

THE CONTROL OF COMPLEX ORGANIZATIONS AND OPERATIONAL PERFORMANCE MEASURES : THE CASE OF FRENCH MUSEUMS AND THE CASE OF THE FRENCH INCOME SUPPORT SCHEME

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Abstract

This paper investigates how complex organizations are managed on the basis of an operational performance measure. More precisely, it focuses on how these organizations regulate themselves, and/or are audited on the basis of an operational performance measure.

It is based on the case of two different types of organisations: French museums on the one hand and the framework of the French income support scheme on the other hand. Thus, it is based on the case of two operational performance measures: audience (museums) and the number of exits (French income support scheme). Ironically, this paper tends to show that the more complex these organizations seem to be, the simpler their control systems are. Even the actors whose work is audited, in spite of their criticizing operational performance measures, seem to recommend the use of one of these.

This paper is structured as follows. First, our theoretical framework is described. Second, we present our research method. Third, we outline some of the main findings of this study. Finally, implications and insights are discussed, along with directions for future research.

Key words: Control; Performance; Operational performance measures; Complexity

1 INTRODUCTION

This paper investigates how complex organizations are managed on the basis of an operational performance measure. More precisely, it focuses on how these organizations regulate themselves, and/or are audited on the basis of an operational performance measure. Its objective is to answer the following questions: can these measures represent organizational performance? Can the use of one of these measures actually lead to organizational performance? Nowadays, management tools and approaches such as balanced scorecards (Kaplan & Norton 1992, 1996a, 1996b; Kaplan, 2001), stakeholders theory (Freeman, 1984; Atkinson *et al.*, 1997...), « stakeholders value¹ » (Charreaux & Desbrières, 1998), « value tree² » (Bogliolo *et al.*, 1999), enable managers to face a multi-dimensional performance and to link performance measures to strategy. Venkatraman & Ramanujam (1986), in their comparison of business performance in strategy approaches, circumscribe the domain of business performance. They differentiate, from the narrowest to the largest, financial performance, financial and operational performance, and organizational effectiveness. According to these authors, the latter permits a broader conceptualisation of performance and is, in the same time, the less studied: most strategy studies focus on the first two visions of performance. Yet, in some complex organizations, where performance indeed is multidimensionnal, and where only an organizational effectiveness approach can be useful to understand and control performance, the use of a unique operational performance measure persists.

The defended thesis here is as follows: the more complex organizations seem to be, the simpler their control systems are. Even the audited actors, in spite of their criticizing operational performance measures, seem to recommend the use of such measures.

This research is based on the case of two different types of organisations: French museums on the one hand and the framework of the French income support scheme on the other hand. The latter was created in 1988. Helping the poorest is the goal. It provides them a benefit and can help them in many fields such as health, housing, job searching, setting up a company. Thus it is based on the case of two operational performance measures: audience (museums) and the number of exits (French income support scheme).

This paper is structured as follows. First, our theoretical framework is described. Second, we present our research method. Third, we outline some of the main findings of this study. Finally, implications and insights are discussed, along with directions for future research.

2 THEORETICAL FRAMEWORK

In the following paragraphs we develop our theoretical framework, which rests on three concepts: performance, control and complexity.

Performance

When it comes to controlling organizations, performance is a key question (Bouquin, 1994 ; Bouquin & Pesqueux, 1999 ; Dupuy, 1999 ...). Beyond the diversity of performanceø

¹ « valeur partenariale »

² « arbre de valeur »

definitions (Bourguignon, 1995 ; Bessire, 1999), performance can traditionally be split up into effectiveness and efficiency (Barnard, 1968).

One can consider that effectiveness refers to the capability of achieving objectives. Consequently it can be tied up with the concept of mission. Indeed, objectives are measurable results that have to be reached. Therefore they constitute a quantitative expression of the mission, the latter being more general (Alecian & Aerts, 1996, p. 106). Besides, according to Demeestère (2002), seeking performance means above all trying to achieve one's mission.

Efficiency can be defined as the rational and economic use of the material and immaterial resources ("one best way").

A third dimension of performance, effectivity, can be added to the first two ones. Effectivity alludes to the relationship between the level of satisfaction perceived by the workers and their perceived level of engagement in work (Marchesnay, 2000).

