

## RESEARCH ARTICLE

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# The Factor Structure of the Leadership Orientations Questionnaire in Romania

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### Abstract

Classical approaches to leadership (e.g., transformational, servant, charismatic, etc.) have led to significant breakthroughs in understanding this phenomenon. However, these perspectives may ignore the essential aspects of leadership. This paper aimed to test the factor structure of the Leadership Orientations Questionnaire (Bolman & Deal, 1988). The questionnaire was administered to an occupationally heterogeneous sample of 402 employees. Confirmatory factor analysis (CFA) was used to determine the psychometric characteristics of the questionnaire, testing three alternative models. The results indicate a weak factorial structure. The single factor model has a similar fit to the one in which the four factors are correlated, while the model with uncorrelated factors has a much weaker fit. These features of the instrument make questionable its use in research and practice. Further research is needed to conclude that the questionnaire is suitable to measure leadership orientations in Romanian organizations.

### Keywords

leadership, factor structure, Leadership Orientation Questionnaire

### Introduction

Measuring instruments related to leadership usually focus on the Full-Range Leadership Model (e.g., Judge & Piccolo, 2004; Yammarino & Bass, 1990) or other popular constructs, such as servant leadership (e.g., Sendjaya, Sarros, & Santora, 2008) or charismatic leadership (e.g., Conger & Kanungo, 1994). Although studying these approaches has led to remarkable contributions, the repeated analysis of these instruments has also led to the overthrow of other psychometric measures that may have the potential to highlight different and relevant aspects of leadership. One of these instruments is Leadership Orientations Questionnaire, which contains four frames for understanding organizations and leadership:

structural, human resource, political, and symbolic (Bolman & Deal, 1991; 1992). Even though a questionnaire has good psychometric properties in a particular culture, it does not mean that measurements from other cultures are equivalent (Farh, Cannella, & Lee, 2006; Smith, Misumi, Tayeb, Peterson, & Bond, 1989; Tsui, Nifadkar, & Ou, 2007). Therefore, this paper aims to analyze the factorial structure of the Leadership Orientations Questionnaire in Romanian culture, to verify if it can be used with confidence in research and practice on Romanian samples.

### The Romanian Organizational Context

Organizations operating in Romania can be classified into two main categories: local and

foreign. Foreign organizations enforce their policies and attempt to merge purely Romanian elements with those brought from abroad. Romanian organizations either strive to adopt current policies or remain stuck in obsolete mentalities. Leadership styles and guidelines are, therefore numerous and diverse in the current Romanian organizational context. Although studying leadership is one of the oldest endeavors in socio-organizational psychology, it is a topic of global interest with various ramifications. This is explained by the fact that in the context of modern organizations interested in success and performance, leadership is a cardinal variable, as organizational behaviors or phenomena related to it directly or indirectly. The complicated relationship of leadership with other constructs which are frequently invoked in organizational research is a necessity dictated by reasons that explain the genesis of phenomena such as the development, change, dynamics, and efficiency of workgroups and organization. In the current context, the need to study leadership styles and orientations appears as a priority in identifying models adopted by leaders, in organizational diagnosis and, of course, in finding solutions to increase the productivity of organizations. Identifying leadership patterns in Romanian organizations becomes a difficult but essential task. By gathering information on leadership styles, performance patterns can be modeled with "best practices" to increase the market visibility of large, small, and medium-sized organizations.

### **Four-Frames Model of Leadership Orientation**

In order for leadership to be complete and effective, and to address a wide range of issues faced by organizations, Bolman and Deal (1991) propose a model of leadership orientations composed of four frames: the structural frame, the human resources frame, the political frame, and the symbolic frame, which are four different perspectives from which organizational situations can be viewed. The four-frame series becomes the starting point from which a reframe action can be initiated, when the situation requires it.

Reframing is the conscious effort to evaluate a situation from multiple angles and afterward, to find a way to solve that situation. Bolman and Deal (1992) believe that the four frames are as many orientations or perspectives as managers can address in a particular context or a specific situation that may arise in the organization. These frames are also called Factory, Family, Jungle, and Theater.

