

THE IMPACT OF THE DECISION-MAKING METHOD IN BUSINESS ACHIEVEMENTS

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Abstract

*Whoever dares to learn, finds a way,
Whoever renounces to learn, finds a reason!*

Picasso

The environment wherein the business organizations currently operate is increasingly becoming more competitive and the need to face a multitude of challenges arises. Adoption to this environment is conditioned upon finding and using the most analytical efficient forms of managing a business via the use of decision-making analytical methods. The qualitative decision-making highlights the necessity of the scientific and technical capabilities and skills, as well as the creative ideas present in the business environment, in order to provide a sustainable development. The focus of this paper is the aim to consider from the theoretical and practical prospective, the interrelations existing between the decision-making methods used in business and the respective business performance. In this framework, the article entitled: “The impact of the decision-making method in business achievements” poses besides one-another the impacts of the two methods used in the decision-making process. Initially, an overview is made, considering the dimensions of this paper, on some basic concepts of the decision-making theory. Thereafter the theoretical approach, the current decision-making situation and conditioning factors are being analyzed. The hypothesis is of a simple character, due to the small number of independent variables. The research method is based upon on the ground surveying and the instrument used is face to face interviewing. The aggregate data is analyzed via the non-parametric, statistical analysis, such as the Association Coefficients, Pearson(C) Coefficient, Cuprov(T) Coefficient, Kendall Coefficient. The findings are indispensable as they highlight the necessity of considerable support with efficient programs the human resources development of the decision-making structures.

Keywords: Decision-making successful business, Pearson(C) Coefficient, Cuprov (T) Coefficient, Kendall Coefficient, analytical methods

1. Introduction

The beginning of political changes by the end of the last century in the eastern and central European countries lead to a transition period which unavoidably brought about significant changes in the business world.

This change induced the transformation of the totalitarian regime, which had been in power for a period of more than half a century in the post-socialist countries, and had outspoken obvious elements of a complete economic failure. This transformation characteristic was that it started with the political power collapse and the centred socialist economy was substituted with the free trade economy that takes into consideration the market requirements. Albania entered this transformation as an extremely left-winged country and the sole country wherein the private production sector didn't exist. Furthermore, the non-existence of the private sector was legitimated by the fundamental law of the state, the constitution. Thus, based into constitutional norms, the private activity was completely forbidden.

The political system change offered to the citizen new values, new working and living standards (on the ease of doing business). The rapid and complete transition of the Albanian economy towards a free market economy was accompanied with newly created relationships and problems, which required theoretical as well as practical interpretation. Under the circumstances, the group of Albanian businessmen that dared entering the business world immediately after the political transition, the business decision-making represented an entirely unknown terminology and process. Therefore the starting point of the free market economy for the Albanian businessmen has been an arduous period because of their unaccomplished professional background. They lacked experience and/or professional competences regarding the rules and regulations of doing business in general, as well as on the specific aspects of the business activity, as the competition between the businesses, the inventory management, the financial means finding and mobilisation, the business market shares, the defining ways of market shares or the opportunities for growth etc., which have been and are still a concern towards the attainment of professional engagement in finding and using the most efficient forms of business management. All the above statements highlight the indispensability of adapting to the free market economy requirements, a process which is made feasible only through the decision-making process. Thus each managerial form used in business is in the focus of every respective decision. Therefore, the decision-making process does not only constitute an uninterrupted managerial commitment, but plays an important role in business activity.

The decision-making process is compounded of a series of interlinked cogs. Each of them having specific requirements to be rigorously followed, as they directly affect the decision-making quality. Decisions are

not intentions on their own, but are taken to fulfil specific business aims, and on this respect, they are responsibility loaded. The decision-making process in business organisations is affected by the business objectives and the micro and macro environment structures wherein the business operates. Consequently they are decisions lead by the economic logic and require sufficient necessary arguments.

