The perceived managerial discretion: A methodological perspective

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Abstract

In the healthcare sector, the link between performance and outcomes is at best tenuous. Consequently, researchers have been called to move beyond activity-based performance and adopt quality and outcome-based measures. Most of the studies in this field have focused on the measurement of outcomes for either patients or wider society, while not exploring these for managers in the healthcare field. We therefore grounded our methodological note on the performance management literature and investigated the measurement of perceived managerial discretion. Our research aims to validate the perceived managerial discretion construct through confirmatory factor analysis of the data provided by 97 Italian healthcare managers. A principal component analysis's results indicate that two items in three performance management mechanisms are sufficient to measure the perceived managerial discretion.

Keywords: Perceived managerial discretion, Performance measurement systems, Methodological perspective, Healthcare

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1. Introduction

A call for a revolution in the design and use of performance measurement systems in several sectors (Marchi, 2015), especially in the healthcare one has been recently addressed (Grigoroudis et al., 2012; Naranjo-Gil, 2009). This substantial change is most needed for several reasons (Cinquini et al., 2016). First, from an epidemiological standpoint, a general worldwide pattern of population aging and the increase in the prevalence rate of chronic diseases associated with an increased prevalence in the number of comorbidities resulted in a boost in healthcare demand (Guan et al., 2020; Jones et al., 2019; Beretta e Crea, 2020). Second, due to the recent economic and financial downturn, primarily caused by the COVID-19 pandemic, the gross domestic product (GDP) has been substantially affected in several developed countries, resulting in a dramatic change in total healthcare expenditures (Basu et al., 2020; Celik et al., 2020; OECD, 2015). So far, most of these measures were input, process, or output-related (Sikka et al., 2015). Therefore, the link between performance and outcomes is loose if present (Castellano, 2011). For such reasons, there is a call to move beyond activity-based performance and to adopt quality and outcome-based measures (Lohr, 1988; Mkanta et al., 2016; Grigoroudis et al., 2012; Naranjo-Gil, 2009). This is particularly relevant because of the connection between managerial actions and related public performance (Meier e O'Toole Jr, 2007). For this reason, there is the need to support manager's decision-making activity by enhancing their managerial discretion. Nonetheless, only a few studies have specifically addressed this topic in the public sector in general and in the healthcare one in particular (Grigoroudis et al., 2012). Thus, this research aims to validate the Perceived Managerial Discretion construct through confirmatory factor analysis.

To reach our research objective, we use data from 97 Italian healthcare managers, collected through a semi-structured interview. We conducted a study on a sample of Italian managers in healthcare organizations in the Lombardy region (North of Italy).

To build the perceived managerial discretion variable, we tried to overcome the limitations of prior studies by using a measure that directly assesses the perception and it is not a proxy for it (Marchi et al., 2013).

The paper is structured as follows. The next section deals with a review of the literature on the performance measures used in healthcare. The third section sets out the methodology to test the construct validity and the items included in the perceived managerial discretion variable. The fourth Section analyses and discusses results. Finally, the fifth Section outlines concluding remarks and sets out future research avenues.

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2. Literature review

2.1 Performance management systems

The need for monitoring and controlling performance in the public sector is well known and governments are taking actions to set up performance measurement systems to effectively use public funds to fulfill public needs (Bird, 2004). Indeed, in a context in which building a culture of accountability of healthcare represents a major concern, the adoption of measures able to capture the value-based perspective of health systems is of utmost importance (Mkanta et al., 2016). For this purpose, a variety of governance models with the public management as a core element have been developed both at conceptual and empirical levels (Meier e O'Toole Jr, 2007; Lynn et al., 2001; Peters e Savoie, 2000; Pierre, 2000; Kooiman, 2003). The identification of control systems in public companies is a flourishing academic field within management accounting (Marasca e Gatti, 2020). In this context, the New Public Management, which outlines opportunities and conditions for the applications of managerial logics historically referred to private companies, has been heavily adopted in the public sector reform (Hood, 1991; Marasca e Gatti, 2020; van der Kolk et al., 2019; Reiter e Klenk, 2019). In particular, as advocated by the New Public Management, performance in the public sector could be enhanced by results control (van der Kolk et al., 2019). As a consequence of that, since public organizations have multiple objectives to attain, they are facing a context where public services are overwhelmed by a huge amount of performance measures (Martin e Smith, 2005). Hence, the link between this performance and outcomes is loose if present. Indeed, as advocated by previous studies, the assessment of performance in healthcare is difficult, since it should be combined with the understanding of how health systems work and the identification of the main dimensions that could have an impact on them (European Union, 2016). Therefore, there is a call to move beyond activity performance and to adopt quality and outcome-based measures (Lohr, 1988; Mkanta et al., 2016).

