Public Service Motivation and Agency in Distributed Leadership - A panel study of organizational change processes

Anne Mette Kjeldsen

Public Service Motivation and Distributed Leadership Agency

- A panel study during organizational change processes

Anne Mette Kjeldsen

Associate professor, PhD

Department of Political Science

Aarhus University, Denmark

(annemette@ps.au.dk)

Abstract

Implementation of organizational changes is a reoccurring task in all organizations, and the existing literature points to employee support and engagement in the change processes as important predictors of successful reform outcomes. This paper examines employee agency in distributed leadership during a hospital merger and whether hospital employees' public service motivation causes them to engage more in such collective leadership efforts. A two-wave panel study from 2012-2015 during the hospital merger implementation process confirms that public service motivated employees do engage more in distributed leadership practices during organizational change. Yet, this positive association depends on whether the employees agree with the goals and aims of the merger.

INTRODUCTION

Many public sector organizations currently implement profound organizational changes including mergers, cutbacks, and general restructuring to become more effective at delivering welfare services (Kuipers et al. 2014). Such change processes have substantive consequences for the employees, and their support for the change implementation is a key element in determining its outcome (Bordia et al. 2004; Fernandez and Rainey 2006; Kelman 2005). The distributed leadership literature emphasizes the importance of involving employee resources in leadership tasks to facilitate organizational support and performance (Bennett et al. 2003; Bolden 2011; Gronn 2000). As such, this leadership approach highlights that leading an organization is a collective endeavor where other organizational members than the formal managers carry out leadership tasks. This may be an organizational strongpoint in turbulent times. Yet, we know little about which employees are more likely and perhaps better to engage in distributed leadership and help lead the organization towards successful change.

Theoretically, distributed leadership can be defined as the sharing of generic leadership tasks within an organizational perspective (Gronn 2000, 2002b; Woods et al. 2004; Jønsson et al. 2016). Many organizations perform highly complex and discretionary tasks with interdependent processes of production involving many different actors. This is not at least true for public service organizations, which is further attenuated when they have to undergo profound changes. Given these circumstances, a number of studies have recently highlighted the usefulness of collective leadership constellations for successful change implementation as organizational actors need to engage in conjoint activity to perform; individual "heroic" leadership cannot stand alone (Chreim et al. 2010; Jonasson, Kjeldsen, and Ovesen 2018; Harris 2008).

However, organizational members are not equally likely to engage in distributed leadership. Taking on leadership tasks requires motivation, knowledge, skills, and support. Studying public sector organizations, an important predictor of performance is the extent to which employees have high public service motivation, i.e. motivation to do good for others and society through public service delivery (Perry and Hondeghem 2008a). Existing research has found that highly public service motivated employees exert more

2

pro-social citizenship behavior and are more willing to sacrifice themselves and commit to organizational changes – even when these changes involve reductions in the workforce (Wright, Christensen, and Isett 2013; Kim 2006). Hence, this paper argues that highly public service motivated employees are also more likely to engage in the type of intra-organizational behavior that involves taking on leadership tasks during change processes than employees who are less public service motivated. Still, this positive public service motivation-distributed leadership association may depend on whether the employees sympathize with the goals of the change process (Jakobsen, Kjeldsen, and Pallesen 2017).

Combining the literatures on distributed leadership and public service motivation in public organizations, this paper thus asks *how public service motivation relates to employee agency in distributed leadership during times of organizational change depending on employee agreement with organizational change goals.* This research question is examined using data from a panel study containing two consecutive surveys collected in one of Scandinavia's largest public hospitals. The hospital went through a major organizational change process during 2012-2014 as four smaller hospitals merged into one large hospital unit. The first survey to the hospital staff was launched right after the mergers were decided, and the second survey was conducted in early 2015. With survey measures of public service motivation and distributed leadership agency among hospital employees over time, this research design enables a measurement separation of independent and dependent variables which strengthen the causal examination of public service motivation as a predictor of employees' engagement in leading public service organizations during profound change processes. The analysis confirms that the highly public service motivated hospital employees do indeed engage more in distributed leadership practices during the implementation of the hospital merger and that this association is positively strengthened when they agree with the organizational change goals. Hence, highly public service motivated employees can be beneficious change agents for public organizations.

DISTRIBUTED LEADERSHIP

Leadership as a collective social process where leadership activities are shared among organizational members is a recent addition to the strand of leadership theories relying on a more "heroic" leader-follower approach (i.e., charismatic or transformational leadership), (Uhl-Bien 2011). Dating back to Gibb (1954), but in contemporary research advanced by Gronn (2000, 2002a), distributed leadership views leadership as a dynamic organizational entity which is inclusive, collaborative and contextually situated. More specifically, Bennett et al. (2003) summarize three basic assumptions regarding key properties of distributed leadership: 1) leadership is an emerging feature of a group, 2) there is openness towards who can perform leadership tasks, and 3) leadership tasks are shared among the many, not only the formally appointed leaders (see also Bolden 2011). This does, however, not mean that the distributed leadership literature disregards the important role of those individuals in formal leadership positions. Formal leadership hierarchies are not abolished in the implementation of a distributed leadership approach. Formal leaders are still needed to set a direction as well as they should facilitate and safeguard an organizational culture that allows for distributed leadership by ensuring that leadership can actually be distributed and is taken on by members of the organization (Gronn 2008; Günzel-Jensen, Jain, and Kjeldsen 2018; Leithwood, Harris, and Hopkins 2008). Nonetheless, the focus is not on who the leader is, but how leadership is exercised as a social process.

Distributed leadership is thus a collective leadership phenomenon, which operates alongside and outside the formal leadership hierarchy of an organization and which includes the rank-and-file employees in leading the organization. This also means that a perquisite for well-functioning distributed leadership is that employees have the opportunities to and are willing to engage in leading the organization (Currie, Grubnic, and Hodges 2011). In other words, employees need to see themselves as active agents in exercising leadership within the organization. Drawing on Activity Theory (Gronn 2002b) and Bandura's Cognitive Theory of Agency (1997), later contributions within the distributed leadership literature thus operates with an agency perspective focusing on how employees engage in distributed leadership. That is, to which

extent organizational members experience being actively involved in generic leadership activities such as organizational change, managing tasks, and strengthening social relations at work (Jønsson et al. 2016, 910-11). In this sense, the more distributed leadership is dispersed within an organization, the more employees without formal leadership positions will be engaged in leadership tasks.