Performance is related to other concepts such as relevance to the objectives of the organization and strategic coherence. Thus, Bessire (1999) integrates the question of performance in a dynamic triptych: relevance, coherence and performance. First, relevance to the organization's objectives constitutes a subjective and political dimension which cannot be evaluated. Second, coherence with the organization's strategy can be evaluated on the basis of modelization. Lastly, performance constitutes the objectivation dimension. Performance can be measured on the basis of criteria expressed in terms of objectives and consumed resources.

Control

This paper does not aim at defining the term « control », which is ambiguous (Bouquin, 2001). However, the control we refer to is based on a theoretical framework that has to be underlined. As said earlier, performance is a key question when it comes to controlling organizations. Consequently, we refer in this work to the kind of control that enables organizations to achieve their mission. More precisely, we refer to the kind of control that enables organizations to achieve their mission both effectively and efficiently, effectiveness and efficiency being two traditional dimensions of performance.

Who and what is being controlled?

Control is based on the use of an operational performance measure : audience in museums, the number of exits from the French income support scheme, the latter being the number of beneficiaries who will not need to be helped any more. More precisely, control is based on some outputs of the controlled organization, outputs that are supposed to be measured by the operational performance measure. These outputs can be considered as resulting from key actors' actions. Hence the control exerted on the organization can be considered as exerted on those key actors.

The knowledge of transformation processes being imperfect, we understand why behavior control (Ouchi, 1977, 1979) is not appropriate. The availability of output measures itself needs discussing. As a matter of fact, audience can be measured in museums where visitors are counted, which happens to be the case in most museums. The number of exits from the French income support scheme are also counted. Yet there is no guarantee that those indicators do measure all the outputs of the controlled organizations/ the key actors. And there is no guarantee either that those indicators do not take into account external elements. Hence, if factors that cannot be controlled are taken into account, it becomes difficult to tell from the operational measure whether or not adequate actions have been carried on (Merchant, 1998).

Though this paper focuses on output control, we are fully aware that other types of control exist in the studied organizations. For instance, museum directors form a profession (Abbott, 1988). Therefore they are submitted to «professional control» (Abernethy & Stoelwinder, 1995), «clan control» (Ouchi, 1977, 1979), «personal control» (Merchant, 1982).

Who is in charge of controlling ?

Inside the controlled organizations, key actors such as museum directors are likely to exert control. Outside the controlled organizations, backers for instance are likely to exert an external control.

Does this paper deal with operational control, management control or strategic planning (Anthony, 1965, 1993) ?

Indicators such as audience in museums and the number of exits from the French income support scheme are called operational performance measures. Yet they are not only used at an operating level. As a matter of fact, this paper does not deal only with operational control. It is rather about management control and, to a smaller extent, about strategic planning. The studied indicators are tools that make it possible to evaluate organizational outputs/outputs that result from key actors' actions and behaviors. Therefore they are related to management control. In addition, chronically low audience, for instance, may be the result of inappropriate strategic choices. It also may signify that it is time strategy evolved. The studied operational performance measures can thereby be used within the framework of double-loop learning (Argyris & Schön, 1978, 1996) and strategic planning.

Complexity

We refer to the kind of control that enables organizations to achieve their mission both effectively and efficiently. More specifically, we refer in this work to the kind of control that enables *complex* organizations to achieve their mission effectively and efficiently.

Complexity refers to a degree of variety which an organization can be characterized by.

The law of requisite variety (Ashby, 1956) states that a control system must have sufficient internal variety to represent the system (the organization) to be controlled. In other words, it has to be characterized by at least an equal amount of variety as the system to be controlled. One way of achieving the requisite variety consists in building a control system which is isomorphic to the controlled one. Yet, in some cases, the variety of the controlled system is so high that it makes it impossible to decompose it (Ashby, 1956; Beer, 1959, 1966; Le Moigne, 1995; Morin, 1984, 1994). Thus the controlled system has to be approached as a whole, and any attempt to describe it simultaneously faithfully and in details is bound to fail. Under these conditions, there is no elaborating an isomorphic control system. However, it is still possible to find a control system the internal variety of which equals that of the controlled system (organization): a black box with the appropriate variety is suitable (Beer, 1959, 1966).

Performance being multi-dimensional is one aspect of complexity/ variety. Other elements led us to state the studied organizations were complex ones.

3 RESEARCH METHOD

In this section we present the reasons why we chose to study French museums and the French income support scheme. Then we describe our research protocol.

3.1 The EXEMPLARITY OF THE STUDIED ORGANIZATIONS

Indeed, the studied organisations are complex and complexity is partly due to their being related to the public sector³. They both form an extremely varied and specific category of organizations. Moreover, their 'public service mission' is ambiguous. Consequently, the problematic of pertinent and coherent representations arises more severely in these organizations than in other ones.

