



Identifying Leaders in Business Organizations

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Abstract: There are many scientific and popular scientific texts related to leadership and what leaders should be, what qualities they should possess, what behavior they should have, etc. In the scientific literature, the conclusions are most often based on recognized leaders in successful organizations. Leadership exists at different scales and there are leaders even in small work groups, at the lower hierarchical levels. The report is specifically aimed at identifying such leaders, part of work groups in various business organizations. Three approaches to this are proposed, as well as an analysis of each. Basic points in applying the sociometric approach are clarified.

Keywords: Leader Identification, Application of Sociogram, Expert Methods

JEL: M10

I. INTRODUCTION

In the modern world, leadership and leaders are extremely popular and texts related to them are found quite often, especially in popular literature. There are high expectations for leaders related to motivating employees, leading changes in organizations, solving problems, giving direction for development, etc. It makes an impression that most texts talk about leaders in general. Questions remain about who should actually live up to the high expectations of leaders. Are managers the ones who are expected to lead the organization to development and enter the role of leaders, and how can one determine who are the leaders in a company.

From a scientific point of view, interest in the study of leaders has existed since the second half of the last century, when leadership and management began to be distinguished as concepts. But in order to study leaders they must first be identified. Identifying leaders is a fundamentally complex task. It requires a number of factors to be taken into account and, after a thorough analysis, to come up with proposals for determining leaders. Such factors can be, for example, the goals and philosophy of the company, on the basis of which the criteria for determining which qualities make an employee a leader for this particular company should be determined. Forecasts of changes in the business environment should also be taken into account to build up the overall profile of the skills of future leaders that are important for success, etc. When the leader is clearly prominent and recognized by many followers in the organization it is easy to indicate. Such leaders quite often gain worldwide popularity, and there are many examples of this.

II. METHODS FOR IDENTIFYING LEADERS

In terms of defining a leader, apart from being numerous, there is unification of the various authors around the fact that the manifestation of leadership is related to relationships with other people. Modern science provides opportunities to study relationships between people using sociometric methods of personality research. Expert methods also make it possible to identify leaders, and the most elementary approach remains their identification with managers.

2.1. Identifying leaders based on formal tenure

Until the middle of the last century, and a little later (the 1970s), very often the terms manager and leader were used as synonyms. The publication of Abraham Zaleznik (1977) initiated the distinction between the two concepts. If this early approach is accepted, it should also be understood in modern organizations that managers are also leaders in the respective work groups. Identification can be done on the basis of a formally held position. This is particularly easy to implement from a research point of view as well. In order to single out two subsets and on this basis identify leaders, then it is necessary to single out requirements for them. Such requirements would state that all formal leaders of a certain number of people, say five, possess the qualities to do so and are therefore also leaders of the respective group. Alternatively, all formal managers who have more than a certain number of years of service, for example 3, would meet this requirement. From a research point of view, it is possible to distinguish such a population of people with just one question.

In the scientific world, the concepts of management and leadership have been examined by quite a few researchers (Ellis, 2015; Kotter, 2006; Bennis, 1985, Yukl, 1999; Maccoby, 2000) and others. The distinction has already been clarified and such an identification approach would hardly reflect the desired result. Managers and leaders cannot be mutually-replaceable and by studying one we draw conclusions about the other. It is not necessary for every formal team leader to have leadership qualities, and it is not necessary for every leader to work in a leadership position. Considering only managers as leaders does not cover all people who possess the qualities to be such.

2.2. Identifying leaders through expert methods

The activity of leaders can hardly be measured quantitatively, since it is primarily a social activity and

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depends on many factors. This necessitates the search for research methods that are applicable. Such are expert methods and, more specifically, expert assessments. In this method, people with specific knowledge and experience relevant to the researched topic are used, who express competent opinions. Analyzing multiple such opinions gives a relatively objective result using essentially subjective conclusions. The advantages and disadvantages of using such an approach depend on the choice of experts who participate in the research.

Sometimes the opinion of the experts is so different that it is difficult to trust the results. Compared to quantitative methods, expert methods are extremely labor-intensive and time-consuming to conduct. Despite the significant disadvantages, a situation is often reached when they are the only ones possible to implement.

2.3. Identifying leaders through sociometry

A scientifically based approach to examining work group relationships is through sociometric methods. Sociometrics is a branch of social psychology concerned with the study of spontaneous individual relationships between members of a given group. According to one of the definitions, this is a methodology for tracing the energy vectors of interpersonal relations in a specific group. It shows the patterns of how individuals associate with each other when acting as a group toward a particular goal or task (Hoffman, 2001).