Decision-making in business organisations entails not just a managerial engagement, but it is a pivotal part of the managing business structure responsibility. Decisions are numerous, variable and conditioned upon the issue needing solution, the time when these decisions should be made and the consequences they bare on the business performance. Considering the entire multitude of business problems in general, it is viably noticeable that the decision-making is a thoroughly widespread process, in the state that it may be considered omnipresent. Decision-making is a daily activity in some professions, therefore it carries a special importance. One of these professions is the manager's activity, who is permanently faced with diverse challenges, requiring consistent decision-making.

Businesses are highly sensible towards decision-making considering both interest groups, the employees operating in the business on one hand, and the managing business structures on the other, due to the fact that every business represents a combination of interests, being those individual, group or the interest of the business itself. The combination of interests often may even cause conflicts, which in decision-making are inevitable. In this context, to Garvin and Roberto (2001) conflict is one of the critical factors of the decision-making process. Thus they recommend "careful attention to three critical factors, the three "C's" of effective decision-making: conflict, consideration, and closure".

To the decision-making process, conflict is not an exclusion, but as a rule it is a welded part. To this regard, Johan Galtung (1988), the mediator, consultant and the person who helped in conflict resolution worldwide for more than 40 years, states: "where there are goals there are contradictions as well, within the same organism or among different organisms. Whereas according to Laurie J. Mullins (2010), Irvine treats the conflict as an inevitable factor. Mullins explains the conflict inevitability upon the fact that "We all see things in different ways and have our own set of values, beliefs and option". Whereas, Galtung explains the inevitability of the conflict related to its ubiquity trait, alluding for its continuous presence in different cognitive problem levels we face "...the conflicts in persons (dilemmas) and among people (disputes)". This multitude of interests combination inevitably leads to conflict. In the circumstances of doing business the solution must serve only as a means towards the business success.

Regarding the above, we may conclude that conflict should not become an obstacle to decision-making. To this reason, Philippe Vincke highlights the necessity of compromise finding: “The aim is to find some compromise in a decision problem in which are involved several decision-makers (or committees) with different systems of preferences (while, in multicriteria decision-aid, the decision-maker is unique, even if it is a committee)”. Herbert A. Simon (1997), the Nobel winner, 5 years later as well suggests the importance of compromise in decision-making. “In an important sense, all decision is a matter of compromise”

Considering the entirety of the decision-making problems, it is easily noticeable the fact that the manager must be proficiently cognitive of decision-making theories. Lee J. Krajewski, Larry P. Ritzman (2005) think that: “Decision theory is a general approach to decision making when the outcomes associated with alternatives are often in doubt. It helps operations managers with decisions on process, capacity, location and inventory, because such decisions are about an uncertain future. The diffusion rate and the objectives that decision-making brings focus to, results that in the entire decision-making spectre are included miscellaneous problems. Whereas Rudolf Grünig & Richard Kühn (2005) argued that “A decision problem is present when the discrepancy between the current situation and the target situation can be reduced and/or overcome through different courses of action”.

Thereof decision-making in general and the business decision-making specifically encounter technical hardships and being accompanied by ulterior expenses or risks. Therefore the know-how on the decision-making problems in business is not only a necessity but highly important as well, as it deals with finding efficient solutions to the business problems. In the usual practice, the in-depth knowledge of the decision-making problems appears not very important, keeping in mind the routine of the business manager engagement. The importance of qualitative decision-making is especially highlighted when we try to find solutions and get positive results for strategic business problems. Only in this way the offered solution is stable and long-lasting. In this context, the decisions in any case will focus important business problems and as such should reflect managerial professionalism. Therefore decision-making is an important and responsible managerial engagement to the business destiny. To this Garvin and Roberto (2001) would state: “Decision-making is arguably the most important job of the senior executive and one of the easiest to get wrong”. Thus a good cognition of decision-making problems in business is simultaneously necessary and useful. Therefore the decision-making process should be studied in all its aspects.

