LEAP LEDELSESADFÆRD OG PERFORMANCE
LEADERSHIP AND PERFORMANCE

Technical report

Survey of leaders and employees, post-treatment
Spring-summer 2015

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Table of contents

Introduction to the project

The Leadership and Performance (LEAP) research project is an experimental study of the effects of leadership training and leadership strategies on organizational performance. The project includes 673 Danish public and private leaders from five different sectors day care, primary schools, secondary schools, tax divisions and bank branches. The LEAP project runs from 2014 to 2017 and is funded by the Danish Council for Independent Research. For more information on LEAP, please visit www.leap-project.dk.

This report summarizes and describes the post-treatment surveys of participating leaders and their employees. Two surveys were distributed to the leaders and one survey to their employees in the spring and summer of 2015. The report details the procedures, response rates and survey items for each survey. 15,130 employees reporting to 477 participating leaders were contacted just after the end of the treatment, 6,326 completed the survey, and 1,211 provided some answers. The questionnaires can be found in appendix A, B, C, D, E and F.

This report continues from the pre-treatment technical report that is available at www.leap-project.dk.

Survey Setup, Collection Methods, Response Rate

In order to maximize the survey's relevance to the respondents, the post-treatment surveys differed slightly from area to area. This was necessary, as each area had different users and organizational concepts, and in order to accommodate these differences, we created a slightly different version of the survey for each area to ensure that the survey fit the given area.

All surveys in the project were designed in the online survey software, SurveyXact. To encourage respondents to complete the survey, the designs were minimalistic and easy to understand. Answers were saved continuously in case the respondents left the survey or experienced technical difficulties. The fact that each answer was saved was emphasized in the introduction text along with instructions on how to navigate in the survey.

We constructed each survey so that questions on each page were related in the sense that they measure the same latent concept. This gave the respondents a context for the questions. The questions on each page of the surveys were randomized to minimize response set. To motivate the respondents to answer as many questions as possible, "Don't know" was not included as a response option. If the respondents did not want to or could not answer the question, they could leave the question blank and continue with the survey. The flow of the survey ensured that respondents did not get irrelevant questions on the basis of answers to earlier questions

The primary distribution form was email. All surveys to the leaders were distributed by email. The invitation to participate in the surveys included a unique link to the survey to ensure that respondents did not answer the surveys several times. Almost all employees had valid email addresses. Employees without email received invitations to participate in the survey in closed envelopes at their workplace via regular mail. The invitation included a unique code for the respondents to enter on a webpage and open the survey. This procedure ensured that the respondents did not answer the surveys several times and that the leaders could not interfere in the collection.1,692 invitations to participate in the survey were mail-delivered. To account for the fact that several leaders had changed work place in the one-year period, we developed a short version distributed to the employees of the leaders who had changed workplace in the treatment period. The short survey focused exclusively on survey measures on leadership behavior. As expected, a considerable number of email addresses were not valid. Non-valid addresses resulted in 'bounce mails', where the email server replied with a "not delivered"

message. We excluded employees from the survey if we received several bounce messages from the respondent's purported email address.

Leader survey

The leader post-treatment survey ran from August 18th to September 16th. All surveys were distributed via email and the average completion time was around 15-20 minutes. Three reminders were sent out on August 25th, September 1st, and September 14th. Table 1 shows the distribution of the response rate on the different sectors. A total of 523 leaders got the post-treatment survey. 452 (86.4%) completed the survey which is lightly lower than the pre-treatment survey which had a 90.3% completion rate. 452 leaders completed or partly completed both the pre- and post-treatment survey. The leaders of secondary schools had the highest completion rate (96.8%) in the post-treatment survey and the daycare type 3 leaders had the lowest (77.1%).

Table 1. Response rate for Leader Post-Treatment Survey

Area	Completed and partly completed	Delivered but not answered	Total
Secondary schools	30 (96.8%)	1 (3.2%)	31 (100%)
Public primary schools	77 (91.7%)	7 (8.3%)	84 (100%)
Private primary schools	26 (83.9%)	5 (16.1%)	31 (100%)
Daycare, type 1	63 (91.3%)	6 (8.7%)	69 (100%)
Daycare, type 2	30 (83.3%)	6 (16.7%)	36 (100%)
Daycare, type 3	47 (77.1%)	14 (23.0%)	61 (100%)
Daycare, private	37 (86.1%)	6 (14.0%)	43 (100%)
Tax	115 (85.8%)	19 (14.2%)	134 (100%)
Banks	22 (78.6%)	6 (21.4%)	28 (100%)
Total	452 (86.4%)	71 (13.6%)	523 (100%)

Note: * Only from daycare centers with 3-6 year-olds or 0-6 year-olds, except if part of the formal authority of type 1 leader ** Only from daycare centers with 3-6 year-olds or 0-6 year-olds.