Social communication and social interaction in the group are directly related and reflected in the relationships between its members. The purpose of sociometric research is to analyze the position that a person occupies in the group in which he lives or works (Piryev & Tsanev, 1968). The quantitative measurement of relationships in a social group and the social status of each person in it is carried out precisely by means of sociometry. It is the best quality, the most widespread and established in social psychology methodology for quantitative measurement of interpersonal relationships and the social status of each member in a group and collective (Nikova, 2012).

The data obtained from a sociometric study can also be represented by a diagram called a sociogram. With the help of sociometric methods and sociograms, the different types of relationships between individuals in the group are visually presented. Through the sociogram, the different members of the group can be revealed - leaders, popular, unpopular, outsiders (Donev et al., 2019).

III. ANALYSIS OF RESEARCH METHODS

Identifying leaders based on formal work position should not be discussed. It has become clear that this antiquated understanding of leadership will not distinguish the desired populations of leaders and non-leaders, but rather managers with leadership experience will stand out from the rest.

When using *expert methods* to determine some intra-group relationships, including the determination of a team leader, it will not be enough to conduct an expediently

organized survey of a group of experts. It will require commitment and active participation from the experts. When using the method in such a direction, shortcomings would also appear in the various stages through which the implementation of such an approach should go, namely:

1. First and very important is the selection of the experts with whose participation the method will be conducted. This implies high competence, special knowledge and a high degree of awareness in the researched field. There is no generally accepted point of view on the question of the qualities of an expert, as the opinions of different authors sometimes differ too much (Yonov & Vanev, 1977). From here comes the possibility of obtaining different results when using different experts, as well as the concern that the obtained results will not be accepted by the people examining the study as a result of a different point of view from that of the selected group.
2. Once the team of experts has been identified, the difficult task of determining the leaders in different groups follows. In research, experts cannot know the working groups and all their members in order to identify the leader among them based on their specific knowledge. This necessitates the development of a questionnaire in advance, with the help of which the internal group relationships can be investigated. The questions formulated by the experts will have to carry the information they need to identify the leaders in the work teams. One of the essential features of this method is that the experts must not influence each other, and for this purpose they must work independently. A serious difficulty that can occur at this second stage is a significant discrepancy between the generated questions, which in turn will lead to the inclusion of a large number of them in the final survey card.
3. The third stage of using this approach is precisely the identification of the leaders in each of the researched teams. At this stage, the information obtained after conducting the research should be provided to the experts with whom we work, for summarizing the results and drawing conclusions. The difficulties at this stage consist in the possible large volume of information to be processed by the experts and potentially incorrectly processed information.
4. The last stage includes appropriate processing of the collected expert opinions in order to obtain objectified evaluations based on their subjective opinions. It is only at this stage that the results obtained by the experts can be summarized. A serious problem here can be the possible conflicting conclusions from different specialists. There are a number of tools for processing the data and in such situations they can be used, but the question will remain whether the research is correct and whether the results obtained are reliable.

Going through all the described stages, only after conducting the entire research and processing the results, it can be noticed that the shortcomings have not been overcome in some of the stages or due to the incorrect selection of experts. Another question is whether quality



specialists will be found who will devote the necessary time and effort to participate in such research.

As a result of applying this approach and eventually collecting enough information to be analyzed, it is possible to apply factor analysis to identify significant elements for leadership. This analysis makes it possible to discover hidden (latent) factors, among a set of quantitative directly measurable signs that can be extracted using mathematical techniques (Haralampiev, 2012). As a result, one could define a certain set of requirements that a person must meet and on that basis claim to be a leader.

After analyzing the *sociometric methods*, some main shortcomings can be pointed out: the limited cognitive capabilities of sociometry to reveal the personal characteristics of the members of the group, to reveal the motivation in the formation of interpersonal relations in the group; presence of subjectivism in the socio-metric elections (Haralampiev, 2012).

Regardless of the objectively existing shortcomings of sociometry as a research method, the advantages that this method possesses make it one of the most frequently applied methods for revealing the main characteristics of social organization. Thanks to sociometry, in a very short period of time, it is possible to obtain a significant amount of information about the social organization in terms of its essential characteristics: the nature of interpersonal relations according to the "sympathy-antipathy" criterion, the level of interaction between the members of the organization and the particularly significant characteristic - the informal substructure of the organization.