Organisational and institutional variety

Organizational variety can be expressed in terms of activities, the latter constituting a traditional dimension in contingency theory (Mintzberg, 1995).

Every museum is characterized by its own specific set of heterogeneous activities. Inside the French income support scheme as well activities are also very heterogeneous, all the more because some of the organizations taking part in the scheme have complementary competences. Indeed social workers help beneficiaries to get socially integrated. Many fields of action are concerned: health, housing, job seeking, setting up a company⁴

On a more institutional level, there is no unique French definition of museums. Consequently, the number of French museums is unknown. Besides, not all the museums have the same relation with the French Museums Board. This board is administratively responsible for 34 national museums. In addition, it provides technical and scientific support, advice and control for 1,200 museums in towns, French 'departments'⁴ and regions. It also ensures the general orientation, animation and co-ordination of French museums⁵. Museums do not have the same legal structure either.

In the same way, the French income support scheme is composed of organizations with different legal structures. The number of actors which take part in the scheme or which are likely to participate in it is plethoric. Among these actors we find: social workers (town social centers, General Council Agencies...), payments departments, private organizations that are officially agreed, institutions (the General Council, Departmental Direction of Work and Employment...)... The fuzzy borders of the system keep changing along with the changing partnerships.

From an academic perspective, variety is problematic because it implies a control system with at least as much internal variety as the organizations to be controlled. In other words, a representation of the organization to be controlled with as much internal variety as this organization is needed.

A common but ambiguous mission

In spite of that complexity, the studied organizations can be characterized by their mission.

³ The French income support scheme as a whole is a public organization. Actually French museums are nonprofit organizations. Yet some of them are owned by the state; and the state is largely involved in the management of those that are not. All French museums have a 'public service mission' which consists in conservation and diffusion. Therefore, they can be related to the public sector.

⁴ A 'department' is one of the administrative divisions of France. Departments are smaller than regions and bigger than towns.

⁵ <http://www.paris.org/Musees/dmf.html>

The use of various sources⁶ - dictionaries, encyclopaedias, research literature, institutional sources - leads us to suggest that French museums have in common their mission of conservation and diffusion of a collection. In the same way, all the organizations which participate in the French income support scheme share a mission of social integration: beneficiaries have to be helped to get socially integrated. This appears clearly in the law which created the French income support scheme⁷. Indeed, the second sentence of the first article of this law states that "social and professional integration of the people in difficulty constitutes a national priority"⁸.

The concept of mission seems to permit to overcome complexity. However, in both studied organizations, the mission is ambiguous.

On the one hand, there is no denying that conservation refers to conservative protection and restoration, that diffusion includes exhibitions. In practice, conservation activities and diffusion activities are likely to be contradictory. For instance, glass panels protect the exhibited works; they may also prevent visitors from seeing the works properly. Yet on the whole both dimensions are linked to each other. Indeed if works of art are protected and if nobody is allowed to see them they are not actually conserved. Works have to be regularly reinterpreted by visitors, otherwise they are not truly conserved (Vander Gucht, 1998). Under these conditions, any additional visitor can be seen as a better achievement of the mission. Thus, audience appears as an operational measure which is likely to represent the achievement of the mission.

On the other hand, there is no unique institutional definition of conservation and diffusion. In practice, each museum implements its own specific set of conservation and diffusion activities.

A few elements of definition of social integration can be found in the article 1 of the law n°98-657 : "the present law aims at guaranteeing that on the whole territory everyone had access to the fundamental rights as regards employment, housing, health, justice, education and culture, family and childhood protection "⁹. There is no other definition that would be more precise. According to the various laws that deal with the French income support scheme, having access to those fundamental right means being socially integrated. The French income support scheme is precisely supposed to help the beneficiaries to have access to those rights. Under these conditions, any exit from the support income scheme can be interpreted as one more beneficiaryø succeeding in being socially integrated. The number of exits appears as an operational measure which is likely to represent the achievement of the mission.

However, interpreting the above operational measures in terms of a missionø being achieved is submitted to specific conditions which it seems impossible to fulfill. For instance, such interpretations make sense only if visitors/beneficiaries are all alike, if the only reason why a

⁶ And in particular the works of the UNESCO, the works of the International Council of Museums, the French ordinance n° 45-1546 of July 13, 1945, and the French law n° 2002-5 of January 4, 2002 on French museums.