Table 2 shows the response rate of the leader post-treatment survey on the different treatments. There is little difference in the response rate of the three treatment groups all being from 79.7-89.7 %. The control group, however, has a lower response rate of 79.9%.

Table 2. Response rate for Leader Post-Treatment Survey, treatment

Treatment	Completed and partly completed	Delivered but not answered	Total
Transformational	105 (89.7%)	12 (10.3%)	117 (100%)
Combination	112 (88.2%)	15 (11.8%)	127 (100%)
Transactional	113 (89.7%)	13 (10.3%)	126 (100%)
Control	122 (79.7%)	31 (20.3%)	153 (100%)
Total	452 (86.4%)	71 (13.6%)	523 (100%)

Employee survey

The employee post-treatment survey ran from August 25th to September 16th. The surveys were distributed via email and mail. Three reminders were sent out on September 1st, 8th and 14th. Table 3 shows the distribution of the response rate on sectors. A total of 15,130 employees got the post-treatment survey, and 6,326 (41.8 %) completed it, which is slightly lower than the pre-treatment's completion rate of 45.3 %. Like the pre-treatment survey banks had the highest completion rate (74.4 %) and the public primary schools had the lowest (32.3 %). 4,017 employees have answered both the pre- and post-treatment survey and 3,953 answered neither. There were 22,012 unique employees in total over the two waves.

Table 3. Response rate for Employee Post-Treatment Survey

Area	Completed	Delivered but not answered	Partially completed	Total
Secondary schools	1,071 (48.4%)	933 (42.1%)	211 (9.5%)	2,215 (100%)
Public primary schools	1,678 (32.%)	3,092 (59,5%	424 (8.2)	5,194 (100%)
Private primary schools	211 (33.5%)	354 (56.2%)	65 (10.3%)	630 (100%)
Daycare, type 1	933 (34.61%)	1,642 (60.0%)	162 (5.9%)	2,737 (100%)
Daycare, type 2	207 (38.5%)	295 (54.8%)	36 (6.7%)	538 (100%)
Daycare, type 3	382 (41.5%)	486 (52.8%)	52 (5.7%)	920 (100%)
Daycare, private	137 (43.2%)	159 (50.2%)	21 (6.6%)	317 (100%)
Tax	1,547 (65.4%)	59 (25.2%)	222 (9.4%)	2,364 (100%)
Banks	160 (74.4%)	37 (17.2%)	18 (8.4%)	215 (100%)
Total	6,326 (41.8%)	7,593 (50.2%)	1,211 (8.0%)	15,130 (100%)

Table 4 shows the response rate of the employee post-treatment survey on the different treatments. Contrary to the leader post-treatment survey the control group did not have a lower response rate and in general the four groups are very similar.

Table 4. Response rate for Employee Post-Treatment Survey, treatment

Treatment	Completed	Delivered but not answered	Partially completed	Total
Transformational	1,569 (39.7%)	2,077 (52.5%)	308 (7.8%)	3,954 (100%)
Combination	1,584 (42.1%)	1,902 (50.6%)	274 (7.3%)	3,760 (100%)
Transactional	1,544 (44.6%)	1,632 (46.8%)	300 (8.6%)	3,486 (100%)
Control	1,619 (41.2%)	1,982 (50.4%)	329 (8.4%)	3,930 (100%
Total	6,325 (41.8%)	7,593 (50.2%)	1,211 (8.0%)	15,130 (100%)

The primary distribution method for the employee post-treatment survey was email but 1,692 (11.2 %) were distributed via mail. A big majority (1,406) of these were equally divided between public primary schools (705) and day care, type 1 (701). In sum, we mail-distributed to the following:

- 42 employees from secondary schools
- 705 employees from public primary schools
- 58 employees from private primary schools
- 701 from daycare 1
- 70 from daycare 2
- 86 from daycare 3
- 27 from daycare 4

Table 5 shows the response rate of the different methods of distribution. The response rate for surveys distributed via mail was much lower (16.73 %) than those distributed via email (44.97 %)

Table 5. Response rate for Employee Post-Treatment Survey, distribution method

	Completed	Delivered but not answered	Partially completed	Total
E-mail	6,043 (45.0%)	6,227 (46.3%)	1,168 (8.7%)	13,438 (100%)
Mail	283 (16.7%)	1,366 (80.7%)	43 (2.5%)	1,692 (100%)
Total	6,326 (41.8%)	7,593 (50.2%)	1,211 (8.0%)	15,130 (100%)

Table 6 shows the response rate of the short and long survey. The response rate of the short survey (22.4%) was much lower than the long survey (43.6%).

