic in their reactions to new information but rather confident and change their choices after the emergence of new information. In recent years, the media give more importance to the valuation of securities. Therefore, there are biases in the decision and therefore deviant behavior of individuals. These anomalies suggest that the principles of rational behavior are not always true, hence the need for a model that treats human behavior, such as those studied in other social sciences.

Keywords: corporate governance, behavioral approach, overconfidence, structural analysis, cognitive mapping

2. Literature review

Behavioral approach of corporate governance

According to Thaler (1996), the current behavior differs from traditional economic power by seeking to account for three deviations from the standard representation of behavior: bounded rationality (bounded rationality); will limited (bounded willpower) and selfishness limited (bounded self interest). To these differences are associated a number of biases that induce decision errors.

Biases associated with bounded rationality

For Jolls (2009), bounded rationality includes both errors of judgment and the differences in decisions relative to those of the standard maximization of expected utility. Errors in judgment may be caused, for example, in the subconscious bias for or against many prejudices against members of a group (on the basis of race, class, nation, sex, beauty ...).

Biases associated with the will and limited selfishness

Beyond the means of rationality that led to many developments in the field of law, the current behavior also highlights two other imperfections of human behavior, the limited willingness and limited egoism. The concept of limited willingness reflects the limits of the will of individuals.

The key concepts of the behavioral approach

The overconfidence

One of the foundations for the development of behavioral finance is overconfidence, which is, nowadays, one of the most studied phenomena. Among these works are cited Article pioneer Debondt and Thaler (1985). These studies define overconfidence as overestimation of the ability of the investor (Ritter (2003)). Generally, there is the presence of such an attitude especially for agents 'experts' that the less experienced actors. Overconfidence can have two effects; one is direct while the other is indirect. Daniel, Hirshleifer and Subrahmanyam (1998) (DHS) show the direct effect of overconfidence. They show that investors place more emphasis on the private information which they use in their choices.

The optimism

Several models have been devoted to explaining the phenomena of bubble; and all emphasized the importance of investor optimism during the swelling phase of these bubbles. In this regard, Scheinkman and Xiong (2003) have built a model in which investors are willing to buy a security at a price above its fundamental value because they anticipate the possibility of resale to investors even more optimistic than them. Note that this model is based on a strong assumption: absence of short sales, already present in a model developed by Miller (1977), where the latter shows that only optimistic investors take long positions in sales since the ban found to prevent pessimistic investors to work heavily on the markets.

The cognitive dissonance

Cognitive dissonance proposed by Festinger in 1957 which defines it as "a feeling of psychological discomfort, caused by two conflicting cognitions, and plunging the individual in a state that motivates him to reduce this uncomfortable feeling" (Festinger, 1957). The theory is related to cognitive processes, emotional and motivational.

The mimicry

Mimicry is the ability to identify basic human its congeners and imitate them. Many authors can be invoked here: Freud and the concept of identifying, Piaget's genetic psychology and the importance he gave to the concept of imitation, sociologists and "anthropologists" as Tarde or for which Girard social life finds its ultimate explanation in the imitation, cultural psychologists, as Tomasello showed precocity and importance of imitative gestures and the role they take in learning.

The dependence

Organized collective activity always creates a situation of interdependence between cognitive players who engage in it. Since the early work of economics is considered that the collective achievement of a common goal requires coordinate the activities of each by dividing the work and then ensuring synchronization and consistency between the products of the activity, they are realized by objects or they are "intangible" intellectual productions. This cognitive interdependence itself rests on a structural interdependence that we define as follows: When two actors are contractually bound to achieve a given we will assume that they are structurally interdependent. This structural interdependence may be created by an informal agreement to work together, an employment contract that associates of individuals within a given institution, or as part of market relations between individuals or corporations.

3. Research Methodology

Description of the empirical investigation

To meet the research objectives mentioned above, a survey was conducted among players in the company of Tunisia. I have chosen as exploratory approach using multiple case studies. The multiple case studies seek a better understanding of the phenomenon. They are to study a phenomenon in its natural setting by working with a limited number of cases. They are particularly interesting in the case of exploration of little-known phenomena. The case studies thus allow multiple accounts the specificities and characteristics of corporate governance. The data is from 10 firms. The method used to create cognitive maps is the questionnaire.

Presentation of the questionnaire

The questionnaire is divided into two parts: the first identifies the company and the second deals with corporate governance. For the second part, relating to corporate governance, we interview actors from the firm on behavioral approach of corporate governance by providing a list of concepts for each approach with systematic exploration grids and matrices cross. Systematic exploration of the grid is a technique for collecting materials. Each player is encouraged to explore their own ideas or cognitive representations in relation to its strategic vision. The subject is asked to identify important factors that he said will have an impact on the key concept related to an approach to corporate governance.

