

MEASURING EMPOWERMENT

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Abstract

This paper aims to contribute to the empowerment literature by providing a concrete definition of the topic and thus a way of measuring the empowerment level at organisations. The tool designed to measure empowerment – resulting from the previous theoretical definition – has been proved to be a scale, fulfilling the necessary properties: reliability and validity. It has been tested at a sample of Spanish firms, concluding that it follows a Normal distribution, whereas 20% of the companies apply a less participative style and 20% could be described as empowered. Measuring empowerment does not only serve to know how many companies use empowerment practices but also it can be used to deepen into relationships between empowerment levels and other managerial concepts, such as the effects of empowerment on organisational change, on quality, or even on organisational performance.

MEASURING EMPOWERMENT

1. Introduction

Empowerment, participation or participative management is a classic concept in business management literature¹, since studies about democratic supervision and participation are being published regularly from the thirties onwards (Lawler, 1993). Despite this, one of the main problems in this research field is that this concept is diversely used and every study understands a different idea of it (Locke and Schweiger, 1979). Another problem is the difficulty to measure the degree of empowerment. Considering the great interest in studying the influence of empowerment on other managerial and organisational variables (e.g. how much an empowered management style affects organisational performance, or organisational change results, or how much it helps to motivate employees), the absence of a measuring tool becomes a critical issue.

Therefore, our work has two fundamental goals. First, we will discuss our own definition of empowerment. That way, the establishment of a concrete and specific definition will help to confirm what is empowerment and how can we identify it. Our second objective will be the design of a tool to measure that concept in companies. Such tool will be the result of applying the previous definition to a set of questions that might confirm whether certain managerial practices are showing an empowered managerial style or not.

To achieve these goals, we will structure this paper as follows. We will start by defining empowerment theoretically, according to an extensive literature review. Then, we will apply this definition to the design of a tool to measure empowerment at organisations. Third, we will present a research, where the former tool has been used at a number of companies, checking its main properties and showing the results of applying the measurement tool. Finally, our paper will end with the conclusions.

¹ Wilkinson (1998) presents an exhaustive historical revision with respect to the use of this style, its characteristics along time and its different naming and relations with other management tools.

2. Definition of empowerment

To start clarifying terms, we will consider empowerment², participative management, and participation as synonyms. Regarding concepts such as *involvement* and *commitment*³, we will consider them as characteristics included in empowerment, that is to say, empowerment includes by definition the involvement and commitment of employees.

In our work, empowerment will be defined as the involvement of employees in the decision making process (Mitchell, 1973; Vroom and Jago, 1988; Cole *et al.*, 1993), inviting the members of the organisation to think strategically and to be personally responsible of the quality of their tasks (Bowen and Lawler, 1995), animating, favoring and rewarding that employees behave always as they consider more suitable to satisfy customers (Bowen and Lawler, 1992) and to improve the organisation's functioning (Hermel, 1990). However, empowerment does not exclude an initial supervision to organise, train and guide employees, as well as certain self-control (Geroy *et al.*, 1998; Lawler, 1993).

In essence, empowerment is the management style where managers share with the rest of the organisational members their influence in the decision making process – that is to say, the collaboration in the decision making process is not limited to those positions with formal power –, with certain characteristics as far as information systems, training, rewarding, power sharing, leadership style and organisational culture concerns.

The first idea to point out is that such collaboration in the decision making process can be very diverse. Making decisions is not a simple act, but a full process (Ford and Fottler, 1995). The decision making process could be divided into several stages, starting with the identification of the problem –intelligence stage–, alternatives' design –also called conception stage–, election of the decision, and finally implementation and revision. So, the influence of managers and employees could be shared at any stage, without underrating one stage against another.

² A wide set of definitions of empowerment can be found in Geroy *et al.* (1998) and in Honold (1997), observing that it doesn't highly differ from the definition we will propose later. Although some authors (Collins, 1995; Niehoff *et al.*, 2001) consider empowerment different from participation, we think that it aims to present an old idea with a new concept, hoping to avoid any negative connotation and, following Baruch (1998), we see empowerment as a contemporary version of the ideas of the participative movement of the seventies.