When being engaged in leadership actions, organizational members perform actions that may be more or less related to their organizational practice (ibid.). These "conjoint actions" are performed by organizational members, who are reciprocally dependent on each other due to complementary expertise (e.g., consultants and nurses) or overlapping roles and responsibilities (e.g., consultants who assist each other during an operation or nurses that care for the patients in teams). Conjoint actions in all parts of the organization need to be led, and this is at the core of the distributed leadership agency approach as it is advanced by the more holistic perspective of Gronn (2002b). This focus on distributed leadership as an influence in conjoint actions is also what has led to the advancement of distributed leadership as a "leader-plus" phenomenon indicating that distributed leadership adds an extra dimension to leadership within organizations than what originates from those in formal leadership positions. As Yukl (1999, 292–93) states:

"… leadership does not require an individual who can perform all of the essential leadership functions, only a set of people who can collectively perform them. (…) The leadership actions of any individual leader are much less important than the collective leadership provided by members of the organization".

When distributed leadership agency unfolds, it encompasses both the formal and informal ways in which employees exert influence. Another core characteristic of distributed leadership agency is thus that it is made up from both top-down delegation of leadership tasks (e.g., through formally structured and appointed leadership roles and task committees) as well as bottom-up initiatives from employees when they see a need to exercise leadership and coordinate efforts in a given situation. This is also what has been determined institutionalized distributed leadership vs. spontaneous collaboration (Gronn 2000; Harris 2008). The present study does not distinguish between the different modes of how leadership has been

distributed, but is concerned with the overall employee experienced agency in distributed leadership as a measure of how involved the employees are in leading the organization.

Up until recently, distributed leadership research has mainly been conducted within the education sector. With highly discretionary tasks and interdependent processes of production requiring conjoint action, this sector is well suited for distributed leadership practices to unfold. For the same reasons, there has also been an increasing scholarly interest in distributed leadership within the health care sector where the complexity of service delivery renders leadership at many levels and from multiple actors important to succeed (Fitzgerald et al. 2013; Buchanan et al. 2007; Günzel-Jensen, Jain, and Kjeldsen 2018; Chreim et al. 2010; Jonasson, Kjeldsen, and Ovesen 2018). Yet, critical notes have also been made on the suitability of distributed leadership in these contexts (Martin et al. 2015; Currie and Lockett 2011; Currie, Lockett, and Suhomlinova 2009). Schools and in particular hospitals employ strong professional groups, which to some extent compete in parallel hierarchies and which have to adhere to professional jurisdictions that may be at odds with collective leadership constellations. Therefore, one might argue that the context of public service organizations can also make the successful realization of distributed leadership rather difficult (Günzel-Jensen, Jain, and Kjeldsen 2018, 113). Currie et al. (2009) even call this observation a "Catch-22" studying the implementation of distributed leadership in English secondary schools.

Nevertheless, quite a few studies within education and health have associated distributed leadership with positive outcomes such as job satisfaction, commitment, professional and organizational empowerment, successful change implementation, and ultimately increased organizational effectiveness (Harris 2008; Hulpia, Devos, and Van Keer 2009; Woods et al. 2004; Chreim et al. 2010; Jonasson, Kjeldsen, and Ovesen 2018). Linking distributed leadership agency to successful change implementation in a longitudinal case study of Canadian health care organizations, Chreim et al. (2010), for instance, point to the importance of distributed leadership through a coalition of agents with complementary skills and resources that support the change. Moreover, in a multilevel study of 1522 Flemish teachers (Belgium), Hulpia, Devos and Van Keer (2009) find that the presence of a cooperative leadership team, participative decision-making, and

distribution of supportive leadership functions played significant positive roles in predicting teachers'

commitment. Regarding methodology, this latter study is, however, an exception in a distributed leadership

literature generally characterized by qualitative evidence and/or studies that remain at a conceptual

descriptive level. Hence, more quantitative studies as well as studies that deal with the antecedents of

distributed leadership are called for. Specifically, Tian et al. (2016) request more knowledge about who

engages more than others in distributed leadership practices from an agency perspective. This may help us

attract more attention to how distributed leadership is fostered and upheld when we seek to harvest

potential benefits from viewing leadership as a collective endeavor during organizational change processes.

PUBLIC SERVICE MOTIVATED EMPLOYEES AS CHANGE AGENTS

When studying public service organizations, an important predictor of many desirable organizational

outcomes such as job satisfaction, commitment, and performance is the extent to which the employees are

motivated to do good for others and society through their work (Perry and Hondeghem 2008b; Ritz,

Brewer, and Neumann 2016). Public employees place a higher value on helping others and performing

work that is worthwhile to society and according to Perry and Wise (1990), this desire attracts them to

public sector work where they – if they experience that this desire is fulfilled – feel better at work and

deliver more and better services. Theoretically, public service motivation rests on three motivational

bases: rational, norm-based, and affective motives (ibid.). Rational motives to contribute to public service

are participation in the process of policy formulation, commitment to public programs because of personal

identification, and advocacy for certain interests. Norm-based motives are desires to serve the public

interest due to loyalty and duty and concerns for social equity, and affective motives are grounded in

human emotion and commitment to public services due to their social importance. Together these

motivational bases make up the theoretical ground for studying public service motivation among public

service providers. Perry (1996) later identified a multi-dimensional scale to measure public service

motivation which has four components: attraction to public policy making, commitment to public interest,

compassion, and self-sacrifice. This measurement – and different short versions of it – has since been used

throughout the public service motivation literature to examine different antecedents and effects of this type of prosocial motivation (Ritz, Brewer, and Neumann 2016; Wright 2008; Wright, Christensen, and Pandey 2013).