Table 6. Response rate for Employee Post-Treatment Survey, survey form

	Completed	Delivered but not answered	Partially completed	Total
Short	288 (22.4%)	966 (75.1%)	32 (2.5%)	1,286 (100%)
Long	6.038 (43.6%)	6,627 (47.9%)	1,179 (8.5%)	13,844 (100%)
Total	6,326 (41.8%)	7,593 (50.2%)	1,211 (8.0%)	15,130 (100%)

To avoid overloading the respondents, we have taken advantage of the large sample size and grouped respondents into five groups. All groups received the core questions and a set of specific questions (between 5 and 36 questions) belonging to each of the five groups. The sampling approach was also used in the pre-treatment survey (see pre-treatment technical report for further information).

Survey maintenance

Overall, the inquiries from the employees were primarily inquiries from newly hired employees, who had difficulties of rating their leader, with only a few months of employment under the leader. They were in general asked just to answer the question, which they felt comfortable answering and otherwise skip the questions. Some inquires were specific to various sectors.

The *daycare* area received especially many inquired from daycare leaders and employees regarding the complexity of the questionnaire. A number of the employees had difficulties answering the survey because of complex, and therefore difficult, formulations. Inquiries of this nature were answered quickly and the respondents were guided to answer correspondingly to the best of their ability.

In the *primary school area*, many people felt it was difficult to answer the questions and evaluate their leader according to the given parameters. Some of the most common reasons for this was that the employees had been hired recently or that they did not work directly with the leader and hence did not have enough knowledge about the leader. Many people were also very nervous with regard to the anonymity of their answers and somewhat in relation to this some said they felt uncomfortable answering some of the questions. We also experienced a group of respondents who were not employed at the leader or had never been employed by the leader. These respondents were removed from the survey. We experienced some trouble with emails that could not be delivered to the given email address. In total this happened to 400-500 respondents. Of the ones where we could not locate any obvious errors in the email address we did one of two things. The ones that had an email domain related to a specific school or municipality were deleted. The rest were redistributed with an invitation by letter. These were sent in enclosed envelopes to the leaders who then distributed them to the employees.

Table 7. Overview of measured new concepts and items in the post-treatment survey

DIMENSION	#	SURVEY		AREA				
		EMPLOYEE POST-TREATMENT SURVEY	LEADER POST-TREATMENT SURVEY 2	D	P	S	T	B
LEADERSHIP								
Verbal rewards	7	X		X	X	X	X	X
Leadership changes	8	X		X	X	X	X	X
Intention to quit	3	X		X	X	X	X	X
Perceived organizational change	1	X		X	X	X	X	X
Change management	3	X		X	X	X	X	X
Responsibility attribution	6	X		X	X			
Intended organizational change	3		X	X	X	X	X	X
Perceived performance, parents' satisfaction and user well-being	6		X	X	X			

Theoretical Definitions, Factor Loadings, and Distributions

This chapter introduces the theoretical definition of each measured concept, how each item loads in a factor analysis, and the distribution of respondents.

We conduct semi-explorative factor analyses to measure the degree to which the items tap into the same underlying concept. Principal-factor method (principal axis) is used to analyze the correlation and the communality of the items and the latent factor (Rencher & Christensen 2012). The distributions of the concepts are constructed as additive indexes for all concepts to illustrate and provide information on the variance, numbers of valid answers and mean values. If the respondents have missing values on one item in each concept, the missing values are replaced with mean values for all respondents' answer on the particular item. This ensures that we do not lose too many respondents in the construction of the indexes. There are three main reasons why we use index constructions: 1) we increase the validity and reliability of the measurements, 2) we increase the level of measurement, and 3) we simplify data.

Verbal rewards (CBJ/LBA)

Based on social psychological research, we know that it is important for the effects of rewards whether they are verbal or materiel (Deci et al. 1999). This question investigates the perceived existence of performance contingent verbal reward systems.