³ A deep analysis of these concepts, their relation and implications, can be found in Becker *et al.* (1996)

Secondly, we have to bear in mind that decisions in organisations are very different. We will distinguish decisions according to the pyramidal classification, because it is one of the most known classifications. Another reason is that it links every type of decision to a certain hierarchical level, which will be of great help for our objective of identifying the collaboration degree of the individuals in the decision making process. Pyramidal classification divides decisions into three types, strategic, tactical and operational decisions. Influencing one type of decision or another carries very different implications.

Moreover, we should distinguish two basic questions about empowerment. Firstly, we should consider its extent, according to the hierarchical groups that collaborate in the decision making process. Secondly, we should consider three dimensions that show the characteristics of the way in which this collaboration is put into practice and that introduce subtle distinctions of the empowerment degree: the formal or informal character, the direct or indirect way, and the degree of influence allowed to collaborators. Both questions should be studied for each stage at the decision making process and for each type of decision, as it can be seen on table 1.

Table 1. Scheme of empowerment content

Stages at the decision making process ▼	OPERATIONAL DECISIONS	TACTICAL DECISIONS	STRATEGIC DECISIONS
Problem identification	For each resulting square, the following aspects should be studied: • Hierarchic levels influencing • Formal or informal channel • Direct or indirect way • Degree of influence		
Alternatives' design			
Alternatives' choose			
Implementation and control			

3. Designing a tool to measure empowerment

Our research has designed a tool to measure empowerment as a result of the two components explained theoretically. The first component is the “degree of extent” and the second component is called “dimensions”.

By degree of extent we refer to the people taking part in the empowerment programs, that is to say, until which hierarchical level is offered the chance of

collaborating or sharing influence in the decision making process. The more extended along the hierarchic scope is this influence, the more empowered is the management style. The degree of extent is thus divided into four hierarchical levels, namely first-line workers, supervisors, middle managers and top management.

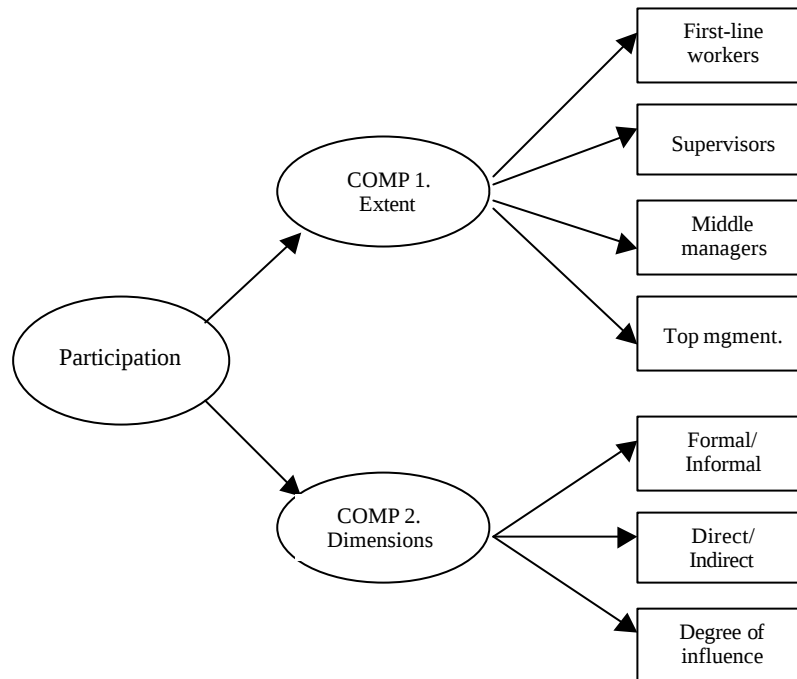
In the second component, the first dimension is the formal or informal character of the kind of involvement. Empowerment is formal when there are official and recognised channels to put it into practice (Locke and Schweiger, 1979), that is to say, there are certain norms or rules that impose or guarantee employee participation (Dachler and Wilpert, 1978; Harber *et al.*, 1991). It is informal when the influence on decisions is based on the personal relationship between the manager and the subordinates (Locke and Schweiger, 1979), through a non regulated exchange (Harber *et al.*, 1991) that rises from the agreement among the members of the organisation (Dachler and Wilpert, 1978). Therefore, the more formal are the channels that make empowerment possible, the more participative will be the management style (Cole *et al.*, 1993), because informal participation is a result of an exceptional relationship and it does not guarantee a long term and general empowerment.