Some scholars and practitioners found it difficult to develop outcome measures since these measures have to capture a large spectrum of dimensions, which ought to be included in the performance metrics to provide a comprehensive understanding of the degree of change in the outcome under analysis. Some of these dimensions might be difficult to capture due to either a lack of information or a degree of subjectivity embedded into them.

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In particular, more traditionally health status measures have been adopted to capture the performance of healthcare systems. For instance, they might capture perceptions on the change in an individual's health status after a specific treatment (Porter, 2010), patient's satisfaction, and patient's experience (Sikka et al., 2015). Indeed, despite some studies underlined their subjectivity (Elwyn et al., 2007), they provide healthcare managers and professionals with insights for the improvement of healthcare quality and effectiveness, and policymakers with information related to how health systems address patients' needs (Ruggieri et al., 2018; OECD, 2019).

Nonetheless, governors and healthcare managers perceive them as effective and important measures to assess the quality of a health system, and, therefore, the relevance of the managerial discretion has increased. Outcome-based performance might involve a higher degree of subjectivity than activity measures (Lohr, 1988). Hence, governors, regulators, decision-makers, and managers in the public sector relying on more outcome-based measures when making decisions, are also accepting that some degree of personal judgment might affect that performance, and their decisions might be based on those perceptions rather than on objective facts. For this reason, objective measures have always been conceived as the "golden standard" in the public sector (Boyne, 2006, p. 16), since they can "minimize discretion" (Meier et al., 2006, p. 19). However, issues of validity arise for both objective and subjective measures applied to the public sector (Andrews et al., 2006). On the one hand, as previously mentioned, it is difficult to capture all of the relevant dimensions, which should be covered by the objective measure in the public service under analysis. Therefore, the objective measure might lack some relevant information, which could bias managerial or governmental decision-making. Moreover, the validity of objective measures can be flawed by unintended behaviors people may put in place, such as effort substitution (Holmstrom and Milgrom, 1991) and gaming (Baker, 1992). Effort substitution refers to situations where individuals, either consciously or unconsciously, prefer to attain only a subset of targets they are given, usually those which are more easily measured. Gaming addresses the behavior displayed by individuals who either cheat, misreport, or falsify performance. On the other hand, although subjective measures overcome the lack of objective information regarding specific dimensions to be measured, they are often affected by common-method bias (Wall et al., 2004). More recently some models have been introduced, which are aimed at overcoming issues in prior frameworks. By taking a multi-dimensional approach, Sikka and colleagues (Sikka et al., 2015) put forward a quadruple aim approach to assess the effectiveness of healthcare programs and

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interventions. According to this approach, a healthcare system should be assessed against four main outcomes, "improving the experience of providing care […] improving the individual experience of care; improving the health of populations; and reducing the per capita costs of care for populations" (p. 608), which are neither independent nor bounded outcomes by policy restrictions, such as austerity programs. Most of the literature on outcome-related performance measures in healthcare has dealt with outcomes for both patients and the wider society. However, there is a call to address some research effort to the measurement of managerial discretion in the health sector to support their decision-making effectiveness and therefore their capability to impact on the quadruple or multiple aims of a healthcare system (Brazier et al., 1999). The next paragraph will review the literature on the role of performance measurement in enhancing managerial discretion in healthcare, i.e. perceived managerial discretion.

2.2. The perception of managerial discretion and performance measurement

Recent national health policies, organizational practices, and managerial effort have witnessed a change in the use of performance measurement tools within the health sector (Ferrè et al., 2012; Suter et al., 2017; Elkomy and Cookson, 2020; Gandarillas and Goswami, 2018). Indeed, performance measurement systems (PMS) are aimed at supporting managerial decision-making within healthcare organizations (Grigoroudis et al., 2012; Naranjo-Gil, 2009), which, in turn, is expected to deliver improved processes of care (Schultz et al., 2012). This topic has gained particular attention because of the connection between managerial actions and related public performance (Meier e O'Toole Jr, 2007). Prior literature has identified the use of PMS as crucial in addressing such outcomes. However, to date, the literature on the use of PMS within healthcare organizations still requires more research (Macinati and Anessi-Pessina, 2014). Management literature stressed the need to support manager's decision-making activity by enhancing their managerial discretion. Managerial discretion refers to a manager's perception of her "latitude of managerial action" (Hambrick and Finkelstein, 1987, p. 369). The need for higher discretion in decision-making has been addressed by a variety of studies (Sirovich et al. 2008). However, the transition from control systems based on strict observance of procedures and on compliance with rules to control systems oriented to monitoring results and based on spaces of operational discretion imposes, in fact, a cultural