In the entirety of the decision-making aspects, the method engaged in decision preparation has a considerable impact upon the decision-making quality. This due to the fact that decision-making quality serves the economic and social progress of the business. The economic-social progress in general and considered within the business conditions specifically, compounds a multi-dimensional and arduous process, associated by a series of challenge-facing. In this framework, sensing the need of finding analytical forms and techniques, it is evident the presence of coordinated researches, in order to orientate successful economic business activities. One more reason to this reasoning is the fact that Albanian businessmen lacked the background that would have allowed them to model efficient ways and manners towards an economic business management. The highly centralized economy and the enterprise state commandment via the “unique central-state plan” dominating the Albanian economy hindered them to develop the professional competence in this direction. The professional competence includes theoretical as well as practical implementation elements. This once more highlights the lacking possibilities of the Albanian businessmen.

The decision-making quality is mainly affected by the method used for the decision preparation. The method is a supporting and argumentative factor for the decision-making quality. These attributes give a very important role to the method used in decision-making. This refers to the fact that it should be built upon the theoretic principles, considering efficient tools that shall be used in modelling a qualitative decision. The decision-making methods are numerous. They have evolved towards improvement.

Based on Lennart Sjöberg (2003), decision-making methods can classify:

a. First group – intuitive methods

As a rule this group should include the descriptive methods of the economic phenomena. According to these methods, the economic phenomena are characterised by economic indicators. The calculation of these indicators is made possible on the basis of basic mathematical activities and those deriving from them. The entirety of methods sustained upon the basic activities and their derivatives is generally known as intuitive methods. These methods support the experience and managerial intuition. They belong to the early XX Century developments and are generally oriented by the managerial intuition.

b. The second group – analytical methods

The economic problems, being the object of decision-making in business are thoroughly complicated and variable. There is a multiplicity of factors impacting them separately or co-ordinately, acting in different time-spans or occasionally at the same time. Taking into consideration the impact of all these factors, simultaneously with the methods that experience offers –

the intuitive methods, is practically very difficult and impossible at cases. Therefore the managerial engagement in decision-making constitutes a difficult activity. Moreover, the difficulties the manager encounters in the competitive environment in which the business operates make the managerial intuition in decision-making an insufficient support kit in order to analyse and explain the multiple nature of the business activity. Faced to this challenge, other methods are required to survive. In the context, the use of improved methods in decision-making, represent an essential factor of survival and success, in the competing market. Therefore the place of managerial intuition should be duly occupied by the analytical sciences recommended methods and thereof should be called, the analytical methods. This labelling refers to the fact that the entirety of methods included in this group are methods developed during the current period, therefore it is logically fairer to be referred as analytical methods. Parts of this categorization are the different statistical, mathematical, econometric methods, which belong mainly to XX century developments. These are methods that must be known and used by managers in their decision-making activity. In this way the performance deriving from the use of analytical methods in decision making is considered of interest, secure and reliable.

The use of analytical methods in decision-making should not be identified with the theoretical approach of the scientific concepts or of the respective confirmations by the manager. From the decision-making point of view, the use of analytical methods takes into considers a more simple way and comparably more explicit comparably to the respective approaches in the existing literature. The use of analytical methods in decision-making is a potential opportunity to increase the managers and business director's benefits from the scientific developments. The analytical methods in decision-making represent important instruments for the managers and business directors towards the managerial problem-solving, being the focus of the business performance.

Considering the above, it is obvious the linkage between the decision-making quality based on the analytical methods and the business performance, but does there exist a relationship between them? Therefore this paper aims at approaching in details the relation problem that exists between the using rate of the analytical methods in decision-making and the business performance.

In this way this paper has as its main objective the evaluation of the role of the analytical methods use in decision-making, considering their rate of use as a precondition to improve the business performance. In this context, solutions will be offered in a recommendation format, aiming at an increase of the opportunity to use there methods in the managerial activity.