The second dimension is the direct or indirect way in which employee collaboration takes place. When the employee contributes directly in the decision making process, we are in a direct participation way. When he influences through the representation of someone else – someone who acts in his name, either his superior, or the delegate of his group, or another colleague –, participation is indirect (Córdova, 1982; Dachler and Wilpert, 1978; Harber *et al.*, 1991). Cole *et al.* (1993) consider empowerment is characterised for being direct instead of through intermediates. Also Dachler and Wilpert (1978) affirm that the ideal way of empowerment is the immediate and direct involvement of the members of the organisation in the decision making process.

Finally, the last dimension in this second component of empowerment is the degree of influence of employees along the decision making process. With regard to it, we could consider several perspectives (Bowen and Lawler, 1992; Eccles, 1993; Hinckley, 1985). We will analyse influence according to the role that managers allow to subordinates. That way, we can identify a continuum starting from a point when managers just tell employees the decisions that have been already taken, and ends at a point when managers delegate in subordinates the decision making (Córdova, 1982; Dachler and Wilpert, 1978; Harber *et al.*, 1991).

Therefore, the global measurement of empowerment, divided into components and these into their corresponding variables, is the one shown in figure 1.

Figure 1. Structure of the tool to measure empowerment



With respect to the way of presenting the question to measure empowerment, we have structured it into three parts, each one corresponding to a different stage at the decision making process. In fact, we have combined phases one and two of the decision making process into one single stage, because four parts would have meant too long of a question for a questionnaire. So, since both phases one and two could be more clearly distinguished from the third, or *election* stage, and fourth, the *implementation and control* stage, we decided to combine them and leave only three parts in our questionnaire.

Inside each of the three parts, we have asked the same questions dividing into the three main types of decisions we had previously established theoretically, namely operational, tactical and strategic decisions. And, for each decision at each phase of the decision making process, we have asked about the two main components of empowerment; that is to say, what amount of collaboration did each hierarchical group contribute, and how was this collaboration put into practice – formal or informal, directly or through representatives, and degree of influence.

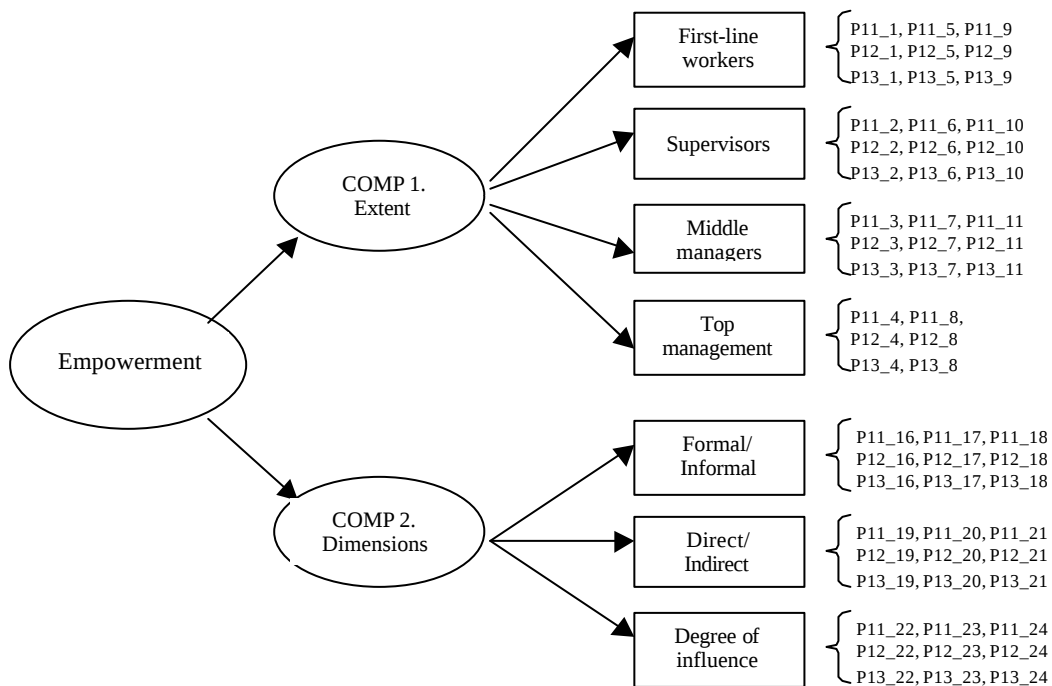
To see how the question is decoded, we present the example of the first part, that is to say, this part asks about the moment when the information to make the decision is collected and when the alternatives are presented, as it can be seen in figure 2