In this approach, the formulation of the questions to be used is of utmost importance. The reliability of sociometric data depends primarily on the strength of the sociometric criterion (question) as a basis for the preferences or deviations of group members (Druzhinin, 2001). In order to be correctly selected, they must simultaneously carry the necessary information for the study of the desired connections and at the same time be clearly and correctly set. They can of course vary in view of certain pre-set criteria. A major drawback that should be avoided is the probability of obtaining a random selection when using the method non-parametrically. This is possible if a large part of the researched do not make a reasoned choice of one of their colleagues on the relevant question, but mark a large part or all of the participants. This should also be taken into account when framing the questions to avoid skewing the results in such a way.

Among the main positives of using this approach is the possibility of applying system-structural analysis and modeling relationships in the work group. The procedure for conducting the research itself is relatively simple, and from a practical point of view it is a relatively quick method by which a large amount of information about the socio-psychological structure of the group can be collected in a short period of time (Desev, 1998).

A sociometric approach in identifying leaders

In the case of the sociometric questionnaire, the principle of anonymity in organizing and conducting research in the social organization is of decisive importance

for the reliability of the information received. The level of anonymity is further increased by introducing a requirement not to write the names of the members of the organization when answering the individual sociometric questions. This can be achieved by coding the team members, and when completing the sociometric survey card, each member receives a list of names and their corresponding codes. In this way, personal influences in the group will be avoided and the obtained results should be objective.

An essential point is the choice of questions to be included in the research. They must be clearly and correctly set and the necessary information must be obtained from them. One of the essential activities in the research is aimed at identifying the leaders in work teams, for this the questions should imply the disclosure of leadership potential. When considering the many definitions of a leader, two directions for considering leadership can be distinguished (Aldac, 1987). In a broad sense, leadership is a process of non-coercive influence on group activity aimed at achieving certain group goals. In a narrower sense, leadership is seen as a distinctive quality i.e. as a set of qualities or characteristics of the person who exerts influence on the group.

Referring to this distinction in the definitions of leadership, it is appropriate to formulate two questions aimed at each of the two directions. The first question might read, for example:

"Which of your colleagues in the team would you follow when implementing a risky and unpopular project in your organization?"

It is aimed precisely at non-coercive influence on the part of a certain person exhibiting leadership potential. Described as a risky or unpopular situation, without specifying what exactly, reveals the complexity in which choices must be made. The most favored at such a time undoubtedly possesses qualities thanks to which he can gather followers among his colleagues. Looking back at definitions of a leader - one of the most succinct states that the only definition of a leader is someone who has followers (Drucker, 1996).

The second question that can be included in a research to identify leaders should be aimed at the other way of looking at leadership, namely as a set of qualities or characteristics of the person who exerts influence on the group. In this case, it is necessary to clarify what kind of influence is involved - it must be positive and related to the work process. A worded question might read:

"Who/which of your colleagues most purposefully influences the work of the team?"

The use of the particle "most" to form a superlative before the adjective "purposeful" implies that the choice is to indicate one person who is best at this activity. This way, not all team members will be named and avoid the chance of a random team member getting the most votes. The most favored one will possess qualities thanks to which he influences his colleagues.

As a result of the choices made, each of the members of the respective group receives a certain number of points, reflecting the number of choices made for him and the number of choices made by him. The total score,

representing the sum of the positive choices for a subject, is his sociometric score. It is a quantitative expression of the sociometric status of this studied person, allows determining his rank in the ranking by sociometric score of all members of the studied social group and gives an idea of his place in the informal group hierarchy. On this basis, the leadership status of each member of the researched social group can be determined.

The collected data is recorded in a sociometric matrix, which in turn can be visualized by means of a sociogram. They can be shaped in different ways, the main ones being circular, hierarchical, radial, grouped and free (Tubaro, Ryan, d'Angelo, 2016). When identifying leaders, it is most appropriate to use a radial sociogram with concentric circles in which signs of all individuals of the group are placed (Figure 1). For this purpose, they are divided into groups according to the points obtained from the preferences expressed for them. To find the interval in which everyone else should be placed, the maximum number of preferences is divided by the number of circles. Therefore, in the first group, which is located in the most peripheral circle, should be placed all the persons who received the least preferences or the so-called outsiders in the group, and those with the most preferences are placed in the central circle.