With respect to public service motivation and leadership in public service organizations, several studies have linked public service motivation to some of the more leader-centered leadership approaches such as transformational leadership and goal-oriented leadership (Bellé 2013; Caillier 2014; Jensen, Andersen, and Jacobsen 2019; Paarlberg and Lavigna 2010; Park and Rainey 2008). The core argument is here that followers' public service motivation can be promoted and supported via certain behaviors exercised by the formal leader. In relation to transformational leadership it has been argued and shown that the leader's efforts in formulating, sharing and sustaining an organizational vision focused on the public interest is appealing to public service motivated employees and helps stimulate their job satisfaction and performance (Paarlberg and Lavigna 2010). Yet, it has rarely been considered how other, less leader-centered approaches such as distributed leadership are tied to the public service motivation of public service providing employees.

This paper argues that employee public service motivation, a well-known public sector strongpoint, may also be associated with distributed leadership. With its bottom-up perspective on leadership and the agency approach to conceptualizing and analyzing distributed leadership, it becomes interesting to examine whether employee public service motivation is a resource for distributed leadership agency during organizational change processes. The distributed leadership literature emphasizes the importance of having employees in the organization who are also willing to contribute to leading the organization via their conjoint actions in service delivery – especially during difficult times (Currie, Grubnic, and Hodges 2011). Such employees may be found among the highly public service motivated staff. Whereas we already know that employee characteristics such as years of experience and self-efficacy are antecedents of distributed leadership agency and change readiness/handling of change-related problems (Amiot et al. 2006; Cunningham et al. 2002), less is known about employees' motivational attitudes in relation the core task of

the organization, here public service provision, and their participation in leading the organization during changes.

From the public service motivation literature, it is evident that this prosocial motivational attitude can play a significant and positive role for change implementation and for contributing to intra-organizational agendas more broadly. Wright, Christensen and Isett (2013) for instance found that the self-sacrifice component of public service motivation predicts employee commitment to change in a context where the organization is undergoing a reorganization and reduction in the workforce (see also Voet, Steijn, and Kuipers 2017). In addition, Kim (2006) and Bottomley et al. (2016) found that public service motivated employees are more likely to exert organizational citizenship behavior; that is, behavior which involves helping co-workers, assisting the supervisor, and volunteering to take care of functions that aid the organization in succeeding and which are not formally rewarded (Smith, Organ, and Near 1983). Such behavior is clearly at the core of the conjoint actions in distributed leadership agency. Combining insights from these studies with the literature on distributed leadership agency, I therefore expect that employees with high public service motivation will be more inclined to engage actively in leading their organization during changes.

When an organization is struggling to achieve its outcomes, employees that are able to transcend their own self-interest, help others, and contribute positively to public service delivery despite turbulent circumstances of organizational change are highly needed to help lead the organization. Moreover, the rank-and-file employees are also those, who are closest to the service recipients, and who therefore have the daily knowledge to help implement the change and achieve the intended consequences (or who can try to prevent unwanted consequences). Yet, they may not want to do so if they fundamentally disagree with the goals and intentions of the organizational change. Hence, this paper also examine whether goal agreement about the organizational change is a moderator of the public service motivation-distributed leadership agency association. Research has shown that with respect to the association between transformational leadership and public service motivation, value conflict is an important moderator

meaning that the less value conflict, the stronger the positive relationship between the direct managers' level of transformational leadership and the employees' public service motivation (Krogsgaard, Thomsen, and Andersen 2014). According to Paarlberg and Perry (2007), employees are only expected to respond to organizational agendas if the aims pursued fall within their "zone of existing values". Similar results have also been found by van der Voet et al. (2017), who in addition to showing a positive association between prosocial motivation and commitment to change, show that this association depends on perceived meaningfulness of the change. This is in line with the argument by Thompson and Bunderson (2003) that employee participation in an organization depends on their perceived opportunity to contribute to a greater cause. When the employees participate in carrying out leadership tasks, they have to invest effort and time in the organization besides what is required to perform the core service delivering tasks. This likely requires that they find it meaningful to pursue the goals of the organization – in this case an organizational change. If they do not, then we may have very motivated agents but who do not want to take responsibility for leadership tasks or who does so in a very unproductive way that counteracts with the intentions of the organizational reform (Jakobsen, Kjeldsen, and Pallesen 2017). This is also what has been called "misaligned" distributed leadership (Harris 2008).

In sum, this paper examines the following two hypotheses:

H1: Employee public service motivation is positively associated with distributed leadership agency during organizational change processes

H2: Agreement with organizational change goals positively moderates the association between employee public service motivation and distributed leadership agency

DATA AND METHODS

Case, data collection, and sample description

To study the association between employee PSM and agency in distributed leadership during organizational change processes, this study rely on panel survey data collected in one of Scandinavia's largest public

hospitals. This hospital was established in 2011 as a merger between four smaller public hospitals within the same region. The merger process involved a profound restructuring of medical specialties, although the largest of these smaller hospitals – which also hosts the physical location of the new hospital – was the leading partner. Following this merger, a survey containing measures of distributed leadership agency in the different hospital units as well as individual attitudes and socio-demographic controls was distributed to all hospital staff (n=4,575) in the Autumn 2012 and repeated again in April 2015 (n=4,880). By allowing the introduction of a time separation between measurement of DL and PSM, this provides a relatively stronger research design for examining causal effects in relation to DL compared with previous studies within the literature (for a research overview, see Harris 2008; Bolden 2011).

More specifically, the surveys were distributed in three different ways: by e-mail for staff with regular access to check their e-mail during work hours, by personal password to the survey webpage for staff with no regular access to check their e-mail during work hours, and by paper for staff with no work e-mail. This procedure resulted in 2,212 replies (response rate 48.5 percent) for the first survey round in 2012 and 1,406 replies (response rate 28.8 percent) for the second survey round in 2015. Responses from 650 individuals, who participated in both the 2012 and 2015 surveys, were matched; however, some respondents did not reply to all questions. After further limiting the analysis to hospital departments with more than 10 respondents in both years and employees only[1],a valid and effective panel sample consists of 425 respondents. Table 1 provides an overview of the panel sample according to key socio-demographic characteristics and contextual factors. In addition, panel respondents are characterized by being employed in 16 different medical departments, which constitutes level two in the multi-level regression analysis.