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change on public companies even before an organizational or technical one (Marasca e Gatti, 2020). Some determinants of managerial discretion, i.e. manager's characteristics, have been found to impact the perceived latitude of option in terms of strategic adaptive response within a sample of US hospitals (Strandholm et al., 2004). More than managerial discretion itself, some literature stressed the relevance of the perception of managerial discretion, which can be defined as “the actual influence that managers perceive themselves to have regarding the firm decision-making process” (Zhao et al., 2010, p. 148). This study will focus on the perception of managerial discretion rather than on managerial discretion itself, for several reasons. First, this perception has been found to affect relevant organizational performance in several industries, such as manufacturing and service (Key, 2002), and healthcare as well, where it was found to enable nurses’ empowerment and self-efficacy (Spence Laschinger and Shamian, 1994). Second, the perception of discretion has been conceived as superior, compared to the managerial discretion itself, in addressing the relationship with other organizational variables, because “a CEO’s [sic] discretion is not entirely knowable: it is almost never explicit” (Hambrick and Finkelstein, 1987, p. 400). In a similar vein, Carpenter and Golden stress that “discretion can be exercised or created only to the extent that it is perceived” (Carpenter and Golden, 1997, p. 187). Third, perception can be more effective than discretion itself, since it can extend (limit) the boundaries of available managerial options by enabling (inhibiting) the information flow related to what is a managerial option and what is not, according to a bounded rationality definition of knowledge (Simon, 1991). Fourth, previous studies have pointed out that the “failure to act, or to identify the need for action can be extremely costly to the organisation” (Key, 2002, p. 219). Thus, managers perceiving an unsatisfactory degree of managerial discretion in their area of responsibility can report this lack of discretion to their supervisors, who can then take actions to extend their subordinates’ perception of managerial discretion. Nonetheless, only a few studies have specifically addressed this topic in the public sector in general and in the healthcare sector in particular (Grigoroudis et al., 2012). Moreover, there is a call for more survey-based research on managerial discretion, to account for “many of the human factors that affect discretion” (Wangrow et al., 2014, p. 123). Prior literature indeed measured perceived managerial discretion by grounding on psychological theories (Hutzschenreuter and Kleindienst, 2013), however, this measure does not directly assess the perception of managerial discretion, being a proxy of it.

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Thus, we put forward the following research questions: How can we directly measure the degree of perceived managerial discretion in the healthcare sector? Can we validate previous literature on the components of perceived managerial discretion in the healthcare sector? We will take healthcare as a sector of investigation since, in healthcare, decision-making affects several key variables, such as population health, social wellbeing, and health expenditures (Langabeer and Yao, 2012). Therefore, managers have to look for ways to enhance their perception of discretion to effectively cope with the aforementioned variables.

3. Methodology

3.1. Sample selection

To answer our research question, we use data from 97 Italian healthcare managers. To collect data, we sent to 125 responsibility centers an anonymous paper questionnaire in 2010. A random sampling selection method was carried out to define the final 125 units of analysis, according to previous literature in the health care sector (Messiah et al., 2016) and, in this way, all participants have an equal chance of selection (Marshall, 1996).

After two weeks from the submission of the paper questionnaire, a reminder to all managers was sent. The response rate was 77.6% (97 valid questionnaires were returned), which can be considered in line with other similar studies in the healthcare sector (Naranjo-Gil, 2009). The final sample may be considered representative of the whole population since we consider each feature of the organizational units; for instance, public and private units, teaching, and re-search units.