Table 8. Verbal rewards, items

#		Source
praise_yes	Do you and your colleagues receive praise if you perform your tasks really well? *Hvis du og dine kolleger klarer jeres opgaver rigtigt godt, får I så ros fra jeres leder?*	Own

	Yes	**No**	**Total**
Do you and your colleagues receive praise if you perform your tasks really well?	4,916 (75.62%)	1,585 (24.38%)	6,501 (100%)

Combining motivation crowding theory (Frey 1997) and social psychological theory (Deci et al. 1999), these items investigate whether the verbal reward systems mentioned in praise_yes are seen as controlling or supportive by the employees. The items are inspired by Jacobsen et al. (2014)

Table 9. Verbal rewards, supportive or controlling, items

	IF praise_yes=yes	Source
praise_att1	Even my leader's praising comments on my work feel controlling *Selv min leders rosende kommentarer til mit arbejde føles kontrollerende*	Inspired by Jacobsen et al. (2014)
praise_att2	My leader's praise of my effort contributes to my development *Min leders ros af min indsats bidrager til at udvikle mig*	Inspired by Jacobsen et al. (2014)
praise_att3	Regular, positive feedback helps support my interest in my work *Regelmæssig positiv feedback er med til at understøtte min interesse i arbejdet*	Inspired by Jacobsen et al. (2014)

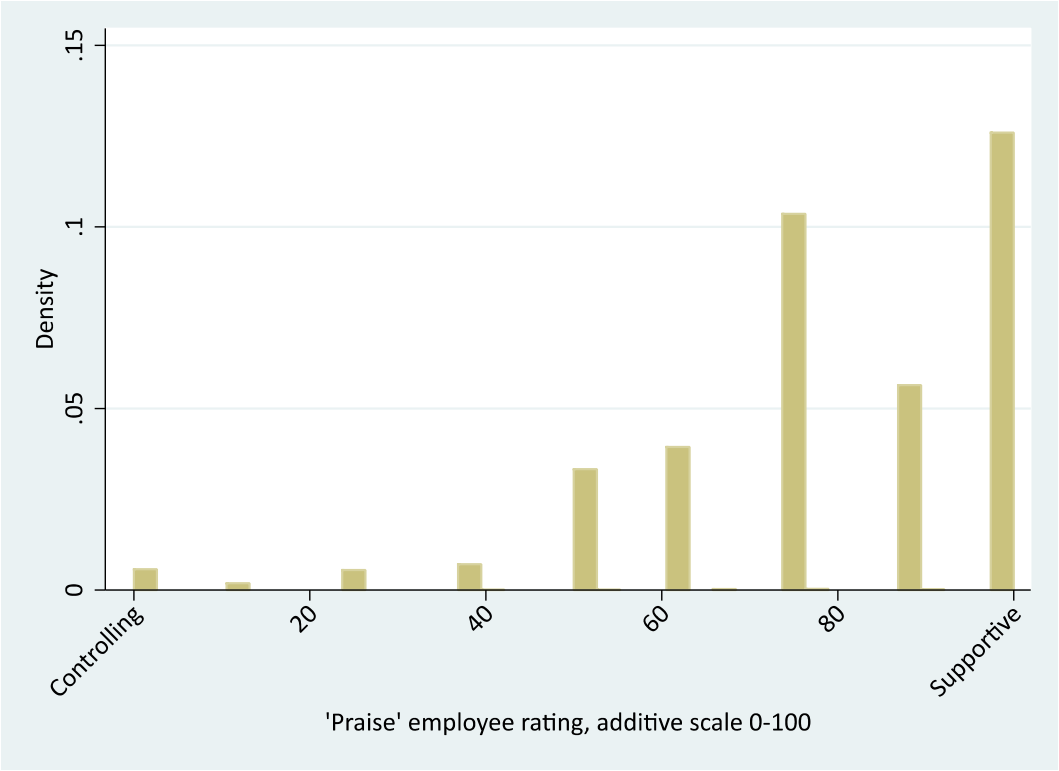
Table 10. Factor analysis: Verbal rewards, supportive or controlling

Pretext:	Loadings
Even my leader's praising comments on my work feel controlling	-.289
My leader's praise of my effort contributes to my development	.764
Regular, positive feedback helps support my interest in my work	.745

Note: Extraction method: Principal factor analysis. One factor with an Eigenvalue higher than 1 was extracted. N = 6,465. Cronbach's alpha with praise_att1 = 0.632, Cronbach's alpha without praise_att2 = 0.805

Two of the items seem to reflect a common latent dimension.