---

[1] 8 hospital departments were filtered out due to less than 10 respondents in both years and because two of these departments did not exist throughout the period 2012-2015.

Table 1: Socio-demographic statistics of survey panel respondents, 2012-2015 (N=425).

	N	Percent
Gender		
Male	29	6.82
Female	396	93.18
Age (in 2012)		
Mean	44.45	
SD	9.12	
Merged		
Yes	54	12.71
No	371	87.29
Occupational group		
Nurse	179	42.42
Service/cleaning/assistant staff	18	3.58
Social and health care/nursing assistant	25	6.34
Medical secretary	57	11.71
Radiographer	5	1.38
Resident	5	1.38
Consultant	20	5.10
Biomedical laboratory technician	31	7.44
Physiotherapist	26	5.10
Administrative staff	29	6.61
Occupational therapist	16	3.44
Midwife	10	1.93
Other functionary	4	1.24

Measures

Regarding measurement of the main variables of interest, distributed leadership agency was measured

with a newly developed 7-item Likert scale by Jønsson et al. (2016). Consistent with the theoretical focus

and definition of distributed leadership as involving conjoint actions in organizing tasks and functions

within organizations (Gronn 2000, 2002b; Yukl 2002), this measure asked the hospital staff about their

perceived involvement in both change-oriented, task-oriented and relation-oriented leadership behavior in

their different hospital units. A confirmatory factor analysis supported a one-dimensional structure of the

concept and a good fit with the data. The measure was constructed as a reflective index rescaled to range

from 0-100, where 100 is the maximum reported degree of perceived distributed leadership agency by an

employee.

Concerning the public service motivation measure, this was measured with a well-known previously

developed and thoroughly validated 5-item Likert scale (cf. Alonso and Lewis 2001). This global measure of public service motivation covers all four dimensions of the public service motivation construct, commitment to the public interest, compassion, self-sacrifice, and attraction to public policy making. Wright et al. (2013) highlight that such composite measures of public service motivation perform equally well as a four-factor measure with respect to its psychometric properties and in relation to a number of outcome measures. The measure is constructed as a reflective index scaled from 0-100, where 100 is the maximum reported level of public service motivation among the respondents, and a confirmatory factor analysis showed acceptable fit statistics.

The proposed moderation variable, agreement with the organizational change goals, was measured with a short scale specifically developed for this survey as it targets the context of the hospital merger. The scale consists of five statements asking the hospital staff to evaluate their agreement with whether the hospital merger was a necessity, whether it makes sense to them, and the extent to which the see advantages/disadvantages of the merger decision. A principal component analysis revealed a one-dimensional scale, and the scale has a Cronbach's alpha value of 0.850. The measure is constructed as a reflective index scaled from 0-100, where 100 is the maximum reported level of goal agreement regarding the hospital merger.

With respect to control variables, a series of individual- and contextual/organizational level factors that can affect both distributed leadership agency and public service motivation were included. First, this includes respondents' gender and age. Next, I also control for the extent to which respondents were affected by the hospital merger in 2011; that is, whether they had to switch hospital since this can affect their likelihood of getting involved in distributed leadership practices. At a more general level, I also control for the department in which the staff is employed by including 16 department dummies and the public service occupations to which the respondents belong (13 occupational group dummies). Both public service motivation and distributed leadership agency are likely to vary with department cultures/professional settings for providing the services and the occupational and professional jurisdictional boundaries. The

items and psychometric properties of the survey questions and scales are displayed in Table A1 in the Appendix.

Statistical methods

The proposed relationship between public service motivation and distributed leadership agency is examined using multi-level regression analysis which take the nested structure of the data into account, i.e. the potential correlation between individuals' survey replies (level 1) when employed in the same hospital departments (level 2). This method thus enables estimation of both individual and organizational level effects at the same time (Rabe-Hesketh and Skrondal 2008). To examine the causality of the proposed arguments and limit potential common source bias (Jakobsen and Jensen 2015; Favero and Bullock 2015), the distributed leadership agency variable in the models is from the 2015 survey, whereas public service motivation and the control variables are measured in the 2012 survey. In addition, I control for lagged distributed leadership agency 2012 since previous levels of this behavioral measure is likely a strong predictor of future levels (see Favero, Meier, and O'Toole 2016, 334). By controlling for past levels of distributed leadership agency for each employee, the analysis thus reveals if public service motivation predicts an increased inclination to take part in leadership activities during the three years of ongoing organizational changes following the hospital merger.[2]

RESULTS

This section presents the results from the multi-level regression analysis testing the proposed association between public service motivation (PSM) and distributed leadership agency (H1), and whether this association is moderated by hospital staff agreement with the goals of the merger process (H2). Table 2 provides a descriptive overview of the development in the independent variable of interest, public service motivation, and the dependent variable, distributed leadership agency, in the two surveys: the 2012 survey conducted immediately after the implementation of the hospital merger and the follow-up survey in 2015.

---

[2] Panel regression analysis with fixed effects at the individual level fails to provide a significant association between PSM and DL due to limited variation in especially PSM between to two surveys.

This introductory overview shows that whereas employee public service motivation seems rather stable over time, hospital staff experiences of distributed leadership agency during these three years on average increase with 6.25 scalepoints. But the question is whether it is the employees with the highest public service motivation, who also participate more in carrying out leadership tasks during these turbulent times with substantive organizational changes?

Table 2: Descriptive statistics and paired samples t-test of differences 2012-2015 (mean scores [0-100] and standard deviations in parentheses).

Time of survey	2012	2015	Difference
Public service motivation	70.21	68.04	-2.18*
	(14.90)	(14.66)	(15.44)
Distributed leadership agency	30.65	36.90	6.25**
	(21.69)	(21.64)	(19.58)

Note: **$p < .001$, *$p < .01$.