In particular, we focus our study on a sample of managers in Italian hospitals in the Lombardy region (North of Italy). This region was chosen for the peculiarities that make it a best practice in terms of efficiency in the resource management process and the performance measurement system. The Lombardy region health service is one of the 21 regional health services in Italy which accounts for 16.50% of the Italian population, with more than 10 million people living in Lombardy, and 16.39% of the total health budget, with a health expenditure of more than 17 billion euros (Conferenza delle Regioni e delle Province Autonome, 2016). In this context, there is a separation between local health authorities (to provide primary and community service) and hospitals (to provide acute care). Besides, it strongly supports the patient's choice of health care providers. It is organized as a

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quasi-market (Bartlett and Le Grand, 1993), where providers can be either public or private (which can deliver national health service also (Fattore & Torbica, 2006). According to previous studies, this has always been conceived as a high quality one (Berta et al., 2013; Garavaglia et al., 2010), and it achieved the highest rate of attractiveness within the national system (Brenna & Spandonaro, 2015). Indeed, in terms of performance against the quality of care, measured by mortality rates (Berta et al., 2013), in 2010, the Lombardy region was considered a benchmark region. These findings contribute to the knowledge that managers need to effectively improve quality in a financially constrained health care system.

Following Wangrow's and colleagues' (Wangrow et al., 2014) suggestion for the development of the measure of managerial discretion, we performed a survey. This helped us in identifying psychological, environmental, and organizational features related to managerial discretion.

Perceived Managerial Discretion is a latent variable composed of the following two items concerning non-financial performance system, budget, and employees' performance appraisal system: Decision-Making and Flexibility. The former dimension – perceived support to decision-making – refers to prior literature on perceived managerial discretion, which pointed out that the perception of the latitude of options available to managers is closely related to strategic decision-making (Key, 2002). The latter dimension – perceived flexibility – is consistent with previous studies, such as Kogut and Kulatilaka's (Kogut and Kulatilaka, 1994) in which managers perceived operational flexibility as an inhibiting/enabling factor for executives perceived discretion.

As control variables, we used: Environmental Uncertainty, Tenure, and Gender. Environmental Uncertainty is a latent variable composed of Complexity, Risk, and Uncertainty, based on other studies (Broadbent and Guthrie, 2008; Govindarajan, 1984; Gul and Chia, 1994). In detail, managers were asked to evaluate the relevance of the degree of Uncertainty, the level of Complexity, and the level of Risk faced in their unit's environment compared to the average of the sector they belong to. The tenure variable is composed of the manager's tenure in the same company (how long the manager has been with the company, namely Time) and in the current position (how long the manager has been in the current job, namely Time Actual).

For each question, respondents could choose a score from 1 to 7 on a Likert scale. In table 1, we reported survey questions and the variable measurement for each item. Moreover, we reported a description of some concepts as reported in the original paper questionnaire that we sent.

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Table 1 - Measurement of the research variables

Research variable name	**Survey questions addressed to healthcare managers and variable items**	**Variable measurement**
Perceived Managerial Discretion	Decision Making: What is your perception about the effectiveness of the non-financial performance system used in providing information regarding support operational decisions of your unit?	Decision making: a score from 1 to 7 on a Likert scale (1 Extremely unsatisfactory, …, 7 Extremely satisfactory)
	Flexibility: What is your perception of the effectiveness of the non-financial performance system providing information about enabling the flexibility/adaptability of your organizational unit?	Flexibility: a score from 1 to 7 on a Likert scale (1 Extremely unsatisfactory, …, 7 Extremely satisfactory)
	Decision Making: What is your perception about the effectiveness of the budget used in providing information regarding support operational decisions of your unit?	Decision making: a score from 1 to 7 on a Likert scale (1 Extremely unsatisfactory,…, 7 Extremely satisfactory)
	Flexibility: What is your perception of the effectiveness of the budget used in providing information concerning enabling the flexibility/adaptability of your organizational unit?	Flexibility: a score from 1 to 7 on a Likert scale (1 Extremely unsatisfactory, …, 7 Extremely satisfactory)
	Decision Making: What is your perception about the effectiveness of employees' performance appraisal system used in providing information regarding support operational decisions of your unit?	Decision making: a score from 1 to 7 on a Likert scale (1 Extremely unsatisfactory, …, 7 Extremely satisfactory)
	Flexibility: What is your perception of the effectiveness of employees' performance appraisal system used in providing information	Flexibility: a score from 1 to 7 on a Likert scale (1 Extremely unsatisfactory, …, 7 Extremely satisfactory)