The execution of the main objective is enabled if answers will be provided to a series of issues, which are as well delineated as other paper objectives:

- Theoretical approach of some of the quality decision-making problems, considering the dimensions this paper allows.
- A general overview of the analytical methods using rate in decision-making in businesses currently operating in Albania, on the basis of an empirical evaluation.
- The analysis of the relationship strength between the kind of method used in decision-making and the business performance.
- Characterisation of the decision-making practice in Albanian businesses and highlighting some highly ponderous factors conditioning the current situation of analytical methods use in decision-making, in businesses in Albania.

However, it should be considered the fact that the diffusion of the analytical methods use in decision-making constitutes a development of human acknowledgement in the business decision-making practice. The use of analytical methods in business management is related to the engagement, in this important activity for the business future, of the main actors, that is the managers. It is however known the fact that actually the businessmen and managers engagement in using the analytical methods in decision-making is rather low. In this context, the intuitive methods, referring to the traditional practices should possess a smaller part compared to the analytical ones. To this aim is needed data gathering and analysis, in order to find acceptable solutions to the situation. On this basis will be defined the factors conditioning the situation.

The hypothetical evaluation of the fact is a necessity so that this empirical evaluation shall be transformed into a conviction, which would help improving the future work concerning the increase of the analytical methods use. Therefore, in order to create a clear picture on the factors conditioning the analytical methods using rate in decision-making, is highly significant to consider the experts opinion. This approach will create an opportunity to further explain specific phenomena in the function of testing the raised hypothesis on this paper.

The focus of this paper refers to the decision-making in the context of the used method role and its impact on the quality of decision-making.

2. Methodology

The methodology offered in this paper serves the propound objectives and considers:

Table work: research focused on the relevant economic literature in Albanian and other languages, different researches and studies, sample definition, interview preparation, data processing and conclusions generation.

Terrain work: refers to researches in different institutions, interviews with pre-selected experts and other interviews.

In this paper two kinds of researches have been considered. In more concrete terms – the descriptive research – descriptive statistics, used aiming at acknowledging the situation; and the verifying research – statistical non-parametrical analysis, necessary to explain and highlight the relations existing among variables. These methods were used solely and combined. Whereas, the results of this paper survey on the necessity of using analytical methods in decision-making are analysed according to the hypothesis:

H. Does the business success depend on the method used in decision-making?

The interview was the instrument used to gather the necessary data. The interview content consisted mainly on specific questions, claiming that such questions would bring important information to the undertaken research. By means of the interview is intended to measure the experts perception regarding the impact of the method used in decision-making on the business performance. Having as a scope generating as many ideas as possible, the interview was done via individual (face to face) meeting, focused on communication.

The choice that experts were selected on the focus of this paper is carried out via the method “empirical selection – snow balls”, due to the fact that there is no database of the field experts from the Academy of Sciences. This choice was enabled after a preliminary identification of the specific characteristics of the experts to be interviewed. The sample would consist of 30 experts, considering the fact that each cell density of the contingency table would be larger than 5.

As the generated data stand as qualitative data, their processing will consider non-parametrical statistical methods such as, the association coefficient, the Pearson (C), Cuprov (T) coefficients and Kendall Coefficient. The last will be used when having several variables.

3. Results

The positive performance of each business is a challenge to the manager. The performance challenge analysis should be based upon a realistic evaluation of the current situation. Therefore, data interpretation is highly important. So C.R. Kothari (2004) suggested: “Interpretation is essential for the simple reason that the usefulness and utility of research

findings lie in proper interpretation.” The interpretation is based upon the surveys results, based on hypothesis.

Business decision-making is conditioned upon finding and measuring the interlinks existing among different variables. In order to confirm this, the experts interviewed were asked to evaluate the businesses situation from the interview questions perspective. During the interview attention was turned to the questions by means of which qualitative variables are generated.

The interview resulted in:

Descriptive analysis:

The statistical descriptive method aims at bringing out of the real business world a fundamental phenomenon, whose impacts define the professional behaviour manner. The method aims at identifying the focus problem, its characteristics, restrictions identification intending to define the necessary solutions. The descriptive method of analysis coordinated with the correlative non-parametric analysis method, enabled the formulation and materialization of the phenomena in focus of this article.