Table 3 shows the results from the multi-level regression analysis of public service motivation and distributed leadership agency over time in the 16 different hospital departments. Model 1 clearly confirms Hypothesis 1 regarding a positive association between employee public service motivation and participation in distributed leadership (controlled for initial employee perceived distributed leadership agency in 2012). This means that highly public service motivated hospital staff do indeed participate more actively in leading their hospital units during these times of organizational change. Furthermore, we see that previous distributed leadership agency of an employee is a strong predictor of later distributed leadership agency in 2015, there are no significant differences between male and female employees regarding their active leadership participation, and older hospital staff are less inclined to participate in leading the organization during these hospital mergers. Finally, we see that there are no significant differences in employee distributed leadership agency associated with whether the employee switched hospital as a result of the merger or not.

Table 3: Multi-level regression analysis of distributed leadership agency in 2015

	Model 1	Model 2	Model 3
Public service motivation[2012]	0.145*	0.147*	-0.148
	(0.057)	(0.057)	(0.179)
Distributed leadership agency[2012]	0.536***	0.532***	0.533***
	(0.041)	(0.041)	(0.041)
Gender (male)	3.902	3.869	3.454
	(4.163)	(4.169)	(4.165)
Age	-0.227*	-0.222*	-0.219*
	(0.095)	(0.097)	(0.096)
13 occupational dummies (Not shown)			
Merged (1=yes)	0.224	-0.192	0.066
	(2.470)	(2.500)	(2.498)
Goal agreement[2012]		0.002	-0.448+
		(0.053)	(0.263)
PSM[2012] × Goal agreement[2012]			0.006+
			(0.004)
Constant	22.799***	22.433***	43.496**
	(5.527)	(6.256)	(13.592)
N	425	418	418
r2_within	0.425	0.425	0.429
r2_between	0.470	0.471	0.471
r2_overall	0.426	0.426	0.430
Groups	16	16	16

Note: Standard errors in parentheses, $^+ p < .1$, $^* p < .05$, $^{**} p < .01$, $^{***} p < .001$

Moving on to Model 2 which includes the goal agreement variable measuring the extent to which the hospital staff agree with the decision of implementing a hospital merger, this variable does not in itself have a significant impact on distributed leadership agency. In other words, controlled for occupational group, department, gender and age etc., it is not the case that it is only the employees who agree with the merger decision that participate in carrying out leadership tasks. However, Model 3, which includes the hypothesized interaction term between public service motivation and goal agreement, shows an interesting result. As expected in Hypothesis 2, the public service motivation-distributed leadership agency association is positively moderated by goal agreement indicating that highly public service motivated hospital staff are more inclined to take on leadership tasks when they support the hospital merger decision – and oppositely

if they do not (although the negative effect for low levels of goal agreement is not significant). This

moderation effect is illustrated in Figure 1, which shows the marginal effects of public service motivation

on distributed leadership agency at different levels of goal agreement. As it is evident from the figure, goal

agreement levels just above 40 (on the 0-100 scale) results in a significant and positively strengthened

effect of public service motivation on distributed leadership agency ($p<0.01$ for goal agreement > 45 and <

85). This means that if employees are to translate their motivation to do good for others and society into a

willingness to take active part in leading the organization during times of radical changes, it takes a certain

level of agreement with the reasoning and justification for implementing the organizational change in the

first place – otherwise it may result in less inclination to actively engage in leadership tasks.

Figure 1: Marginal effect of PSM on distributed leadership agency for different levels of goal agreement
(illustration of the significant interaction term $PSM^{2012} \times$ Goal agreement^{2012} from Model 3, Table 3)
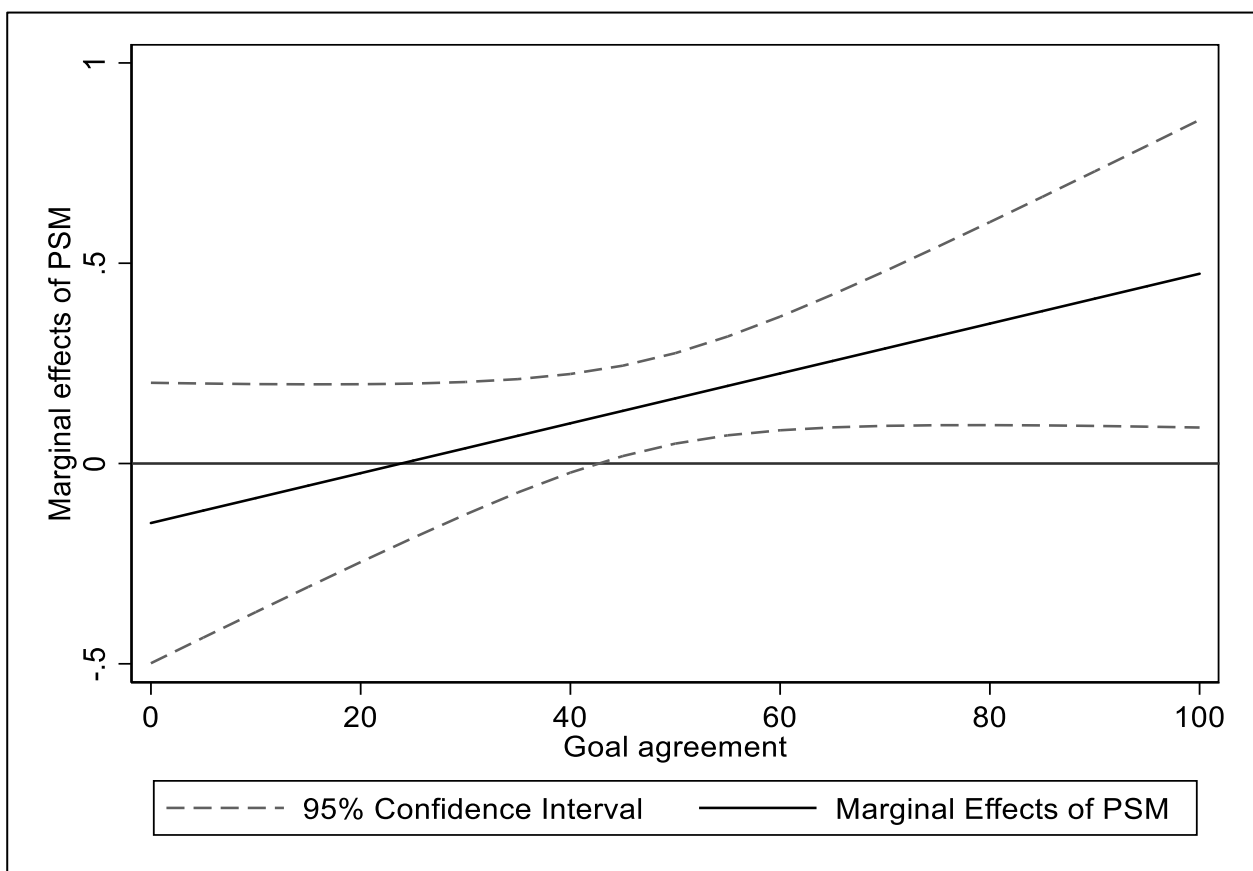
CONCLUSION