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	concerning enabling the flexibility/adaptability of your organizational unit?	
Tenure	Time: How long have you been with the company?	Time: respondent has to indicate years and months (0<"1"≤5 years; 5<"2"≤10 years; 10<"3"≤15 years; 15<"4"≤20 years; 20<"5"≤25 years; 25<"6"≤30 years; "7">30 years)
	Time actual: How long have you been in the current job?	Time actual: respondent has to indicate years and months (0<"1"≤3 years; 3<"2"≤6 years; 6<"3"≤9 years; 9<"4"≤12 years; 12<"5"≤15 years; 15<"6"≤18 years; "7">18 years)
Gender	Women/Men managers	A dichotomous variable: 0 if the respondent is a man and 1 if the respondent is a woman.
Environmental Uncertainty	Complexity: What is the level of complexity faced in your unit's environment compared to the average of the sector you belong to?	Complexity: A score from 1 to 7 on a Likert scale (1 Very much less than sector's average,…, 7 Much greater than sector's average)
	Risk: What is the level of risk faced in your unit's environment compared to the average of the sector you belong to?	Risk: A score from 1 to 7 on a Likert scale (1 Very much less than sector's average,…, 7 Much greater than sector's average)
	Uncertainty: What is the degree of uncertainty faced in your unit's environment compared to the average of the sector you belong to?	Uncertainty: A score from 1 to 7 on a Likert scale (1 Very much less than sector's average,…, 7 Much greater than sector's average)

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Concept	*Description*
Budgeting system	The planning and budgeting system is the process that leads to a formal quantitative plan of actions that aims to implement organizational strategies.
Non-financial performance system	A non-financial performance system is a set of non-financial based performance measures that identify key drivers to organizational success. A a typical example of non-financial performance systems is the Balanced Scorecard (excluding the financial perspective).
Performance appraisal system	An individual performance appraisal system is the process of evaluation of an employee's target achievement. It could be based on either objective dimensions or subjective dimensions, or both.

3. Results and findings

The first step of our empirical analysis was to perform a confirmatory factor analysis (CFA) to confirm Perceived Managerial Discretion and the components of this variable (Brown, 2012). Table 2 presents descriptive statistics of the research variables, whereas the Appendix (presented in: www.sidrea.it/perceived-managerial-discretion) shows Research variables, variable items, and frequency distribution (in %) for each variable. Mean values for the items included in the Perceived managerial discretion show higher levels than the theoretical mean, with the highest level linked to Decision-making in the non-financial performance measurement system. The highest mean value of Flexibility is associated with the performance appraisal system. Consistently, Decision-making shows higher mean values compared to Flexibility. It is worth noting that among the three analyzed performance management mechanisms, namely the Non-financial performance measurement system, Budgeting, and Performance appraisal system, Budgeting shows lower mean values compared to the other two mechanisms.

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Table 2 – Descriptive statistics of the research variables

Research variable	Items	Min	Max	Mean	Standard deviation	Obs.
Perceived Managerial Discretion	Decision-Making in non-financial	1	7	4.99	1.510	97
	Flexibility in non-financial	1	7	4.54	1.479	97
	Decision-Making in budget	1	7	4.77	1.531	97
	Flexibility in budget	1	7	4.36	1.556	97
	Decision-Making in employees' performance appraisal system	2	7	4.88	1.371	97
	Flexibility in employees' performance appraisal system	1	7	4.58	1.513	97
Environmental Uncertainty	Risk	1	7	4.48	1.217	97
	Complexity	3	7	5.20	1.196	97
	Uncertainty	1	7	4.25	1.191	97
Gender	Male vs Female	0	1	0.21	0.411	94
Tenure	Time	0	37	13.04	11.222	93
	Time Actual	0	20	4.731	4.658	93

The sample is composed primarily of men (79.38%). Most of the surveyed managers have been in post for less than six years (67%), with an average of 4.7 years. Forty percent of them have worked for the same organization for less than five years, with a mean value of 13 years. They reported a high degree of environmental uncertainty, especially for what concerns Complexity (AVG = 5.2), which is also mirrored by the frequencies in the highest scores in this item (Complexity: score 4 = 24.74%, score 5 = 19.59%; score 6 = 34.02%; score 7 = 13.4%).