Figure 2. Codification of part one: problem's identification and alternatives' design

Value from 1 to 5 the collaboration of the following groups:		Operational decision	Tactic decision	Strategic decision
1 – no collaboration 2 – very little collaboration 3 – some collaboration 4 – enough collaboration 5 – a lot of collaboration	First-line workers	P11_1	P11_5	P11_9
	Supervisors	P11_2	P11_6	P11_10
	Middle managers	P11_3	P11_7	P11_11
	Top management	P11_4	P11_8	P11_12
Write in each cell the group meant with the first number at each column that is superior to 1 (that is to say, the lowest hierarchical group that collaborates) From now on, just answer about the group written at each cell		P11_13	P11_14	P11_15
Mark the degree in which collaboration is more formal or informal.	Informal	P11_16	P11_17	P11_18
	Formal			
Mark the degree in which collaboration is direct or indirect.	Indirect	P11_19	P11_20	P11_21
	Direct			
Mark how could the collaboration be defined. They are informed They are consulted They cooperate (consensus is achieved) That task is delegated to them		P11_22	P11_23	P11_24

The former codes are included in each of the variables as follows in figure 3:

Figure 3. Structure of the scale to measure empowerment, with codes



Out of the answers to all these topics at each stage in the decision making process and for each type of decision, we have converted the results into points by applying certain weights, according to our theoretical definitions.

First, we have considered each stage should have a similar weight, although the different components and variables should have different weights depending on the stage we are dealing with. According to the definition of empowerment – management commits and involves lower hierarchical levels in the decision making process –, and considering that each type of decision – operational, tactical and strategic – is made at a different hierarchical level, we will consider that the degree of involvement that could be offered to individual varies for each type of decision. Therefore, the weighting of the answers for each decision will be also different. Finally, we will put a higher weight when lower hierarchical levels are collaborating – degree of extent –, when empowerment is more formal, more direct and with a higher degree of influence. Adding those points, we will arrive to a measure of empowerment⁴.

4. Application of the measuring tool

Our quantitative research consists on the measurement of empowerment in a sample of companies by applying our tool. To achieve this goal, we used the Dun & Bradstreet 2000 database (50.000 best Spanish companies) and selected a random sample of 1.800 companies out of the 12.654 that had more than 50 employees. We sent them our measurement tool as a questionnaire and received 86 answers back. The people who answered our questionnaire were 15% from top management and the others were middle managers. Most –70%– had a university degree.

As far as the profile of the companies concerns, almost two thirds of the respondents were from the industrial sector. About half of them had less than 30 million Euros as annual turnover and only 20% went over 90 million. One third of the sample had less than 100 employees, the second third had between 100 and 300, and the last third had over 300. Table 2 shows the characteristics of the companies that have collaborated in our research.