Successful implementation of organizational changes requires participation and support from the employees. The literature on distributed leadership takes a bottom-up perspective and focuses on leadership as a collective endeavor where rank-and-file employees are engaged in leadership actions alongside the formal managers. This paper has studied distributed leadership agency among Danish hospital staff during a three-year period with implementation of a large-scale public hospital merger. Combining the literature on distributed leadership (Gronn 2000, 2002b; Harris 2008) with the literature on public service providers' motivation to do good for others and society (Perry and Wise 1990; Perry 1996, Perry and Hondeghem 2008), results from a two-wave panel study at the merged hospital showed that highly public service motivated employees participate more actively in leading their hospital units during these turbulent years. But the analysis also revealed that controlled for personal and local organizational characteristics, this positive association between employee public service motivation and distributed leadership agency depended on employee agreement with the goals and reasoning behind the hospital merger. Only those who largely agree with the merger decision translate their public service motivation into active leadership participation during the years of merger implementation – and the opposite seems to be the case for those who do not (although this negative effect is not significant at the $p < 0.05$ level).

These results suggest several contributions to research in distributed leadership, public service motivation, and organizational change implementation. First, employees are not equally likely to engage in distributed leadership agency during times of organizational change. Besides ability and knowledge to lead, employees' more prosocially oriented motivation is also an important predictor of their inclination to partake in generic leadership tasks. This adds to the distributed leadership literature by pointing towards an additional antecedent, namely public service motivation, of this collective leadership approach that public organizations may want to focus more on in their recruitment and retention efforts if distributed leadership is to work as a means towards successful organizational change implementation. Second, public service motivation has previously been seen as a resource in relation to more top-down oriented leadership

approaches and in relation to outcomes such as organizational citizenship behavior and commitment to change. However, this study shows that it can also be a resource in relation to more bottom-up oriented leadership approaches that measures actual leadership behavior carried out by organization members without formal leadership responsibility. Third, this study underscores the importance of employee support for the goals of the organizational change if their public service motivation is to be activated and transformed into participation in leadership tasks. This is an important point of awareness for public managers responsible for reform implementation. Yet, it can also pose a serious communication challenge in terms in sensemaking of the organizational change.

By conducting a quantitative study over time during the implementation of a radical organizational change, a hospital merger, this study has aimed at generating causal insights into the relationship between public service motivation and distributed leadership agency. This is a very different research design and methodological approach than what is used in the existing literature on distributed leadership (Bolden et al. 2011; Tian et al. 2016). Yet, analyzing data collected over time is no guarantee that reversed causality and common method bias is not an issue of concern (Jakobsen and Jensen 2015). By participating actively in leading the organization, the attraction to public policy making dimension of public service motivation may for instance be nurtured. Furthermore, since the robustness test using fixed effects regression modelling failed to provide significant results, unobserved individual level characteristics may bias the results. Still, this study is considered an important first attempt to examine motivational antecedents of distributed leadership agency during organizational changes and with data over time that has fairly high internal and external validity. However, future studies are encouraged to continue along this avenue of research to further validate employee public service motivation as an organizational strongpoint for public managers striving to obtain successful reform outcomes through distributed leadership.

Tabel A1: List of measures and fit statistics for scales

Measure	Items
Distributed leadership	1. Have you participated in setting goals for the development of your unit? 2. Have you contributed in promoting proposals about the operation and development of your unit? 3. Have you had the responsibility for organizing work tasks at your unit? 4. Have you been engaged in activities that involve your colleagues in decision making about operations and development of your unit? 5. Have you been involved in managing how the resources are distributed at your unit? 6. Have you participated in organizing activities about development of competences for your colleagues? 7. Have you been involved in resolving staff conflicts in your unit? Fit indicies 2012/2015: χ^2=101.15 (14)/203.60 (14), RMSEA= 0.06/0.15, CFI=0.98/0.88, TLI=0.97/0.82, and SRMR=0.02/0.06. Cronbach's alpha 2012/2015: = 0.884/0.848
Public service motivation	• I am often reminded by daily events how dependent we are on one another • Making a difference in society means more to me than personal achievements • It motivates me to help improve public services • I consider public service my civic duty • I am prepared to make enormous sacrifices for the good of society Fit indicies 2012/2015: χ^2=141.82 (5)/39.91(5), RMSEA= 0.14/0.10, CFI=0.93/0.95, TLI=0.86/0.90, and SRMR=0.04/0.03 Cronbach's alpha 2012/2015: = 0.798/0.755
Goal agreement	The merger and its related organizational changes have important advantages The merger was necessary Things could not continue the way they were The merger makes good sense in our situation¨ The merger has considerable disadvantages (R) Cronbach's alpha 2012: = 0.850
Gender Age Merged Occupational group Hospital department	What is your gender? Male=1, Female=0 What is your age? _____years Have you changed regional hospital after 2011? Yes=1, No=0 Which occupational group do you belong to? In which hospital department do you work?