As shown in Table 3, the reliability results of the CFA analysis is satisfactory for each item. Results from the Exploratory Factor Analysis put forward that factor loadings of the two items included in the Perceived managerial discretion in the three mechanisms are consistently higher than 0.9, showing a very high effect of the items on the variable. This is also mirrored by the percentage of summated variance explained by the two items in each performance management mechanism, which is higher than 99.9% in each case. Moreover, the scale reliability is very good also (Nunnally and Bernstein, 1978), and consistently higher than 0.89 for the three mechanisms,

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with some values higher than 0.92 (Perceived managerial discretion associated with employees' performance appraisal system).

Table 3 - Factor analysis of Perceived Managerial Discretion

Item	***Factor loading***	***Eigen value***	***% of variance***	***Cronbach's alpha***
***Perceived Managerial Discretion* (of the non-financial performance system)**				
Decision Making	0.956	1.828	91.382	0.906
Flexibility	0.956	0.172	8.618	
***Perceived Managerial Discretion* (of budget)**				
Decision Making	0.949	0.200	9.998	0.889
Flexibility	0.949	1.800	90.002	
***Perceived Managerial Discretion* (of the employees' performance appraisal system)**				
Decision Making	0.965	1.863	93.169	0.924
Flexibility	0.965	0.137	6.831	

4. Discussion and conclusions

This study aimed at analyzing a managerial discretion measure in a healthcare setting. More specifically, perceived managerial discretion has been measured using the answers given by 97 Italian healthcare managers to a survey on the role of performance management systems in supporting their managerial activity. In management studies, perceived managerial discretion is defined as the actual influence that managers perceive themselves to have regarding the firm decision-making process (Zhao et al., 2010, p. 148). Results from an exploratory factor analysis indicate that perceived managerial discretion can be measured by two items, decision-making, and flexibility. In this study, decision-making has been defined as the perceived support to gathering relevant information for decision-making (Key, 2002). using three frequently used performance management mechanisms (Non-

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financial performance measurement system, Budgeting, and Performance appraisal system). Similarly, Flexibility has been defined as the perceived support to gathering relevant information for issues of flexibility and adaptability in a manager's day-by-day operations (Kogut and Kulatilaka, 1994), using the same performance management mechanisms. Findings from this study demonstrate that the most highly valued managerial discretion by healthcare managers is Decision-making, with Flexibility as to the second-ranked perceived outcome, especially with regards to the non-financial performance measurement system.

This study contributes to previous literature in different ways. First, this research aims at contributing to the performance management literature by shedding some light on the strategic role of performance management in a specific setting, i.e. healthcare. This is consistent with prior studies, where Naranjo-Gil obtained evidence on the influence of managerial features on the style of use of the balanced scorecard from a sample of Spanish nurse managers (Naranjo-Gil, 2009) and hospital CEOs (Naranjo-Gil and Hartmann, 2007). Our study contributes further to this stream of research, in that it found how to directly assess an enabling factor of improved processes in the health sector, i.e., the perceived managerial discretion. Indeed, in this paper, we aimed at replying to the call for more research on the use of PMS to improve effectiveness-oriented measures, such as the perception of managerial discretion, in healthcare organizations (Macinati and Anessi-Pessina, 2014; Sikka et al., 2015). Indeed, one of the main contributions regards the empirical test of the construct of the perceived managerial discretion variable, not yet investigated in previous studies. Although this measure is not based on psychological theories, such as in prior studies (Hutzschenreuter and Kleindienst, 2013), we tried to overcome limitations of prior measurement approaches by using a measure that directly assesses the perception of managerial discretion while not being a proxy of it. This variable is both a predictor for healthcare outcome (e.g. quality of care) and an outcome *per se* for the public sector (Zander et al., 2013). Moreover, this study extends the literature on New Public Management from a value-based perspective by providing new insights on which measures are perceived more relevant by managers (van der Kolk et al., 2019). In so doing, it also contributes to the measurement of outcome indicators – perceived managerial discretion – in the healthcare sector (Sikka et al., 2015; Mkanta et al., 2016).

This study is not without its limitations. The results reported in this study refer to a sample of managers operating in a defined area of the Italian NHS; thus, caution should be used in generalizing such findings. Therefore, future

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research could be addressed to extend the sample to managers of other Italian regions and other countries to facilitate comparisons among different NHS systems by taking into account different cultural settings too (Crossland and Hambrick, 2011).

Moreover, the measure assessed in this study is based on managerial perceptions. Further research could also compare and contrast results from our construct on perceived managerial discretion with others already available within the literature.

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