Figure 1. Verbal rewards, supportive or controlling, distribution



Note: praise_att1 is not included in index. N = 6,551, mean = 78.78, std. dev. = 21.32, min = 0, max = 100

Verbal rewards, visibility (CBJ/LBA)

Bellé (2015) argues that visibility of rewards is important (also for verbal rewards), and these items are inspired by his experimental study.

Table 11. Verbal rewards, visibility, items

		Source
praise_beh1	My leader praises his/her employees publicly *Min leder roser offentligt sine medarbejdere*	Inspired by Bellé (2015)
praise_beh2	My leader normally expresses his/her recognition of a job well done one-on-one *Min leder giver som oftest anerkendelse for god indsats på tomandshånd*	Inspired by Bellé (2015)
praise_beh3	My leader makes it very visible (e.g. through newsletters, boards) which employees, who are doing a good job *Min leder gør det meget synligt (fx via nyhedsbreve, opslagstavler osv.), hvilke medarbejdere der klarer sig god*	Inspired by Bellé (2015)

Table 11. Verbal rewards, visibility, frequencies

	Not at all	To lesser extent	To some extent	To a high extent	To a very high extent	N
My leader praises his/her employees publicly	10.31%	13.81%	31.06%	31.41%	13.42%	6,365
My leader normally expresses his/her recognition of a job well done one-on-one	10.04%	10.99%	34.66%	33.18%	11.14%	6,345
My leader makes it very visible (e.g. through newsletters, boards) which employees, who are doing a good job	58.25%	18.05%	17.94%	4.54%	1.23%	6,350

Perceived organizational changes (CBJ/LBA)

These items directly ask about the perceived changes in the treatment period in the use of 8 leadership tools. These are transactional tools (verbal rewards linked to employee effort, verbal rewards linked to employee results, monetary rewards for employee effort, monetary rewards for employee results, negative sanctions linked to employee results, negative sanctions linked to employee efforts) and transformational tools (give direction, share it with the employees and sustaining it in the long run). Especially the focus on different contingencies (effort/results) are inspired by Podsakoff et al. (1982 and 2006)

Table 12. Perceived organizational change, items

	Nedenstående spørgsmål handler om, hvorvidt din leder på en række områder har ændret adfærd i det seneste år.	Source
cls1	Gives concrete praise in relation to employee effort *Giver konkret ros knyttet til medarbejdernes indsats*	Inspired by Podsakoff et al. (1982 and 2006)
cls2	Gives concrete praise in relation to employee results *Giver konkret ros knyttet til medarbejdernes resultater*	Inspired by Podsakoff et al. (1982 and 2006)
cls3	Gives pecuniary rewards to employees who make a great effort *Belønner lønmæssigt de medarbejdere, der gør en stor indsats*	Inspired by Podsakoff et al. (1982 and 2006)
cls4	Gives pecuniary rewards to employees who deliver certain results *Belønner lønmæssigt de medarbejdere, der leverer bestemte resultater*	Inspired by Podsakoff et al. (1982 and 2006)
cls5	Gives negative consequences for employees whose effort is not satisfactory	Inspired by Podsakoff et al. (1982 and 2006)

	Nedenstående spørgsmål handler om, hvorvidt din leder på en række områder har ændret adfærd i det seneste år.	Source
	Giver negative konsekvenser for medarbejdere, hvis indsats ikke er tilfredsstillende	
cls6	Communicates the [organization type's] direction to the employees" *Kommunikerer [ORGANISATIONENS]retning for medarbejderne*	Inspired by Podsakoff et al. (1982 and 2006)
cls7	Works towards a common understanding of [the organization type's] contribution *Arbejder mod, at alle forstår, hvad [ORGANISATIONEN] skal bidrage med*	Inspired by Podsakoff et al. (1982 and 2006)
cls8	Sustains focus on [the organization's] direction *Fastholder fokus på, i hvilken retning [ORGANISATIONEN] skal arbejde*	Inspired by Podsakoff et al. (1982 and 2006)

Table 13. Factor analysis: Perceived organizational change

	Factors		
	1	2	3
Gives concrete praise in relation to employee effort	.338		.685
Gives concrete praise in relation to employee results	.342		.681
Gives pecuniary rewards to employees who make a great effort		.736	
Gives pecuniary rewards to employees who deliver certain results		.734	
Gives negative consequences for employees whose effort is not satisfactory			
Communicates the [organization type's] direction to the employees	.809		
Works towards a common understanding of [the organization type's] contribution	.796		
Sustains focus on [the organization's] direction	.810		

Note: Extraction method: Principal factor analysis with orthogonal rotation. Loadings < .3 left blank. Three factors with an Eigenvalue higher than 1 were extracted. N = 6,006. Cronbach's alpha for items in factor 1 (cls1,cls2) = .791. Cronbach's alpha for items in factor 2 (cls3, cls4) = .834. Cronbach's alpha for items in factor 3 (cls6, cls7, cls8) = .759.