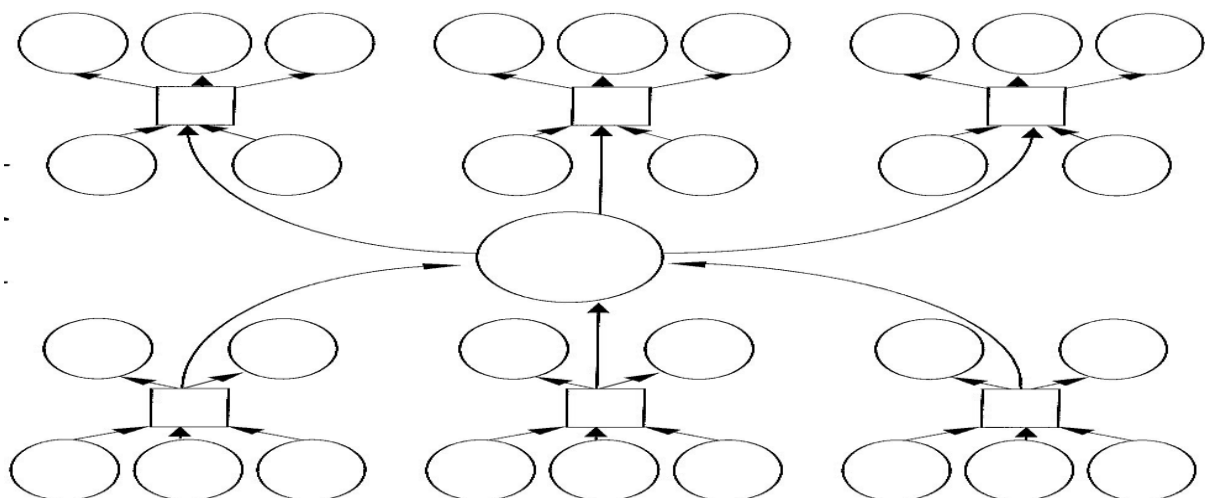


Figure1: Grid systematic exploration

Regarding the cross-matrix, it is also a technique of data collection and the basis for the construction of the cognitive map. The matrix is presented in the form of a table with n rows and n columns. Box of index (i, j) indicates the relationship between concept i and concept j. The actors manipulate the key concepts and assign pairs of concepts depending on the nature and degree of proximity sensed between these concepts.

Table 1: Adjacency matrix

	Concept1	Concep2	Concept n
Concept1	1			
Concept2	L21	1		L2n
.....			1	
Concept n	Ln1	Ln2		1

The construction of cognitive maps

We will see at first step that allowed the construction of concepts, methodological approach that we discuss. Then we will examine how the cards were dealt.

Concepts

We addressed this issue by the representations constructed by players using the method of cognitive maps, a method that can be applied to poorly structured situations. An analysis based on cognitive maps can understand this process of structuring, as this model is to build or rebuild the mental simultaneously modeling. This construction takes the form of a structure, carrier for clarification. It helps to identify ways to implement to achieve a given goal, the same way it helps to identify the goals justifying the use of such means. Finally, it facilitates communication and negotiation. We selected 5 concepts for the behavioral approach to their ability to describe the field of governance. We were guided in this by a literature review and an exploratory study based on a questionnaire made up of grids of systematic exploration and cross-matrices.

4. Materials and methods of structural analysis

This investigation was limited to the analysis of a collective cognitive map for all company, prepared on the basis of systematic exploration grids completed by the actors of the company. From cognitive maps, we could identify and qualify the designs are the actors of the field of corporate governance. The development and analysis of cognitive maps were made using the Mic-Mac software. Our initial investigation focused on two elements: the relative importance of concepts and analysis of the dynamics of influence / dependence concepts (or variables) in the cognitive universe of players in the company. The relative importance of concepts was evaluated from the MIC. Mic-Mac program allowed us to rank the concepts in order to "balance" and "dependency." Thus arise the ideas that dominate in the cognitive universe of players.

PRESENTATION OF VARIABLES LIST OF VARIABLES

Cognitive dissonance (Dis cogn)

Dependence (Dep)

Optimism (Op)

Overconfidence (Over c)

Mimicry (Mim)

The Input

This step was to compile a matrix of direct influence between these variables in a scoring session. Matrix of direct influence (MID) which describes the relationship of direct influence between the variables defining the system and the Matrix Influences MIDP represents the potential direct influences and dependencies between existing and potential variables. The scoring has developed the input matrix "matrix of direct influences (MID). The influences are rated from 0 to 3, with the ability to report potential influences.

Matrix of direct influences (MID)

Matrix of direct influence (MID) describes the relationship of direct influences between the variables defining the system.

