

7 Method and Procedure

In this section empirical aspects of the instruments used in this study are analyzed. Statistics of the Multifactor Leadership Questionnaire (MLQ) scales are presented including their relationship to success criterion of extra effort through the “augmentation effect”. Correlations with commitment in organizations of different size are also presented. In pursuance of these objectives, former studies, research questions and general assumptions are considered in order to determine the path of the empirical investigation. The analysis is preceded by a description of the sample collection method, and the characteristics of the sample is detailed. Evaluations of first and second order factor models are also included. In a separate section, the results and the conclusions are discussed, some future lines of research being indicated.

7.1 Sample description

This study is based on the data obtained from 256 employees of six different companies in the Bolivian industry. The data were collected with the employees being occupied with their normal work. In order to obtain this sample, the data was collected from companies of the industrial circuit with the common characteristic that they were all national private companies that have been operating on the Bolivian market for at least ten years. All the companies included in the sample are associated with the Bolivian industry and commerce chamber. The financial and human capital of the companies consists mainly of Bolivians. The companies in the sample belong to different industrial branches: textile, beverage, tobacco, cement, food and electricity. Three of the companies are large organizations with more than 100 employees, the three others are middle-sized organizations but for this investigation and for comparative purposes they are considered to be small companies (40 to 100 employees).

Most of the companies in the sample belong to the group of the ten largest companies in Bolivia. This classification is due either to their patrimony, liabilities, utilities and/or sales in the country.

Most of the companies share the characteristic of being family owned. Recently, some high employment positions have been given to new members that do not belong to the family, but the board of directors still consists of the original owners. Only two companies of the sample now belong to people who were not the original owners.

7.2 Administration

A total of 280 questionnaires were distributed taking into account only the administrative staff, since some of the questions included required a certain academic level in order to be understood. The questionnaires were anonymous and individual. Two hundred and fifty six questionnaires were collected (238 subordinates and 18 leaders). This represents 91,4% of the ones distributed. The allotted time for data collection was two months since the contact with the company had to be made on-site. Originally, it was planned for the contact to be made via the internet in order to save time and arrive in Bolivia at the time to administer the questionnaires. The reason for deciding to make the contact on-site was that numerous attempts to establish contact with the organizations from Germany via internet failed. The logistics for the administration of the data turned out to be difficult and complex, and in some cases took a lot of time because preliminary interviews and presentations of the project were needed before the administration of the questionnaires could be implemented. It was possible to obtain information from six companies, although it had been intended to cover more than ten companies. Unfortunately, only six companies cooperated with the research study which was, due to the lack of confidence and the difficulty of obtaining the employees' data in Bolivian organizations. The negative responses were reinforced by the general crisis in the country, the extreme confidentiality of internal norms and general political cautiousness within the companies. In some cases, small willingness to cooperate was shown by the "contact" person of the company. The latter usually was a person from the staff of the human resources office. Finally, as mentioned before, the information was obtained from six companies, which took a cooperative attitude with respect to the present study.

7.3 General demographic facts

The average age of the sample was between 31 and 40 years (46.1%). The minimum age was 20 years and only 13 employees were older than 50 years (5%).

Organization and position tenure are important indicators of employees' investment and abandonment costs associated with the company. The average of *organization tenure* was between three and five years. 30.5% of the employees had been working in their company for more than 10 years, while 21.5% of the workers had been working in the company for 1 to 3 years. As to *position tenure*, the mean was between 1

and 3 years. This fact may be indicates a high mobility and promotion possibilities for employees within the companies. Concerning employees' career plan, 70% of the workers stated that they do not have a career plan in their company.

On the other hand, job contracts can be considered as indefinite since 66.4% had been in the company for 3 to 10 years and only 12.1% of the workers have been in the company for less than a year.

It is also worth mentioning that there is a clear male majority within the companies, 82.8% of men versus only 17.2% of women.

As concerns the companies' consideration given to measures for the development of their employees, 63.7% had an affirmative answer.

Lastly, the education level of the employees within the sample is technical and/or under-graduate for 85.6% of them, while only 14.5% have post-graduate studies.

7.4 Instruments

The instrument used for the collection of the data consists in two questionnaires. The first one is Bass and Avolio's (1990) Multifactor Leadership Questionnaire (MLQ) in the Spanish version validated by Molero (1994). It is made up of 70 items with 7 scales (charisma, inspiration, intellectual stimulation, individualized consideration, contingent reward, direction by exception and, laissez faire). The extra effort factor was measured additionally as an internal criterion of the MLQ on the basis of a small scale within the general questionnaire.