Intention to quit (NWN)

A question on intention to quit is added in order to show how satisfied the person is with his/her job. It adds a dimension to job satisfaction as it describes an action. However, one should be cautious with interpretations because "intention to quit" is not the same as actually quitting. There are 3 questions about intention to quit. Quit1 asks about intention about the current job but conditions on staying in the organizations. The condition may have made the question too complicated to answer because cross tabulations of quit1 and quit2 shows that there are 17 respondents who say 'Always' to leave the job and remain in the organization and at the same time say that they always think about leaving the organization. Similarly, you it could be difficult to leave the organization and remain in the same job as 52 do. The counter argument is that the answers should not be taken too literal. People are expressing satisfaction/dissatisfaction with their job (quit1), their organization (quit2) and finally their industry (quit3).

Table 14. Intention to quit, items

		Source
quit1	How often do you consider leaving your job but remaining in the organization? *Hvor ofte tænker du på at forlade din stilling, men blive i organisationen?*	Own
quit2	How often do you consider leaving your organization? *Hvor ofte tænker du på at forlade din organisation?*	Own
quit3	How often do you consider leaving your industry? *Hvor ofte tænker du på at forlade din branche?*	Own

Table 15. Intention to quit, frequencies

	Never	Rarely	Some-times	Often	Always	N
How often do you consider leaving your job but remaining in the organization?	39.34%	31.78%	21.26%	7.15%	0.47%	5,973
How often do you consider leaving your organization?	29.29%	33.70%	25.70%	10.46%	0.85%	5,965
How often do you consider leaving your industry?	35.54%	31.62%	23.74%	8.43%	0.67%	5,970

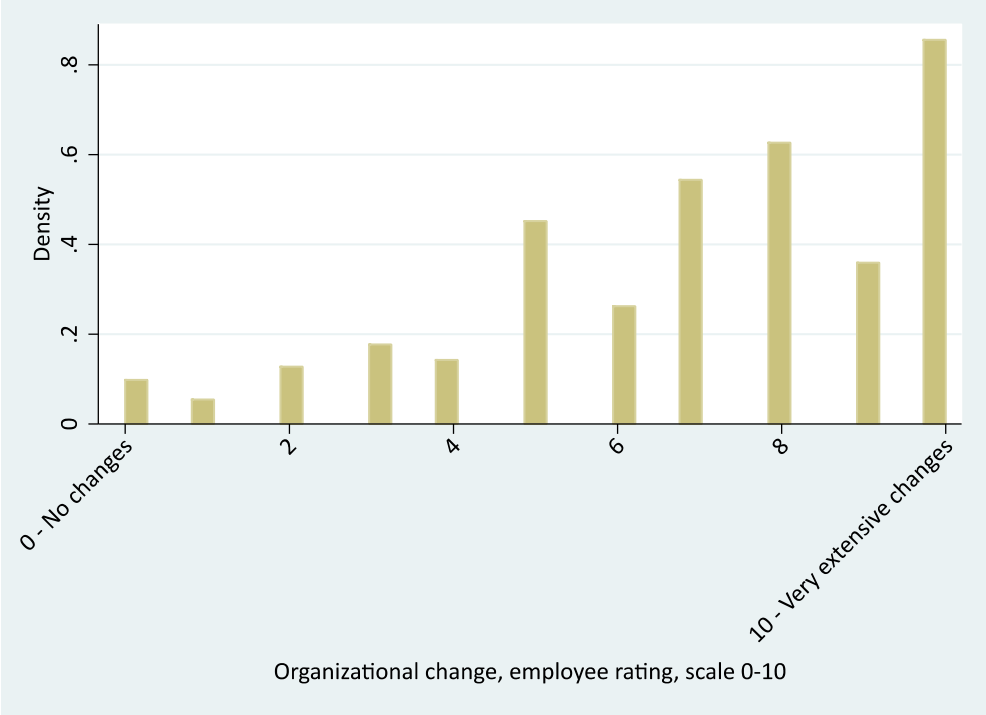
Experienced organizational change (ALH)