Table 2 : Matrix of direct influences

	Dis cogn	Dep	Op	Over c	Mim
Dis cogn	0	0	0	0	0
Dep	0	0	0	1	0
Op	0	0	0	0	0
Over c	0	1	2	0	P
Mim	0	0	1	0	1

The influences are rated from 0 to 3, with the ability to report potential influences:

0: No influence 1: Low 2: Average 3: Strong P: Potential

5. Conclusion and implications of the research

This plan visualizes the concepts (variables) structuring the cognitive universe of actors can be projected in terms of influences / dependencies. By the distribution of the scatter plot variables in this plan, particularly in relation to different quadrants, we can distinguish four major categories of variables. The first quadrant includes the most prominent concepts in the dynamics of thought of the actors. For the actors of organization, the notion of "optimism" is the most dominant in their cognitions reflecting an intention based on a behavioral logic. Returning to the systematic exploration of grids for each actor, there is a balance of concepts expressing their orientation. For example, the actor1, this concept is expressed through statements such as "under evaluation", "investment", "net present value." that reflects the logic level of investment. Optimistic actors, that the market undervalues their firms, reject positive VAN investments to be financed by external resources. This

prediction formula so the same conclusion that theories based on asymmetric information, that is to say under-investment firms when cash at their disposal and their borrowing capacity is insufficient. for the actor2, this orientation is expressed through statements such as "investment project", "project cost", "negative net present value", "on valuation," reflecting a different approach based on return on investment. Actors optimistic overstate their investment projects and can invest in projects they believe profitable but whose NPV is negative. Therefore, optimism leads to the same result as that highlighted by the theories based on the agency relationship between managers and shareholders: managers tend to use free cash flow and debt capacity to overinvest. The second quadrant contains the relay variables that are by definition both very influential and very dependent. In analyzing the plan influences / dependencies, there are players for the concepts or ideas illustrating the concepts of "cognitive dissonance", and "mimicry." The third quadrant contains the dependent variables or resulting. They are both influential and very little dependent, therefore particularly sensitive. They are the results of which is explained by the variables and motor relay. Thus there are only one variable namely on trust. The fourth quadrant contains the variables that are simultaneously autonomous and influential little bit dependent. They are relatively excluded from the dynamics of thinking by the Tunisian company. The plan review influences / dependencies show the existence of a single variable that is addiction.

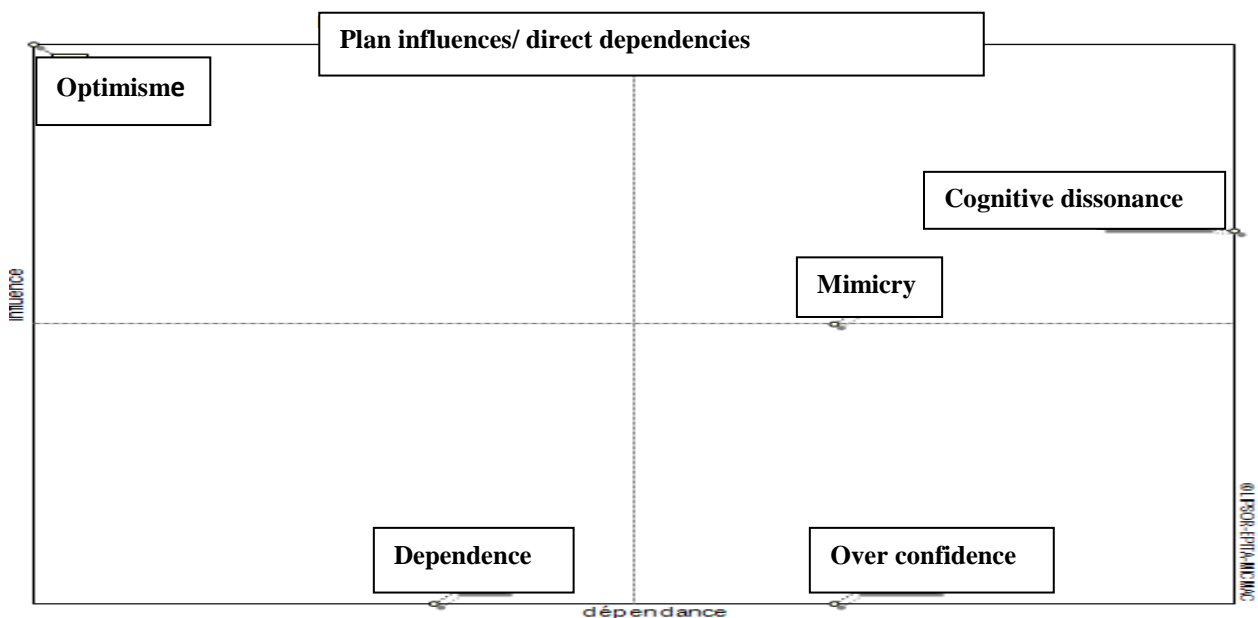


Figure2: Cognitive mapping through the plan influences dependencies

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