⁷ Law n°88-1088 of December,1, 1988 on the minimum income, published in the Official Journal of December 3, 1988, articles 34 and 35 in particular.

⁸ « *l'insertion sociale et professionnelle des personnes en difficulté constitue un impératif national* »

⁹ Law n°98-657 of July 29, 1998 against exclusion, published in the Official Journal number 175 of July 31, 1998 page 11679: « *la présente loi tend à garantir sur l'ensemble du territoire l'accès effectif de tous aux droits fondamentaux dans les domaines de l'emploi, du logement, de la protection de la santé, de la justice, de l'éducation, de la formation et de la culture, de la protection de la famille et de l'enfance* »

beneficiary can leave the scheme is his being socially integrated, if any visitor who comes inside the museum has truly access to the exhibited works. The above section shows that the representation which the operational measures provide is expected to be problematic. The actors's speeches shed an additional light on this issue.

3.2 RESEARCH PROTOCOL

Data Collection

Both types of organizations have been studied with similar protocols, which enabled us to draw a parallel between both sets of results.

We resorted to various techniques of field investigation. First of all, we read newspapers, professional literature, internal documents, intended for the general public documents. Besides, we spent time inside the studied organizations. For instance, each of the 25 studied museums has been visited so as to gain more institutional knowledge; and we participated in 8 working groups in the social income scheme. Moreover we interviewed a wide range of actors. 41 semi-structured interviews have been carried out in museums and 72 in the income support scheme. The number of interviews and observations was not fixed ex-ante. The "theoretical saturation" criterion (Glaser and Strauss, 1967; Strauss and Corbin, 1990) enabled us to determine when to stop.

Why relying on interviews?

Generally speaking, interviews constitute one more way of collecting data which is complementary to others (such as observations).

More precisely, some interviews (23 in museums and 40 in the French social income scheme) permitted a better knowledge of the studied organizations and of their environment. For instance, interviewing the mayor can help understanding how a municipal museum operates. The other interviews enabled us to apprehend how key actors on which control is exerted saw performance. 18 museum directors and 32 social workers have been met in southern France. The findings we present here are based on the latter interviews. Indeed, we consider that things are what actors think they are (Hayek, 1979). Thus, social facts are representations which you can approach by observing what people do and by listening to what they say. In addition, the construction of social reality results in a temporary and fragile order which action and experiment keep redefining (Weick, 1979, 1995). Social reality is produced by individuals interacting in a subjective and intersubjective way. Besides, when a study deals with performance issues in a complex organization where objectives are hard to identify and ambiguous, an interpretative approach of performance is recommended (Lorino, 1996).

In museums, our interview schedule was based on two main questions: « According to you, what is a museum ? » and « How would you define the expression "museum performance" ? » Interviews in the French income support scheme were divided into 4 segments. Every segment dealt with a topic on which information was sought: the organizations' objectives and activities, internal competencies, performance, partners' network.

Data Analysis Phase

We used manual coding and categorization. While listening to the interviewees, we realized that taking context into account was crucial to fully understand the interviewees' ideas. Therefore we chose to resort to a manual analysis (Sanséau, 2001). We divided the speeches into analytical units. Each meaningful analytical unit was coded. Then we elaborated a

hierarchical category system, based on categories that were relevant to our study, exhaustive, homogeneous and mutually exclusive.

4 RESULTS

4.1 IDENTITY

Indeed, museums do appear in the directors' speeches as extremely varied and hard to define. Yet, according to the directors, it is possible to characterize museums by their mission of conservation and diffusion of a collection. Besides, all the interviewees point to the potential contradiction between conservation activities and diffusion activities.

Beyond the shared perceptions of museums, every director has his/ her own idea about conservation and diffusion. As a matter of fact, as said earlier, each museum is characterized by a unique set of conservation and diffusion activities, which endows it with a specific identity.

In the same way, according to the various actors met, the French income support scheme is characterized by its variety and by the existence of a shared mission of social integration, which all the participating organizations have in common. The interviewees think the integrating mission can be interpreted in many different ways and use the term 'mission' in different ways. As regards the beneficiaries, they will not accept the terms 'social integration'. Indeed, if it were not for their finding difficult to buy some consumer goods or to find a job, they would consider themselves as fully integrated in society.