The interviewed experts within the defined area admitted that, currently the intuitive method is the predominant method in business decision-making. However, the experts share different opinions regarding the interdependence of business performance upon the method used in decision-making. On this basis, related to the descriptive analysis methods requirements, it resulted that 26.7 % of the interviewed experts admit the fact that the use of intuitive methods in decision-making outcomes in a low business performance. Whereas, 10 % of experts think that the business may turn out on a low performance, despite using the analytical methods in decision-making. This group of experts support the estimation on the fact that the business success is considerably conditioned by the efficient analytical method selected, in accordance with the problem the decision focuses on. Following this argument, the experts think that if the analytical method used in decision-making does not duly refer to the decision-making object problem, the success of the method used as well as the business performance success will be of a disputable nature. 13.3% of the interviewed experts admit that even using the intuitive methods in decision-making may bring considerable success to business. This group of experts argue that it mainly happens in businesses run by managers having a long term experience in the field. In this framework, experts admit that in this case performance is noticeable, in cases when the manager’s professional profile belongs to a technological profile, such as engineering. To their opinion, the success that the business achieves in cases when the manager uses intuitive methods in decision-making is attributable to the individual professional skills of the manager and his relatively long management experience.

Experts believe that experience induces the managerial intuition towards manifesting a relative accuracy rate in decision-making. Thus, the managerial experience impels power upon intuition, which besides other casual factors will provide considerable success to business. This derives by the method used in decision-making. The majority of the interviewed, nearly 50 %, think that the business success is to a considerable rate due to the use of analytical methods in decision-making.

The above experts’ attitudes on the role and the business performance of the method used in decision-making, lead us to the general opinion that, normally a depending correlation between the method used in decision-making and the business performance, should exist. In more concrete terms, besides the results coming out of the analysis according to the descriptive method above treated, in the study of the correlation we claim, the correlative non-parametric analysis is used as well.

Non - parametric, statistical analysis.

In this article, concerning the analysis of the facts generated by the experts interviews, carried out in Albania, Montenegro, Macedonia, etc., have been considered some of the non-parametric methods abovementioned, such as the association coefficient with both of its forms, the Pearson(C) coefficient, Cuprov(T) coefficient and the Kendall coefficient.

In support to the non-parametric methods requirements above mentioned, and to the available data from the experts’ interviews, the table of the contingency is constructed, having r=2 lines and c=2 columns. In this table we may trace the real density to each variables combination between the kind of method used in decision-making and the business performance in other unchanged conditions as follows:

Table No.1

<i>Variables</i>	Use of intuitive methods	Use of analytical methods	Σ
<i>Less successful (y₁)</i>	a=8	b=3	a+b = 11
<i>Successful (y₂)</i>	c= 4	d=15	c+d = 19
Σ	a+c = 12	b+d =18	n = 30

This table enables the calculation of the indicators as follows:

➤ **The Association Coefficient** is approached in its two forms:

- Julie Coefficient

$$K_a = \frac{ad-bc}{ad+bc}$$

$$K_a = \frac{8*15-4*3}{8*15+4*3} = 0.81$$

- **Correlation Coefficient**

$$K_l = \sqrt{\frac{1 - \frac{bc}{ad}}{1 + \frac{bc}{ad}}}$$

$$K1 = \sqrt{\frac{1 - \frac{4*3}{8*15}}{1 + \frac{4*3}{8*15}}} = 0.9$$

The Association Coefficients, in both forms, highlight the fact that business performance is positively related, to a considerable degree, to the method used in decision-making.

➤ **Pearson (C) Coefficient**

As noticed in the studied case, we have two quality variables of two levels each. In order to evidence the relationships among them the Pearson Coefficient is used. In this regards Michael J. Panik (2005) states: “We noted in the preceding section that the Pearson correlation coefficient Q_{xy} serves as an index of linear association between two variables x and y; that is, it measures strength of the linear relationship between x and y”.