*The Structural Frame. The Factory.* Bolman and Deal (1991) considered two primary intellectual sources from which this frame was built: the work of maximum efficiency and the bureaucratic work. The authors argue that this first frame refers to the roles and relationships within the organization. This orientation provides clarity and structure to the leader by expanding the patterns used in the past in factories. Structures are designed to fit with the environment and technology. Organizations allocate responsibilities and then create rules, policies, processes, systems, and hierarchies to coordinate the various activities in a joint effort. Problems arise when one of these elements deviates from the natural organization. At this point, reorganization or redesign is necessary to remedy the situation.

*The Human Resource Frame. The Family.* This frame is concerned with how the characteristics of organizations and people influence what they do for each other. This orientation is focused on needs. Human resource orientation has its origins in psychology and addresses the organization as an extended family, made up of members with their own needs, feelings, abilities, problems, and limitations. From this point of view, the fundamental challenge is to design the organization according to individuals, to find ways to get their work done and to enhance the satisfaction of their work and life. A human resources leader leads by empowering others in trying to fit the organization's needs with the needs of its employees.

*The Political Frame. The Jungle.* It has its origins in the theory of organizational power and policies describing organizations as places where power is exercised to allocate scarce resources (Durocher, 1996). The source of this power is acquired through authority, expertise, controlled rewards, and personal power or

characteristics (Bolman & Deal, 1984). Political scenes inspire this frame, and the organization is regarded as a battlefield, as a contest or as a jungle. There are interests and conflicts in holding power and controlling resources because of the permanent differences between the needs, prospects, and lifestyles of individuals and groups. Coalitions are developed and changed according to interests. Problems arise when power is used where it is not necessary, where it cannot be constructively utilized or where it disperses uselessly. Solutions are provided by the leader's political abilities.

*The Symbolic Frame. The Theatre.* It has its origins in the theories of organizational culture and focuses on how people behave in the face of confusion, uncertainty, and chaos. The central themes of this frame are meaning, metaphor, ritual, ceremony, stories, beliefs, and faith. This frame, also seen as a "temple and carnival", emphasizes culture and symbols for the success of the organization. This orientation describes the organization in terms of culture, this being propelled by rituals, ceremonies, myths, and heroes, and not by rules, policies or leadership authority. "Actors" play their roles and audiences form impressions of what they see on stage. Problems arise when actors do not perform their roles properly when symbols lose their significance when ceremonies lose their strength. The symbolic leader is oriented towards building the organizational culture (Schein, 1985), thus becoming a symbol for the organization, which gives it value through rituals and ceremonies (Deal & Peterson, 1991). The four frames are four visions of the same reality. Each framework provides the leader with ways to deal with problems (uncertainty and chaos) and to overcome them. The inability of leaders to analyze situations from multiple angles may lead to failure. Reframing is the ability of leaders to analyze the situation, to see it firstly from their point of view and then from different points of view. Structure oriented leaders are genuine designers and do not rely on authority and power: continuously update themselves, rethink relationships between structure, strategy, and environment, focus on implementation, experiment, evaluate and adapt. Leaders focused on human resources

support the other members of the organization: they believe in people and communicate them this, they are visible and accessible, empower others, and provide them the opportunity to exercise this power. Political leaders act as advocates and negotiators building alliances among members of the organization: clarify what they want and what they can get, estimate the distribution of power and interests and the balance between them, build relationships with relevant individuals, and entities inside or outside the organization. Symbolic leaders replace the mirage and the story with their concrete, meaningful experiences: lead by the force of their example, use symbols to capture attention, communicate their vision, they tell others about the past, present and future, about respect, and use history.