REFERENCES

Alonso, Pablo, and Gregory B. Lewis. 2001. "Public Service Motivation and Job Performance Evidence from the Federal Sector." *The American Review of Public Administration* 31 (4): 363–380.

Amiot, Catherine E., Deborah J. Terry, Nerina L. Jimmieson, and Victor J. Callan. 2006. "A Longitudinal Investigation of Coping Processes During a Merger: Implications for Job Satisfaction and Organizational Identification." *Journal of Management* 32 (4): 552–74.

Bandura, Albert. 1997. *Self-Efficacy: The Exercise of Control*. Macmillan.

Bellé, Nicola. 2013. "Leading to Make a Difference: A Field Experiment on the Performance Effects of Transformational Leadership, Perceived Social Impact, and Public Service Motivation." *Journal of Public Administration Research and Theory*, June.

Bennett, N., C. Wise, P. A. Woods, and J. A. Harvey. 2003. "Distributed Leadership: A Review of Literature." http://oro.open.ac.uk/8534/1/bennett-distributed-leadership-full.pdf.

Bolden, Richard. 2011. "Distributed Leadership in Organizations: A Review of Theory and Research." *International Journal of Management Reviews* 13 (3): 251–269.

Bordia, Prashant, Elizabeth Hobman, Elizabeth Jones, Cindy Gallois, and Victor J. Callan. 2004. "Uncertainty during Organizational Change: Types, Consequences, and Management Strategies." *Journal of Business and Psychology* 18 (4): 507–532.

Bottomley, Paul, Ahmed Mohammed Sayed Mostafa, Julian Seymour Gould-Williams, and Filadelfo León-Cázares. 2016. "The Impact of Transformational Leadership on Organizational Citizenship Behaviours: The Contingent Role of Public Service Motivation." *British Journal of Management* 27 (2): 390–405.

Buchanan, David A., Rachael Addicott, Louise Fitzgerald, Ewan Ferlie, and Juan I. Baeza. 2007. "Nobody in Charge: Distributed Change Agency in Healthcare." *Human Relations* 60 (7): 1065–1090.

Caillier, James Gerard. 2014. "Toward a Better Understanding of the Relationship Between Transformational Leadership, Public Service Motivation, Mission Valence, and Employee Performance: A Preliminary Study." *Public Personnel Management* 43 (2): 218–39.

Chreim, Samia, B.E. (Bernie) Williams, Linda Janz, and Ali Dastmalchian. 2010. "Change Agency in a Primary Health Care Context: The Case of Distributed Leadership." *Health Care Management Review* 35 (2): 187–99.

Cunningham, Charles E., Christel A. Woodward, Harry S. Shannon, John MacIntosh, Bonnie Lendrum, David Rosenbloom, and Judy Brown. 2002. "Readiness for Organizational Change: A Longitudinal Study of Workplace, Psychological and Behavioural Correlates." *Journal of Occupational and Organizational Psychology* 75 (4): 377–92.

Currie, Graeme, Suzana Grubnic, and Ron Hodges. 2011. "Leadership in Public Services Networks: Antecedents, Process and Outcome." *Public Administration* 89 (2): 242–264.

Currie, Graeme, and Andy Lockett. 2011. "Distributing Leadership in Health and Social Care: Concertive, Conjoint or Collective?" *International Journal of Management Reviews* 13 (3): 286–300.

Currie, Graeme, Andy Lockett, and Olga Suhomlinova. 2009. "The Institutionalization of Distributed Leadership: A 'Catch-22'in English Public Services." *Human Relations* 62 (11): 1735–1761.

Favero, Nathan, and Justin B. Bullock. 2015. "How (Not) to Solve the Problem: An Evaluation of Scholarly Responses to Common Source Bias." *Journal of Public Administration Research and Theory* 25 (1): 285–308.

Favero, Nathan, Kenneth J. Meier, and Laurence J. O'Toole. 2016. "Goals, Trust, Participation, and Feedback: Linking Internal Management With Performance Outcomes." *Journal of Public Administration Research and Theory* 26 (2): 327–43.

Fernandez, Sergio, and Hal G. Rainey. 2006. "Managing Successful Organizational Change in the Public Sector." *Public Administration Review* 66 (2): 168–176.

Fitzgerald, Louise, Ewan Ferlie, Gerry McGivern, and David Buchanan. 2013. "Distributed Leadership Patterns and Service Improvement: Evidence and Argument from English Healthcare." *The Leadership Quarterly* 24 (1): 227–239.

Gronn, Peter. 2000. "Distributed Properties a New Architecture for Leadership." *Educational Management Administration & Leadership* 28 (3): 317–338.

———. 2002a. "Distributed Leadership." In *Second International Handbook of Educational Leadership and Administration*, 653–696. Springer.

———. 2002b. "Distributed Leadership as a Unit of Analysis." *The Leadership Quarterly* 13 (4): 423–451.

———. 2008. "The Future of Distributed Leadership." *Journal of Educational Administration* 46 (2): 141–158.

Günzel-Jensen, Franziska, Ajay K. Jain, and Anne Mette Kjeldsen. 2018. "Distributed Leadership in Health Care: The Role of Formal Leadership Styles and Organizational Efficacy." *Leadership* 14 (1): 110–133.

Harris, Alma. 2008. "Distributed Leadership: According to the Evidence." *Journal of Educational Administration* 46 (2): 172–188.

Hulpia, Hester, Geert Devos, and Hilde Van Keer. 2009. "The Influence of Distributed Leadership on Teachers' Organizational Commitment: A Multilevel Approach." *The Journal of Educational Research* 103 (1): 40–52.

Jakobsen, Mads Leth, Anne Mette Kjeldsen, and Thomas Pallesen. 2017. "Loyal Agents or Saboteurs? Performance-Increasing Policies and Public Service Motivation among Hospital Workers in Denmark." In Kenneth J. Meier, Amanda Rutherford and Claudia N. Avellaneda: *Comparative Public Management*, pp. 130–153. Georgetown University Press.