A scale of 5 ranges was maintained for the evaluation of the answers: 1= nunca (not at all); 2= rara vez (once in a while); 3= a veces (sometimes); 4= a menudo (fairly often); 5= casi siempre (frequently, if not always). Through the use of these verbal forms, the range of the scale could be considered equidistant (Rohrmann, 1978; cited by Bortz & Döring, 1995).

Bass et al. (1985) also assume an interval level of the scales in their researches through explaining that the magnitude estimation proportion was 4:3:2:1:0. The rating scale in this research is considered equidistant. An interval level of the scale is assumed in the interpretation of the results.

The second questionnaire was the Spanish version of Meyer and Allen commitment scales (Allen & Meyer, 1990; Meyer et al. 1993; Meyer & Allen. 1997). This version

has been validated by; González and Antón (1995), González and De Elena (1993). The instrument is composed of three scales: *Affective Commitment Scale* (ACS), *Continuance Commitment Scale* (CCS) and the *Normative Commitment Scale* (NCS). The original version was composed of 8 items in each scale (Allen & Meyer, 1990), while the revised version contains only 6 items in each scale (Meyer et al., 1993). Two items were eliminated from the original ACS and CCS scales, while the NCS scale suffered some major changes. Taking into account the behavior of the items in each of the scales of the Spanish version in studies conducted in Spain (Frutos, Ruiz & San Martín, 1998; González & Antón, 1995), Arciénega (2001), in his studies in Mexico, Puerto Rico and Venezuela, opted for choosing the 6 items of each scale that had the highest factor loadings in the validity analysis, and also decided not to use items that had a negative connotation, since there was consistent evidence that such items tend to form a methodological factor in the analysis of construct validity.

For the purpose of this study, the modified version was preferred because it was most closely suited for the investigation in Bolivian organizations. Arciénega's version was considered most appropriate since both populations belong to the American continent and are culturally and historically closely related. Their common language made it a major determinant at the time of choosing the instrument. The 18 definitive items can be seen in the appendix.

The range of answers was also considered equidistant, where 1= en fuerte desacuerdo (strongly disagree); 2= en moderado desacuerdo (moderately disagree); 3= en ligero desacuerdo (slightly disagree); 4= indiferente (indifferent); 5= en ligero acuerdo (slightly agree); 6= en moderado acuerdo (moderately agree); 7= en fuerte acuerdo (strongly agree).

7.5 General Assumptions

Considering few studies have been carried out in Latin America on organizational and human resources variables, the present investigation makes a good beginning as a basis for future projects, regardless of the small size of the sample. The question of the transferability of the concept arises at a structural and a content level. Thus the main issue is to clarify if transformational leadership is replicable in Bolivian organizations, and its relationship to external factors as commitment.

The following assumptions and observations are made:

Assumption 1

The first-order hypothesized structure of the version MLQ 5 will not be exactly replicated.

Assumption 2

The scales of transformational leadership will be highly interrelated, and also related to the scale contingent reward and MBE. These assumptions will result in poor model fit as evaluated by CFA.

Assumption 3

Transformational leadership presents a higher correlation with extra effort criterion than transactional leadership.

Assumption 4

The augmentation effect is confirmed with regard to the criterion extra effort.

Assumption 5

In small Bolivian organizations³ the leaders will be perceived as transformational rather than transactional.

Assumption 6

Small organization employees show higher levels of extra effort than big ones.

Assumption 7

A high continuance commitment is expected by employees in the Bolivian organizations.

Assumption 8

Older employees show a higher continuance commitment than younger employees.

Assumption 9

Employees with long position tenure in the organization show higher continuance commitment values than short position tenure employees.

³ In Bolivia these organizations represent the middle sized ones (40 to 100 employees). For comparison purposes they are considered as small companies in hypothesis 5.

Assumption 10

When continuance commitment is divided in two subfactors, continuance commitment *alternatives* shows a higher and significant average than continuance commitment *costs*.

Assumption 11

There is a smaller relation between age, position tenure and affective commitment than between age, position tenure and continuance commitment

Assumption 12

The educational level correlates negatively with commitment whereby the negative correlation for continuance commitment should come out higher than for affective commitment.

Assumption 13

Transformational leadership correlates higher with affective commitment than transactional leadership. By hierarchical regression analysis, the augmentation effect regarding affective and normative commitment will be confirmed.

Assumption 14

A significant influence of transformational leadership in particular on affective commitment is expected, whereas continuance commitment may be predicted by age and position tenure.