⁴ The weightings given to each of the answers can be seen in Pardo del Val (2002)

Table 2. Classification data of the sample

SECTOR	Frequency	Percentage
Industrial	55	64.71
Services	30	35.29
TYPE OF COMPANY	Frequency	Percentage
Limited Liability Company	65	75.58
Limited Responsibility Co.	9	10.47
Co-operative	5	5.81
Don't knows	7	8.14
YEAR OF FOUNDATION	Frequency	Percentage
Before 1950	18	20.93
Between 1951 and 1980	39	45.35
Between 1981 and 1990	18	20.93
Later than 1991	5	5.81
Don't knows	6	6.98
ANUAL TURNOVER	Frequency	Percentage
Less than 6 millions €	15	17.65
Between 6 and 18 millions €	21	24.71
Between 18 and 30 millions €	9	10.59
Between 30 and 90 millions €	10	11.77
More than 90 millions €	18	21.18
Don't knows	11	14.12
Number of EMPLOYEES	Frequency	Percentage
Less than 100	30	34.89
Between 100 and 300	29	33.73
Between 300 and 500	6	6.98
More than 500	18	20.93
Don't knows	3	3.49

Through the use of statistical tools we are going to check if our measuring tool fulfils certain requirements – reliability and validity – that allow us to call it a scale.

We check its reliability through the Cronbach's Alpha, which is 0.8966. According to Nunally and Bernstein (1994), the value needed to confirm reliability depends on the use of the scale. In preliminary research, the rate could be 0.7 and after the appropriate fits it should be at least 0.8. So, with a Cronbach's Alpha close to 0.9 we consider our scale is reliable.

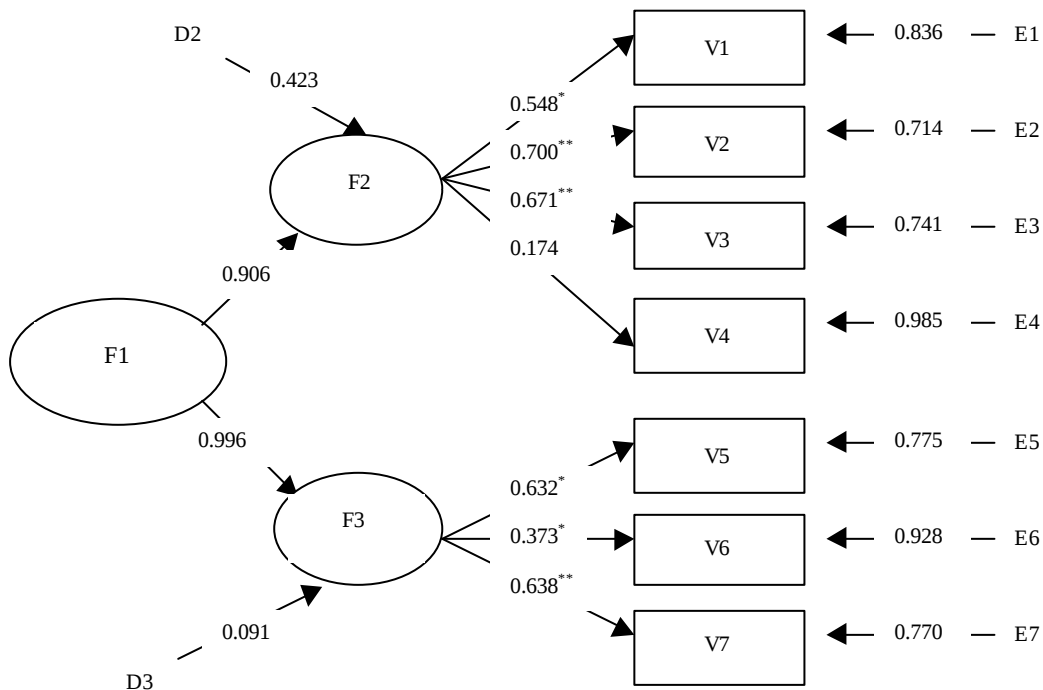
In order to check the validity of the scale we will first calculate the indicators of the goodness of fit – see table 3.