Thus, the integration of the beneficiaries can either be taken for granted, as most of the beneficiaries do have a social life, or regarded as a process, or considered as a result to achieve. Integration as a process is made of different steps and could for instance lead a beneficiary to find a job. Each step can be seen as a progressive integration of the beneficiary. Social integration can be also declined into various objectives for a beneficiary to reach, such as setting up a company, or finding a job. Each of these objectives corresponds to an internal support scheme: a beneficiary can be helped setting up his own company or looking for a job.

In the actors' speeches, conservation/diffusion as well as social integration appear as an original mission which is accompanied with a secondary mission. The latter consists in museums in implementing protection measures and in showing works of art (for instance). Protecting and showing appear as an end in itself. As long as works are protected and shown, it does not matter whether or not there are visitors.

In the same way in the French income support scheme, a secondary mission consists in putting support schemes at beneficiaries' disposal. Under these conditions, it does not matter whether or not beneficiaries succeed in finding a job or setting up a company. In other terms, it does not matter whether or not the integration process is actually successful.

In both cases, this transformation of the mission results in the operational performance measure's appearing to be pointless.

4.2 PERFORMANCE

In the interviews carried out in the two types of organizations a three-dimensional design of performance appears, which reminds us of literature on performance. Performance is declined

indeed in effectiveness, efficiency and visitors/beneficiaries satisfaction. Performance as a social construct is closely associated to a unique operational performance measure.

A three-dimensional performance

Effectiveness is the main dimension of performance in the directors' interviews. However, it is indirectly present in speeches, as the interviewees but mention the concept of mission. According to them, performance in museums is first of all a matter of achieving the mission of conservation and diffusion.

But how can we find out whether or not a mission is being achieved? The mission has to be declined into objectives in order to make it possible to answer the previous question. In the studied museums, this declination is not carried out or, at least, directors do not mention it being carried out. The thing is, many aspects of museums seem difficult to quantify. When directors talk about performance, it is a point which they often underline.

In the French income support scheme, insertion is decomposed into objectives, such as "setting up a company" or "finding a job". Associated measurements do exist. But they suffer from many limits that are stressed by actors. As a matter of fact, information is neither complete nor reliable. Furthermore, several organizations participate in the French income support scheme and their information systems do not fit one another. For instance, beneficiaries lists are out of date. Moreover, as said in section 2, one's going out from the scheme is not inevitably synonymous with one's social integration. For example, some beneficiaries can be struck off because they do not meet the administrative requirements, such as sending regularly documents they are asked for.

Efficiency is present in the actors' speeches to a much smaller extent than effectiveness. Actually, means are regularly evoked by actors and they sometimes happen to be associated with results in the speeches. In most cases, such an association aims at underlining the insufficiency of means. Thus, inside museums as well as inside the French income support scheme, actors point to this insufficiency as a brake upon the realization of the mission of conservation and diffusion/ social integration. However, some of the remarks made by the actors show that they are concerned with efficiency. For instance, among several restorers with similar competencies, a director will choose the one the work of which is the least expensive.

What we call visitors' satisfaction is a generic term which refers to different concepts that can be found in the directors' speeches: satisfaction, pleasure, well-being. Among the various dimensions of performance, the one to which it is most frequently referred to is effectiveness. Actually, satisfaction comes right after effectiveness in the directors' speeches. Satisfaction is also in the heart of the concerns of the actors in the French income support scheme. It is then about satisfying the beneficiaries' needs.

A performance which is closely associated with a unique and simplified indicator.

Performance is closely and spontaneously associated by actors with audience/ the number of exits from the scheme. For example, in museums, when asked the following question: "how would you define the expression 'museum performance'?", many directors answer in terms of audience, even though the term "audience" has not been used by the interviewer. At the same time, both in museums and in the French income support scheme, performance's being associated with audience/ the number of exits from the scheme is criticized by the interviewees themselves.

The association between performance and a unique and simplified indicator undergoes two sets of criticisms.

First, some criticisms denounce the fact that the operational performance measure takes imperfectly into account the achievement of the mission. Indeed, some dimensions of the mission, such as visitors' satisfaction in museums, are qualitative. These criticisms, according to the actors themselves, do not seem truly convincing. For instance, museum directors associate satisfaction with audience: they say that a pleased visitor will tend to come back and see the museum again. They also state that this visitor will tend to recommend his/ her friends and relatives to visit the museum. Finally, they acknowledge that they see a high audience level as a sign that visitors are rather satisfied.