Jakobsen, Morten, and Rasmus Jensen. 2015. "Common Method Bias in Public Management Studies." *International Public Management Journal*.

Jensen, Ulrich Thy, Lotte Bøgh Andersen, and Christian Bøtcher Jacobsen. 2019. "Only When We Agree! How Value Congruence Moderates the Impact of Goal-Oriented Leadership on Public Service Motivation." *Public Administration Review* 79 (1): 12–24.

Jonasson, Charlotte, Anne Mette Kjeldsen, and Maria Shubhra Ovesen. 2018. "Dynamics of Distributed Leadership during a Hospital Merger." *Journal of Health Organization and Management* 32 (5): 691–707.

Jønsson, Thomas, Christine Unterrainer, Hans-Jeppe Jeppesen, and Ajay Kumar Jain. 2016. "Measuring Distributed Leadership Agency in a Hospital Context: Development and Validation of a New Scale." *Journal of Health Organization and Management* 30 (6): 908–26.

Kelman, Steven. 2005. *Unleashing Change: A Study of Organizational Renewal in Government*. Brookings Institution Press.

Kim, Sangmook. 2006. "Public Service Motivation and Organizational Citizenship Behavior in Korea." *International Journal of Manpower* 27 (8): 722–40.

Krogsgaard, Julie Alsøe, Pernille Thomsen, and Lotte Bøgh Andersen. 2014. "Only If We Agree? How Value Conflicts Moderate the Relationship Between Transformational Leadership and Public Service Motivation." *International Journal of Public Administration* 37 (12): 895–907.

Kuipers, Ben S., Malcolm Higgs, Walter Kickert, Lars Tummers, Jolien Grandia, and Joris Van Der Voet. 2014. "The Management of Change in Public Organizations: A Literature Review." *Public Administration* 92 (1): 1–20.

Leithwood, Kenneth, Alma Harris, and David Hopkins. 2008. "Seven Strong Claims about Successful School Leadership." *School Leadership and Management* 28 (1): 27–42.

Martin, Graeme, Nic Beech, Robert MacIntosh, and Stacey Bushfield. 2015. "Potential Challenges Facing Distributed Leadership in Health Care: Evidence from the UK National Health Service." *Sociology of Health & Illness* 37 (1): 14–29.

Paarlberg, Laurie E., and Bob Lavigna. 2010. "Transformational Leadership and Public Service Motivation: Driving Individual and Organizational Performance." *Public Administration Review* 70 (5): 710–718.

Paarlberg, Laurie E., and James L. Perry. 2007. "Values Management: Aligning Employee Values and Organization Goals." *The American Review of Public Administration* 37 (4): 387–408.

Park, Sung Min, and Hal G. Rainey. 2008. "Leadership and Public Service Motivation in U.S. Federal Agencies." *International Public Management Journal* 11 (1): 109–42.

Perry, James L. 1996. "Measuring Public Service Motivation: An Assessment of Construct Reliability and Validity." *Journal of Public Administration Research and Theory* 6 (1): 5–22.

Perry, James L., and Annie Hondeghem. 2008. *Motivation in Public Management: The Call of Public Service*. New York: Oxford University Press, USA.

Perry, James L., and Lois R. Wise. 1990. "The Motivational Bases of Public Service." *Public Administration Review* 50 (3): 367–373.

Rabe-Hesketh, Sophia, and Anders Skrondal. 2008. *Multilevel and Longitudinal Modeling Using Stata*. College Station, TX: STATA press.

Ritz, Adrian, Gene A. Brewer, and Oliver Neumann. 2016. "Public Service Motivation: A Systematic Literature Review and Outlook." *Public Administration Review* 76 (3): 414–26.

Smith, C. Ann, Dennis W. Organ, and Janet P. Near. 1983. "Organizational Citizenship Behavior: Its Nature and Antecedents." *Journal of Applied Psychology* 68 (4): 653–63.

Thompson, Jeffery A., and J. Stuart Bunderson. 2003. "Violations of Principle: Ideological Currency in the Psychological Contract." *Academy of Management Review* 28 (4): 571–86.

Tian, Meng, Mika Risku, and Kaija Collin. 2016. "A Meta-Analysis of Distributed Leadership from 2002 to 2013: Theory Development, Empirical Evidence and Future Research Focus Theory Development, Empirical Evidence and Future Research Focus." *Educational Management Administration & Leadership* 44 (1): 146–64.

Uhl-Bien, Mary. 2011. "Relational Leadership Theory: Exploring the Social Processes of Leadership and Organizing." In *Leadership, Gender, and Organization*, 75–108. Springer.

Voet, Joris van der, Bram Steijn, and Ben S. Kuipers. 2017. "What's in It for Others? The Relationship between Prosocial Motivation and Commitment to Change among Youth Care Professionals." *Public Management Review* 19 (4): 443–62.

Woods, P. A., N. Bennett, J. A. Harvey, and C. Wise. 2004. "Variabilities and Dualities in Distributed Leadership Findings from a Systematic Literature Review." *Educational Management Administration & Leadership* 32 (4): 439–457.

Wright, Bradley E. 2008. "Methodological Challenges Associated with Public Service Motivation Research." In *Motivation in Public Management: The Call of Public Service*, 80–98. New York: Oxford University Press, USA.

Wright, Bradley E., Robert K. Christensen, and Kimberley Roussin Isett. 2013. "Motivated to Adapt? The Role of Public Service Motivation as Employees Face Organizational Change." *Public Administration Review*.

Wright, Bradley E., Robert K. Christensen, and Sanjay K. Pandey. 2013. "Measuring Public Service Motivation: Exploring the Equivalence of Existing Global Measures." *International Public Management Journal* 16 (2): 197–223.

Yukl, Gary. 1999. "An Evaluation of Conceptual Weaknesses in Transformational and Charismatic Leadership Theories." *The Leadership Quarterly* 10 (2): 285–305.

Yukl, Gary. 2002. *Leadership in Organisations*. New Jersey: Prentice Hall.