Pearson Contingence Coefficient is calculated according to the formula:

$$C = \sqrt{\frac{\chi^2}{\chi^2 + n}}$$

For this we preliminarily calculate the size of χ^2 via the following formula:

$$\chi^2 = \frac{\sum(f - f_e)^2}{f_e}$$

wherein: f = factual density.

f_e = expected density

Expected density $f_{e(i,j)}$ for the combination $(xy)_{ij}$ are calculated according to the formula:

$$f_{e(i,j)} = \frac{n_i * n_j}{n}$$

Wherein:

n_i = i line density

n_j = j column density

n= the general cases sum or the general density

The expected densities according to the respective contingency table cells come out as:

$$f_{e(11)} = 12 * 11/30 = 4.4$$

$$f_{e(12)} = 12 * 19/30 = 7.6$$

$$f_{e(21)} = 18 * 11/30 = 6.6$$

$$f_{e(22)} = 18 * 19/30 = 11.4$$

On this basis we calculate the χ^2 value:

$$\chi^2 = (8-4.4)^2/4.4 + (3-7.6)^2/7.6 + (4 - 6.6)^2/6.6 + (15 - 11.4)^2/11.4 = 7.89$$

Considering the above value for χ^2 the Pearson (C) Coefficient results in as follows:

$$C = [7.89 / (7.89 + 30)]^{1/2} = 0.456$$

Whereas the Cuprov Coefficient results in:

$$T = \sqrt{\frac{\chi^2}{n\sqrt{(c-1)*(r-1)}}$$

Wherein: r- lines and c- columns of the contingency table

$$T = \sqrt{\frac{7.89}{30\sqrt{(2-1)*(2-1)}} = 0.512$$

From the distribution table of χ^2 for $\alpha= 0.05$ and liberty rate $v= (c-1)(r-1) = (2-1)(2-1)= 1$ we find the critical value for χ^2 . So $\chi^2_{kr}=0.384$.

Being that:

$$0.512 > 0.384, \text{ so } \chi^2_{fk} > \chi^2_{kr}$$

We conclude that the correlation between the business performance resulting from decision-making and the method used in decision-making is an important positive relation, which confirms the claimed hypothesis. Thus:

- The Association Coefficients (Julie and Correlation Coefficients) despite the possessed shortages, they should be taken into consideration, if we bare in mind the fact that they completely justify “the Rule of thumb“. According to this rule if the variable has 2 variants (the two dimension 2x2 tables), then the coefficient is higher than 0.707 this indicates an important relation.
- The Pearson and Cuprov Coefficients highlight as well positive relations between the method used in decision-making and the business performance , if we compare these coefficients values, with the critical value of $\chi^2_{kr} = 0.384$:

Pearson Coefficient 0.456 > 0.384

Cuprov Coefficient 0.512 > 0.384

This is a solid argument that managers should orientate their decision-making activity towards the use of analytical methods. However, the use of analytical methods in decision-making in Albanian businesses and regional businesses as well, despite the noticeable increase, is still in low levels. The experts admit that the average proportion of using the intuitive methods in decision-making compared to the use of analytical ones is 78%: 22% respectively.

Regarding the current unoptimistic situation, experts highlight a series of different factors. They believe the situation is conditioned by such factors:

1. The considerable impact of the dominant long-term decision-making tradition. This is the opinion of nearly 61.5% of the interviewed experts. Changes in the decision-making ways require time and professional preparation from the manager’s side. In this case, we are faced with a fabricated stereotype. Therefore, the situation reversal needs the detachment from an acting way (the traditional decision-making approach) and the

creation of another decision-making approach, in respect to the development requirements, which is the analytical method.