### **The Leadership Orientations Questionnaire**

Leadership Orientation Questionnaire was developed by Bolman and Deal (1988) based on the Four-Frame Model of Leadership theory (Bolman & Deal, 1991; 1992; 2003). Each of the four frames is built on a specific scientific theory. The instrument consists of 32 items grouped in four scales, eight items each: Leadership Oriented on Task Structure, Leadership oriented on Human Resources, Political Leadership, and Symbolic Leadership. Items are rated on a Likert scale from 1 to 5 (1 – Never, 5 – Always). The items describe specific behaviors of the four distinct leadership frames (e.g., *"Thinks very clearly and logically."*, *"Shows high levels of support and concern for others."*).

This research aims to test the factorial structure and to evaluate the psychometric properties of the LOQ on the Romanian population. Trees (2006) assessed in a doctoral thesis the factor structure of LOQ on a sample of 220 senior administrators at American Metropolitan universities and all but seven items loaded into the four frame categories with a loading value higher than .5. Shin and Choo (2011) tested the validity for 16 items of LOQ (four items per each frame) in Korea and the four factors were yielded, although two items were eliminated when the cut-rate was set at .5. However, other studies question the validity of the instrument (e.g.,

Cansoy & Tofur, 2017). Therefore, it is essential to check the psychometric properties of the Romanian version of the test.

## Method

### Participants

We distributed 500 questionnaires and the link for an online form to human resources managers from various companies and only 402 individuals agreed to participate in the

assessment. The employees filled in the questionnaires either on paper or via the Internet. Thus, the sample consisted of 402 participants, 139 men, and 263 women, aged between 18 and 65 years. The inclusion criterion was that each participant is employed for at least six months. This condition stemmed from the assumption that an employee with less than six months of job experience cannot provide a pertinent opinion on the leadership style.

Table 1. *Sample structure*

Gender	M	F				
N	139	263				
Age (years)	18-24	25-30	31-40	over 41	<i>M</i>	<i>SD</i>
N	82	116	120	84	33.08	10.12
Experience level (years)	Beginner (less than 2)	Intermediate (3-5)	Experienced (6-8)	Senior (more than 9)		
N	145	88	47	122		
Job type	Execution	Leader				
N	253	149				
Number of employees in organization	1-9	10-49	50-249	250-499	500-999	more than 1000
N	33	93	179	26	18	53

## Results

### Descriptive Statistics and Zero-Order Correlations

The descriptive statistics and variable correlations are presented in the following tables.

Table 2. *Descriptive statistics (N = 402)*

	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	$\alpha$
Task structure leadership	31.53	6.26	-.705	-.029	.90
Human resources leadership	30.31	7.09	-.638	-.164	.93
Political leadership	30.66	6.35	-.568	-.312	.89
Symbolic leadership	29.40	7.56	-.603	-.442	.93

Table 3. *Subscales correlations*

	1	2	3	4
1. Task structure leadership				
2. Human resources leadership	.82**			
3. Political leadership	.82**	.86**		
4. Symbolic leadership	.84**	.91**	.90**	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### Factor Analysis

In order to verify to what extend the factorial structure of this questionnaire, i.e. the main leadership styles, is present unaltered in the Romanian population, a confirmatory factor analysis (CFA) was performed. We compared three models by means of CFA: M1 – one general factor (Leadership) for all the 32 items of LOQ, M2 – 4 correlated factors (structure, human resources, politic, symbolic) as indicators of Leadership, and M3 – 4 uncorrelated factors as indicators of Leadership, with 8 items each.

For the model fit of CFA, we considered the criteria of the various model fit indices. It

has been suggested that RMSEA values less than .05 are good, values between .05 and .08 are acceptable, values between .08 and .10 are marginal, and values greater than .10 are poor (Browne & Cudeck, 1993). The model M1 with one general Leadership factor had a marginal fit,  $\chi^2(464) = 2111.89$ ,  $p < .01$ , RMSEA = .09, 95% CI [.09, .10], CFI = .85, TLI = .84. The model M2 with 4 correlated factors had also a marginal fit,  $\chi^2(458) = 1907.78$ ,  $p < .01$ , RMSEA = .09, 95% CI [.08, .09], CFI = .87, TLI = .86, but more adequate than M1. The model M3 with 4 uncorrelated factors had a poor fit,  $\chi^2(464) = 3854.16$ ,  $p < .01$ , RMSEA = .14, 95% CI [.13, .14], CFI = .69, TLI = .67.