Conversely, criticisms which deal with the insufficient "operational relevance" (Lorino, 2001) of the indicator seem fully justified. According to directors, not all the factors which explain audience can be controlled. Directors having fields of responsibility of varied extent, and each museum having its own specific operating mode, it is hard to tell for some variables whether or not they can naturally be controlled. For instance, in some municipal museums, the director is in charge of the exhibition policy, whereas in others, local representatives participate in determining the exhibition policy.

In the same way, not all the explanatory variables for integration are controllable by social workers. For instance the state of the labour market depends partly on national policies.

5 DISCUSSION

We learn from our field study that the studied organizations are both similar to other organizations and original. Like other organizations, their identity is based on their mission; their performance can be represented, and measured, on the basis of a simplified indicator: audience in museums, the number of exits from the French income support scheme. Indeed, they are very complex organizations, which are reduced to a single indicator. Thereby, a simplification process occurs, which is traditional in control. Yet in the studied organizations, the simplification process is drastic, since it leads to a unique indicator. Besides, it undergoes criticisms from actors and eventually seems to be a necessary evil, which differentiates the studied organizations from other ones.

The aim of this paper was to investigate how complex organizations are managed on the basis of an operational performance measure. More precisely, it focused on how these organizations regulate themselves, and/or are audited on the basis of such a measure. Therefore it focused on how these organizations are reduced to a simplified control indicator.

Our study, based on two types of complex organizations, leads us to conclude that it is actually possible to control organizations on the basis of such an indicator. Indeed, it appears that the studied organizations can be identified and identify themselves as organizations which have a mission and that these organizations are controllable on the basis of an operational performance measure.

Studying the actors' representations enabled us to make performance emerge as a social construct. Performance both as a process and as a result from a process is expected to be organization-specific. However, in two different types of complex organizations, a similar phenomenon occurs. To begin with, ideas of performance in both organizations are similar. Moreover, actors, almost in spite of themselves, cannot help talking about an operational performance measure which ironically plays a key role. A strong association between the social construct and the key-role of the simplified indicator can be observed. More precisely,

the operational performance measure can be seen as a foundation for the social construct. The criticisms undergone by the use of the operational performance measure appear as a symbolic meeting point in the performance construction process. A symbolic meeting point which takes part in the control process. For instance, project management is based on a few key variables such as deadlines. Besides, the criticized indicators can be considered as reinforcing the organizations identity. Indeed, they are criticized unanimously. Therefore they are ironically a source of cohesion: In museums as well as in the French income support scheme, the indicators being unanimously disapproved ironically entails cohesion. Hence the following suggestion: when one is in charge of controlling an organization, one can face the diversity of the mental representations of the people who have to work altogether by acting as a translator. Here we suggest a different way of achieving cohesion: we recommend the use of a simplified indicator such as an operational performance measure. If the indicator is simple enough, everyone in the organization will be able to understand it and to talk about it.

From a practical point of view, the above analysis lays the emphasis on how useful simplified control indicators can be. From an academic perspective, this paper contributes to the literature on organizational control and performance. Our contribution could be sum up as follows: the more complex an organization seems to be, the simpler its control system should be. Or rather: beyond a certain level of complexity, the more complex an organization seems to be, the simpler its control system should be. The study actually constituted an occasion of rediscovering some of the findings of cybernetics : the law of the requisite variety and the black box. The studied organizations are complex, therefore their control system has to be of equivalent complexity/ variety. The operational performance measure (audience in museums, the number of exits from the French income support scheme), which seems that simple, can actually be compared to the cybernetic black box. Another implication of the study is that any organization seems to be controllable. Indeed, no matter how complex an organization is, it will still be possible to find an indicator that will be simple enough to permit to control it.

This study has limitations, which are inherent in our research method, which focuses on peculiar types of organizations and is based on some actors' representations. Not all the types of organizations and not all the actors could be taken into account in one study. It was indeed necessary to make choices. We chose to study two different types of organizations, which enabled us to draw comparisons between the corresponding results. Besides, in both types of organizations, complexity was salient. This is one of the reasons why public organizations are worth studying (March, 1962, 1978, 1981, 1987). From now on, we have to carry out further investigations in order to determine to what extent our results can be generalized.

Thus, a number of future research enquiries can be identified. First, a longitudinal study could enable us to see if we can find similar results in the medium and long run. It would also make it possible to study the practical consequences, for instance on financial support, of a change in the indicator. Second, other stakeholders could be taken into account. For example it would be interesting to know how external controlling actors use the operational performance measure. Third, our study has to be extended to other types of organizations.

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