2. The notable presence of a one sole owner having numerous businesses and similarly referring to small businesses, which in most cases pertain to one owner. This being a factor with a considerable impact to the 57% of the interviewed. The managers engaged in one owner businesses, considering the hierarchical structure of these businesses, it viable understandable that managers lack the necessary space to renew the decision-making approaches. Whereas, the small businesses managers such as the coffee –bars, stationeries, bookstores etc., are not much interested in changing the decision-making methods as to their engagement, decision-making takes only a small portion of their activity.

3. The highly academic orientation of university studies, mainly the Bachelor level. 38.5% of the experts consider it a factor impeding the new managers prompt orientation towards practicing the analytical methods in decision-making.

4. The absence of a functional data base in most businesses, which would serve as a crucial support towards creating argumentative models of the decisions concerning the business future. 85.7% of the experts consider as highly important the impact of this factor lacking in different businesses.

5. The informality rate in the domestic economy is considered a crucial factor increasing the requirements for the business decision-making modernization. 61% of the experts consider this factor very important. In the countries of our region informality amounts to a considerable rate. Meanwhile in Albanian economy, during the first years of the economic system transition, the presence of informal economy has been relatively high. According to Hernando de Sotro, it reached up to 80-90 % of GDP (meeting De Sotro-Berisha in 2005). Whereas the estimations regarding the informal sectors dimensions in Albania in the following years according to the CIA fact book, the informal sector accounts that may be as large as 50% of the official GDP (CIA, 2007, 2008, 2009, ..2012).

6. The respondents admit that managers rarely consider the experts' opinion, statisticians or mathematicians, regarding the use of analytical methods in decision-making. Only 11% of the respondents admit to have cooperated with different business managers regarding the modernization of decision-making methods. This indicates an increase of the managers' interest in the use of analytical methods.

Regarding the above, experts state that intelligentsia in business must orientate their activity towards increasing the using rate of the analytical methods in decision-making. Being that the analytical methods are numerous, the experts were asked to define from the great number, the best

possible methods currently. This enabled the calculation of the Kendall Coefficient of Concordance.

- Kendall Coefficient, (the case of some variables)

In an attempt to orientate the managerial engagement towards the use of analytical methods in decision-making, the aim was to confront the experts' opinions regarding the preferential order of some of the analytical methods, possible to use in the current situation. To this cause, the Kendall Coefficient was considered (the case of some variables.), as "the Kendall's coefficient of concordance, represented by the symbol W , is an important non-parametric measure of relationship." C.R. Kothari, (2004)

Special attention was dedicated to the requirement conditioning the use of Kendall Coefficient, as C.R. Kothari states: "The basis of Kendall's coefficient of concordance is to imagine how the given data would look if there were no agreement among the several sets of rankings, and then to imagine how it would look if there were perfect agreement among the several sets". In respect of this requirement, it was aimed that the experts remained unbiased and share different opinions. They were asked to line in a preferential order the four methods, concretely: ANOVA, Time Series, the Regressive Analysis and programming models. For this, the paper further aimed at defining the correlation value of the experts' evaluations regarding the preferential order of some analytical methods chosen, that may be currently used. Even in this case, the non parametric methods requirements have been considered. Concretely the evaluations of 7 experts will be considered, in their four preferential evaluations to four analytical methods. The definition of the correlation value in this case will take into consider the Kendall Coefficient of concordance, (the case of some variables) which is calculated according to the formula:

$$T = \frac{12 * S}{m^2 * (n^3 - n)}$$

Wherein: "S" will be calculated as follows:

$$S = \sum (S_i - \bar{S})^2 = \sum S_i^2 - \frac{(\sum S_i)^2}{n}$$

Whereas " \bar{S} ", is calculated according to the formula:

$$\bar{S} = \frac{1}{2} m * (n + 1)$$

Wherein: m = experts number.

n = the number of analytical methods considered for ordering.