Table 4. *Fit indices and model comparisons for measurement and structural models*

Model	$\chi^2$	df	$\chi^2/df$	CFI	TLI	RMSEA [90% CI]
M1	2111.89	464	4.55	.85	.84	.09 [.09, .10]
M2	1907.78	458	4.17	.87	.86	.09 [.08, .09]
M3	3854.16	464	8.31	.69	.67	.14 [.13, .14]

Model M2 is significantly superior to the two other alternative measurement models, M1 and M3, giving support to a four-correlated factors model, although neither M1, M2, M3 models show an acceptable structure. The standardized factor loadings ranged from .56 to .82 for the structure leadership subscale, from .48 to .82 for human resources leadership subscale, from .24 to .83 for politic leadership subscale, and from .50 to .87 for symbolic leadership subscale. The items with the lowest

loadings were L14 (.48) from human resources leadership subscale, L27 (.24) and L19 (.36) from politic leadership subscale, L16 (.50) from symbolic leadership subscale (Figure 1). Globally, model M2 shows higher item loadings in the four factors vs. model M1 in a single factor.

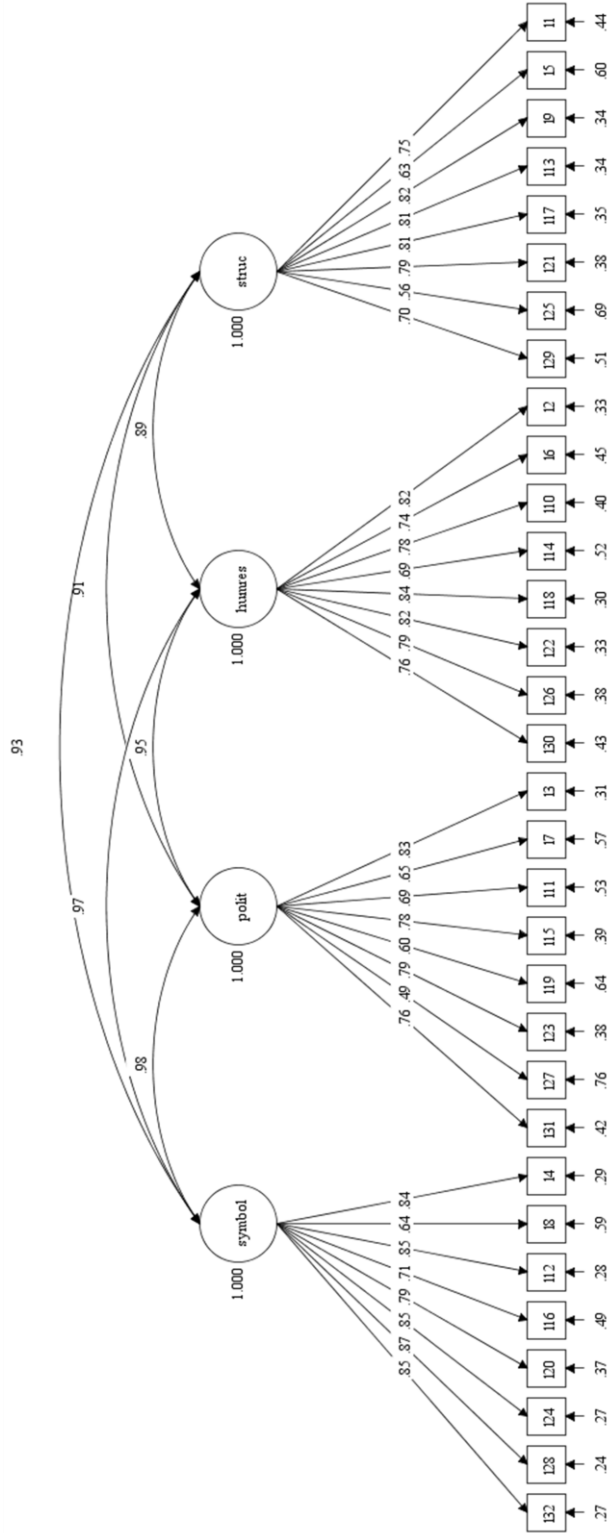


Figure 1. Model M2 – four correlated factors for Leadership (struc = structure, hmres = human resources, polit = politic, symbol = symbolic)