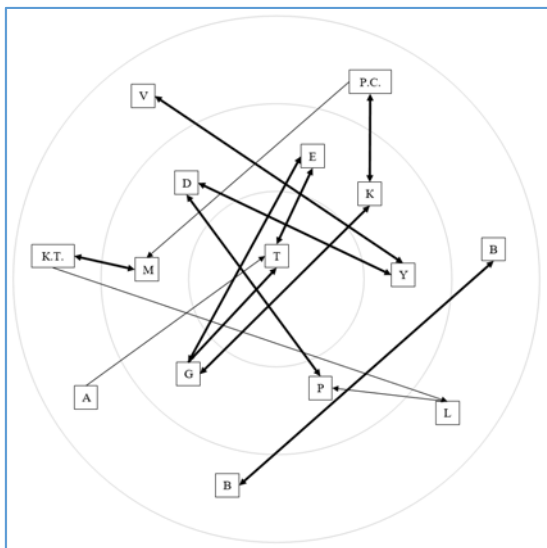


Figure 1. An example sociogram with three concentric circles

Processing of sociometric data

In processing the information related to the implementation of this approach, almost any software can be used, including MS Excel. It is required to add columns to the table to summarize and distinguish the information obtained. The following is an explanation of the fields and a description of the need to perform this activity:

- Preferences from question 1 – here the sum of the preferences made to each of the team members based on question 1 is formed. The SUM function is used, and its structure in Excel is as follows:
=SUM(number1;[number2];...)

$$P1_i = \sum_{j=1}^{m-1} S_{ij}$$

$P1_i$ – general preferences of person i in question 1

m – number of persons in the group

S_{ij} – expressed preference of person j to person $i, S_{ij} \in \{1; 0\}$

- Preferences from the 2nd question – here the sum of the preferences made to each of the team members based on question 2 is formed, the same formula as for question 1 or the SUM function is used;

- Total preferences – here the sum of the preferences made to each of the team members based on questions 1 and 2 is formed. The previous two columns and the SUM function are used;

P1+P2

- Leader - 1 / non-leader - 0 - in this column, the leaders and non-leaders are distinguished with "1" and "0" respectively, based on the total sum of the preferences made.

An IF function is used, and its structure in Excel is as follows:

=if(logical test;[value_if_true];[value_if_false]).

$$a_i \begin{cases} \geq k_g * 2/3 \\ < k_g * 2/3 \end{cases}$$

a_i – general preferences for the person i

k_g – sum of the preferences of the most preferred in the team

$2/3$ – coefficient characterizing the innermost concentric circle

In a specific case it would look like this:

=IF(BN122>8*2/3;1;0),

with BN122 being a random order, 8 is the maximum number of preferences in that particular team.

119	1611	161	0	0	0	0
120	1612	161	0	0	0	0
121	1613	161	1	3	4	0
122	1614	161	5	3	8	1
123	1615	161	0	0	0	0
124	1616	161	0	0	0	0
125	1621	162	0	2	2	0
126	1622	162	0	1	1	0
127	1623	162	0	1	1	0
128	1624	162	3	0	3	1
129	1625	162	2	0	2	0
130	1631	163	1	1	2	0
131	1632	163	0	0	0	0
132	1633	163	3	3	6	1
133	1634	163	1	1	2	0
134	1635	163	0	0	0	0

Figure 2. Defined leaders in random teams

Figure 2 shows a working window in the MS Excel environment with collected and processed information based on a sociometric approach. Depending on the results obtained from an empirical study, it is possible to introduce two categories of leaders and non-leaders (the column on the right).



After applying the chosen approach and processing some of the data obtained, at least two subsets are generated. In one of them, the respondents identified, according to the approach, as leaders, are separated, and in the other group all other participants of the study fall, who can be called non-leaders. They may be followers of their leader, they may not be, they have different qualities and intelligence, but what unites them in a distinct subset is that they do not meet the requirements of a leader.

This makes it possible to conduct various empirical studies aimed specifically at leaders and their various qualities, as well as their comparison with non-leaders. Thanks to this, it will be possible to draw specific, scientifically based conclusions about leaders and leadership in the Bulgarian reality.

CONCLUSION

Choosing research methods when examining social phenomena such as leadership is not always an easy task. The three considered methods are fully applicable when identifying leaders in work teams of various business organizations. There are possibilities to achieve this goal through games or simulations, but with them the subjective factor in analyzing the situation would be difficult to avoid. The included approaches allow for the quantification of the data from the respondents, which makes the results objective. A major shortcoming of each is the inability to identify the motives for interpersonal preferences. On the other hand, each study represents the momentary situation of relationships, and leadership is rather a long-term process. There remains the question of choosing the most appropriate or the most correct method. The criteria for this may be different, such as the number of the researched group, the main goals and tasks of the research, the presence of possible time constraints, the resources available to the researchers, etc. Application of the situational approach should be used in the selection, taking into account specific circumstances such as researcher capabilities, available resources, time constraints, and more.

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