In accordance with the respective requirements for the calculation of the Kendall Coefficient of concordance, the experts were asked to evaluate in a preferential order the four suggested analytical methods of decision-making. Their evaluations, using the respective groupings, are presented as follows:

Table No.2

Number of experts Methods	Expert 5	Expert 3	Expert 5	Expert 3	Expert 7	Expert 4	Expert 3
ANOVA	2	1	1	2	2	3	1
Time series	1	2	4	1	1	1	3
Regressive analysis	4	3	2	4	4	2	2
Programing	3	4	3	3	3	4	4

Following the above line of calculation of the Kendall coefficient and on the basis of the above table data, the following values of the formula parameters come out:

$$\bar{S} = \frac{1}{2} 30 * (4 + 1) = 45$$

Whereas

$$S = 24374 - \frac{300^2}{4} = 1874$$

This enables the calculation of “T“

$$T = \frac{12*105}{72*(4^3-4)} = 0.416$$

As a conclusion we may state that the expert’s evaluations differentiate substantially among each other. This reinforces the idea that from the manager’s side there must be no preference rate regarding the use of analytical methods in decision-making, based on the complexity rate they display. Their engagement should be immediate regarding the use of analytical methods in decision-making. This requires creative thought, technical skills, scientific ability and financial support.

4. Conclusion

The development of successful businesses has for a long time been a priority, but currently in the conditions of European economy integration this is turned into a necessity. The management of this situation needs organizational and infrastructural support. Thus, through this research is highlighted the designation of the trainings needs pertaining to different narrow fields for the managers. The above approaches concerning the methods used in decision-making in a summarised way make evident the below conclusions:

- Based on the surveys, analysis, evaluations and on the expert’s opinions is noticed that the use of analytical methods in decision-making is an ultimate element of business success, especially in the conditions of a competition struggle.
- The findings of the paper, considering the non-parametric methods, indicated that between the method used in decision-making and the business performance exists a powerful positive correlation.

- Currently, we may conclude that the obstacles in the using rate of the analytical methods in decision-making have been and still remain the background of the Albanian managers, as a result of a past, extremely centralised economy. This has inevitably lead to a lack of theoretical and practical knowledge of decision-making. The businessmen and managers' stratum engaged in business after the economic changes by the end of last century should become aware and get further engaged in qualifying activities, with the purpose to increase their professional skills in the decision-making field.
- Necessity of infrastructure improving to support businesses. In this context, the organisation of informative, training and consulting activities is a must. The Chamber of Commerce, Trade and Industry and other similar bodies should stand as the main actors to grand assistance and provide renewed information in the field of business decision-making.
- The new managers, regarding their relations to the innovative scientific developments, should be more active in maintaining a more creative stance in embracing the analytical methods in decision-making. On the other hand, the experienced managers should cooperate more with their younger colleges in order to successfully face the challenges of using the analytical methods in business decision-making.

Reference:

Garvin, D. A., & Roberto, M. A. (2001): *What you don't know about making decisions*. Harvard Business Review, 79(8)

Johan Galtung (1988): *Transcendence and transformation*. UFO University Press.

Laurie J. Mullins (2010): *Management & Organisational Behaviour*. Ninth Edition Printed and bound by Rotolito Lombarda, Italy

Philippe Vincke (1992): *Multicriteria Decision-aid*. John Wiley & Sons, Ltd;

Herbert A. Simon (1997): *Administrative Behavoir*. Fourth Edition, The free press, A Division of Simon &Schuster Inc;

Lee J. Krajewski and Larry P. Ritzman (2005): *Operations Management – Processes and Value Chains*. Seventh Edition, Pearson Education, Inc.

Rudolf Grünig & Richard Kühn (2005): *Successful Decision-making - A Systematic Approach to Complex Problems*. Springer - Verlag Berlin Heidelberg

C.R. Kothari (2004): *Research Methodology, Methods and techniques*. New Age International (P) Ltd, Publisher

Michael J. Panik (2005): *Advanced Statistics from an Elementary Point of View*. Printed in the United States of America. Transferred to Digital printing 2011

Myslym Osmani (2004): *Statistika*. Published GEER

Meeting S. Berisha (Prime Minister of Albania) – De Sotto (2005): Albania