## Discussion

The objective of this study was to operationalize and test the factor structure of Leadership Orientations Questionnaire (LOQ). The results showed that the Romanian version of the questionnaire has to be used with caution, the fit indices being marginal or statistically unacceptable. The literature features a series of studies which obtained acceptable fit indices, such as Roddy's doctoral thesis (2010) on frame analysis of the self-perceived leadership orientations of 94 headmasters from American schools. Between 1990 and 2010, LOQ was used in several studies, dissertations, and doctoral thesis to assess its construct validity. Another thesis in which a first-order CFA was performed to evaluate the construct validity of LOQ is Broyhill's work (2016) which analyzed the effects of leadership performance on safety culture in business aviation flight operations. The fit indices were statistically acceptable. On the other hand, in their study regarding the relationship between individual values of teacher candidates and leadership orientations, Cansoy and Tofur (2017) performed a CFA to determine the validity of LOQ and the fit indices were found to be statistically unacceptable. Our results are consistent with data showing a weak factorial structure. The single factor model has a similar fit to the one in which the four factors are correlated, while the model with uncorrelated factors has a much weaker fit. Moreover, the correlations between the four factors are extremely high (between .82 and .91). The common variance of the factors ranges between 67% and 83%. All these results indicate a well-defined single latent factor (i.e., the same construct measured with different items). These features of the instrument raise a question mark regarding its use in research and practice.

## Theoretical and Practical Implications

From a theoretical point of view, the results indicate that established models of behaviors in leadership positions are more appropriate for understanding leadership. Classical approaches (e.g., transformational; Judge &

Piccolo, 2004; Yammarino & Bass, 1990, servant; Sendjaya, Sarros, & Santora, 2008, or charismatic; Conger & Kanungo, 1994) are based on measuring instruments that respect the psychometric properties needed to be used in research and in the development of the theoretical understanding of the phenomenon.

From a practical point of view, other tools that measure leadership should be used by practitioners in development programs. There are already instruments that meet psychometric standards and that can be used to measure employee behavior in leadership positions. As previously mentioned, these tools measure valid constructs such as transformational leadership (Judge & Piccolo, 2004; Yammarino & Bass, 1990), servant leadership (Sendjaya, Sarros, & Santora, 2008), or charismatic leadership (Conger & Kanungo, 1994). However, factors measured by Leadership Orientation Questionnaire (i.e., political and symbolic) can be used in coaching or training programs because they highlight relevant aspects from the organizational environment.

## Limitations and Further Research Directions

The most important limitation of this study is that the instrument is not developed on a solid theoretical foundation. To create a measurement tool that correctly captures the relevant leadership behaviors, items and factors must be chosen on the basis of theoretical models that have strong empirical support (e.g., the Full-Range Leadership Model; Judge & Piccolo, 2004; Yammarino & Bass, 1990). Given this limit, it is expected that different statistical analyzes will not support the psychometric quality of the instrument. The present paper is only a starting point for our next studies. Based on these results, we aim to adapt and validate the Leadership Orientations Questionnaire so that it could be successfully used in organizational diagnosis activities or at least in training and coaching programs. Future studies may consider using bifactor confirmatory analysis (Reise, 2012), which has already been successfully used in numerous psychometric studies (e.g., Bados, Gómez-Benito, &

Balaguer, 2010). This method can lead to more precise conclusions regarding the uniqueness of factors (i.e., their specific variance after controlling for the variance of the general factor).

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