Experienced organizational change – is a one-item measure, which focuses on degree of experienced change within the past year. The response categories range from experiencing 0 = no change to 10 = very extensive change

Table 16. Experienced change scale, items

		Source
change_scale	To which degree have you experienced change in your organization within the past year? *I hvilken grad har du oplevet, at der har været forandring på [ORGANISATION] inden for det seneste år?*	Own

Figure 2. Experienced change scale distribution



Note: n=5,933, mean = 6.99, std. dev. = 2.65, min = 0, max = 10

A fairly large amount of employees report large changes within the last year. The mean is 7 on the scale from 0 – 10.

Change management (ALH)

Employees responding 1 or more to the item on experienced organizational change were also presented with this question on change management. Change management has shown to be an important aspect of employee reactions to change (Oreg, et al., 2011), especially with regard to trust in management change competencies (Oreg, 2006). This is a three item measure targeting the degree to which employees in relation to the organizational change experience: 1) trust in their managers' change ability, 2) trust in manager, and 3) that their manager was good at explaining the reasons for the change. The response categories range from 1 = completely disagree to 7= completely agree

Table 17. Change management, items

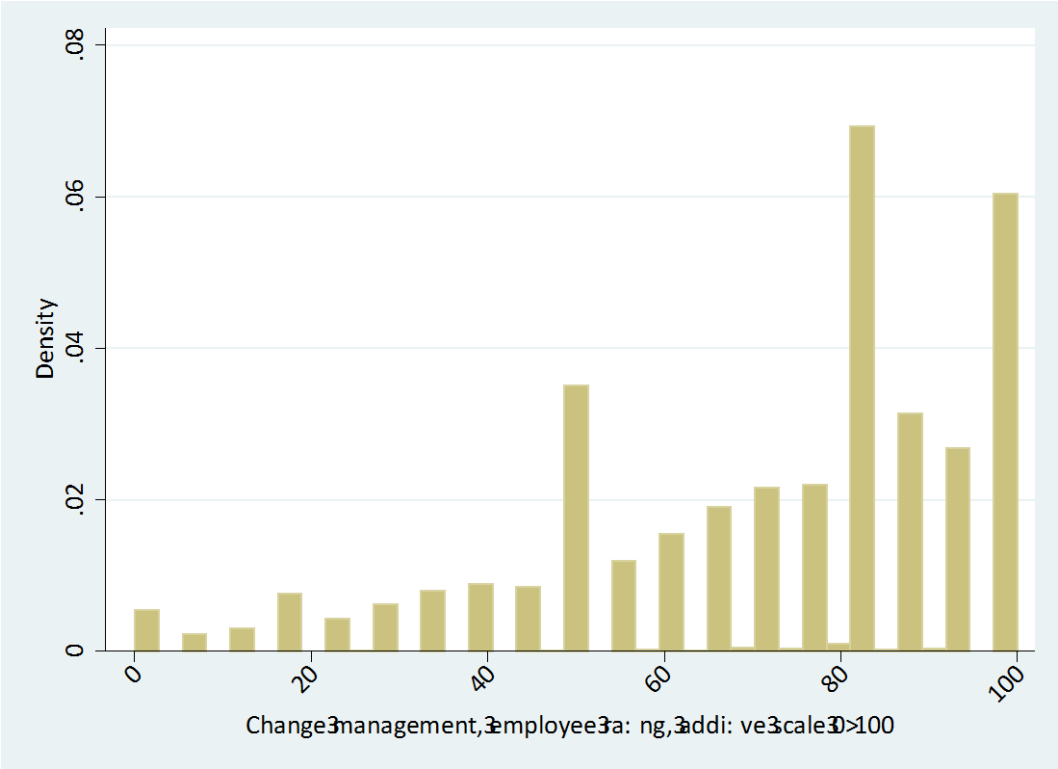
	In connection with the change… *I forbindelse med forandringen…*	Source
change_leaderatt1	I felt that my leader knew what he/she was doing *Oplevede jeg, at min leder vidste, hvad han/hun gjorde*	Inspired by Oreg (2006)
change_leaderatt2	I could trust my leader *Kunne jeg stole på min leder*	Inspired by Oreg (2006)
change_leaderatt3	My leader was good at substantiating the change *Var min leder god til at begrunde forandringen*	Inspired by Oreg (2006)

Table 18. Factor analysis: Change management

Pretext:	Loadings
I felt that my leader knew what he/she was doing	.892
I could trust my leader	.871
My leader was good at substantiating the change <	.875

Note: Extraction method: Principal factor analysis. One factor with an Eigenvalue higher than 1 was extracted. N = 5,664. Cronbach's alpha = .924

Figure 3, Change management distribution



Note: n=5,716, mean = 72.13, std. dev. = 24.69, min = 0, max = 100

The factor analysis extracts one factor. Many of the respondents indicate high values of change management– or even the maximum score on this dimension. The mean score is 72.13.