Table 3. Indicators of goodness of fit

Indicator	Acceptable value recommended (Schumacker & Lomax, 1996)	Value for this scale
BENTLER-BONETT NORMED FIT INDEX	close to 0.9	0.843
BENTLER-BONETT NONNORMED FIT INDEX	close to 0.9	0.884
COMPARATIVE FIT INDEX (CFI)	close to 1	0.934
LISREL GFI FIT INDEX	close to 0.9	0.941
LISREL AGFI FIT INDEX	close to 0.9	0.863
STANDARDIZED RMR	less than 0.08	0.000
ROOT MEAN SQ. ERROR OF APP.(RMSEA)	less than 0.08	0.080

We also check if the loadings are significant. T-statistic is higher than 2.576 in all the cases, so the parameters are significant for $p < 0.01$, even sometimes $t > 3.291$ and thus it is significant for $p < 0.001$. The only exception is variable V4 – top management’s collaboration –, where t-statistic does not achieve 1.96 and the parameter would be significant for $p < 0.05$. Also, loadings are big – close or higher than 0.6 –, with the exception, again, of V4. Figure 4 shows these results.

Figure 4. Estimated model of the scale to measure empowerment



* $t > 2.576$, $p < 0.01$

** $t > 3.291$, $p < 0.001$

So, since our measuring tool fulfils the requirements of reliability and validity, we can affirm that we have developed a scale to measure empowerment.

The variable follows a Normal distribution – kurtosis 0,296 and asymmetry rate -0,416 –, which is a necessary property to apply the statistical tools that would be needed to study the relationship of empowerment with other variables.

The scale could achieve theoretically a minimum value of -233 and a maximum of 1.093. In our sample, the mean of this variable is 433,94 points, being the standard deviation 170,48, with a variation rate of 0,39. The minimum value is -65 and the maximum 843.

Since it is difficult to guess what the previous numbers mean, we have decided to translate them into a scale from 0 to 1.000. This way, we have a more intuitive interval to deal with. With these new limits, the mean of our sample, that is to say, the average degree of empowerment of the companies studied, is 502,97. The company with the minimal empowerment level achieved 126,70 points, and the maximal punctuation was 811,46.

Table 12 shows the distribution of the sample in percentiles.

**Table 12. Distribution of the variable “empowerment” in percentiles
(range from 0 to 1.000)**

Percentile	10	20	30	40	50	60	70	80	90
Empowerment degree	328,13	393,97	456,26	476,77	512,82	533,18	572,02	626,85	659,05

Mean: 502,97

Through this table, we can gain a good idea of the significance of the points. So, about one tenth of the companies less empowered are less than 330 points. The 10% of the most empowered companies surpass the empowerment degree 650. About 60% of the companies in the sample fluctuate between 400 and 625 points and, considering the Normal distribution of the variable, consequently 20% of the companies do not reach the empowerment degree of 400, while about 20% overcome the level 625.

5. Conclusions

This paper contributes to lighten the concept of empowerment, both theoretically and through a measuring tool. We have defined empowerment as the managerial style where managers share with the members of the organisation their influence in the decision making process. Considering decisions are made along certain stages, and that there are different types of decisions, we have developed a tool to quantify the degree of empowerment at any company, taking into account the hierarchical groups collaborating in the process as well as the way such collaboration takes place. Such tool fulfils the necessary requirements to be called as scale – psychometrical properties of validity and reliability.

This empowerment measurement scale has two fundamental contributions. On the one hand, its use would allow us to compare how much empowered are different companies, for example, we could compare the empowerment degree of industrial and service companies, or establish comparisons within companies with different size or from different countries (e.g., this paper shows the empowerment degree of a sample of Spanish companies). On the other hand, the scale will help to move forward in the study of the relationships between empowerment and other management subjects, such as its influence on organisational change or on quality management, among others. Through the use of a measuring tool, empowerment is no more an ambiguous concept, but a specific aspect that can be measured at a company and thus the comparison of its degree with other organisational variables becomes possible. We aim to continue our research in this sense and we hope to be able to present interesting results soon.

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