Responsibility attribution (PAN)

Attribution of responsibility for performance is central to the assignment of credit and blame and where to look for potential organizational improvements. We focus here on how public school teachers attribute responsibility to different actors, which might well depend on their organization's level of performance (Meindl et al. 1985). Particularly we measure their attribution of responsibility to two hierarchically superior actors (the school principal and the city council) and to their own group. The two items measuring responsibility attribution to the school principal have previously been used by Nielsen and Moynihan (2015), and the other four items are constructed in a similar manner.

Table 19. Responsibility attribution, items

	De næste spørgsmål handler om din vurdering af, hvor stor betydning forskellige aktører har for, hvordan din skole klarer sig. I hvor høj grad er du enig eller uenig i følgende påstande?	Source
rea1	My principals effort is decisive for how our students' academic performance *Min skoleleders indsats er afgørende for, hvordan vores elever klarer sig fagligt*	Nielsen and Moynihan (2015)
rea2	The size of the municipality's school budget has little effect on my school's performance *Størrelsen af kommunens skolebudget har ikke særlig stor betydning for, hvor godt min skole klarer sig*	Inspired by Nielsen and Moynihan (2015)
rea3	Decisions made by the municipal council are decisive for our students' academic performance *Kommunalbestyrelsens beslutninger er afgørende for, hvordan eleverne på min skole klarer sig fagligt*	Inspired by Nielsen and Moynihan (2015)

	De næste spørgsmål handler om din vurdering af, hvor stor betydning forskellige aktører har for, hvordan din skole klarer sig. I hvor høj grad er du enig eller uenig i følgende påstande?	Source
rea4	My principal has little influence on my school's performance *Min skoleleder har ikke særlig stor betydning for, hvor godt min skole klarer sig*	Nielsen and Moynihan (2015)
rea5	The municipal council has little influence on my school's performance *Kommunalbestyrelsen har ikke særlig stor betydning for, hvor godt min skole klarer sig*	Inspired by Nielsen and Moynihan (2015)
rea6	The teachers at my school are decisive for our students' academic performance *Lærerne på min skole er afgørende for, hvordan eleverne klarer sig fagligt*	Inspired by Nielsen and Moynihan (2015)

Table 20. Responsibility attribution, frequencies

	Strongly disagree	Disagree	Neither nor disagree	Agree	Strongly agree	N
My principals effort is decisive for how our students' academic performance	4.66%	12.28%	27.98%	43.15%	11.92%	1,694
The size of the municipality's school budget has little effect on my school’s performance	34.48%	40.82%	16.80%	6.75%	1.15%	1,482
Decisions made by the municipal council are decisive for our students’ academic performance	4.87%	15.22%	32.54%	36.33%	11.03%	1,478
My principal has little influence on my school’s performance	31.40%	41.91%	14.46%	9.50%	2.72%	1,694
The municipal council has little influence on my school’s performance	14.72%	34.57%	30.65%	14.45%	5.60%	1,481
The teachers at my school are decisive for our students’ academic performance	0.41%	0.77%	4.19%	41.39%	53.24%	1,696

Organizational change, type (ALH)

There exist scarce indications of change typology as potentially determining for change processes and outcomes (Oreg, et al., 2011). The measure targets types of changes occurring within the past year at three levels: 1) changes in the manager's own work (task and/or processes), 2) changes in the organization of the workplace (restructuring, mergers or divisioning), 3) changes in overall strategy (aims and priorities). The three items are inspired by first, second and third order changes, described by Kuipers, B. et al. (2014). First order changes concern sub-system, organizational process, introduction of new processes, systems, and procedures. Second order changes concern reorganization and agency turnarounds. Third order changes concern reforms, creation of partnerships, sector-specific reforms, privatization and merging of government organizations. The response categories were: 1 = no changes, 2=smaller changes, 3) larger changes, 4) very extensive changes.

Table 21. Intended organizational change, items

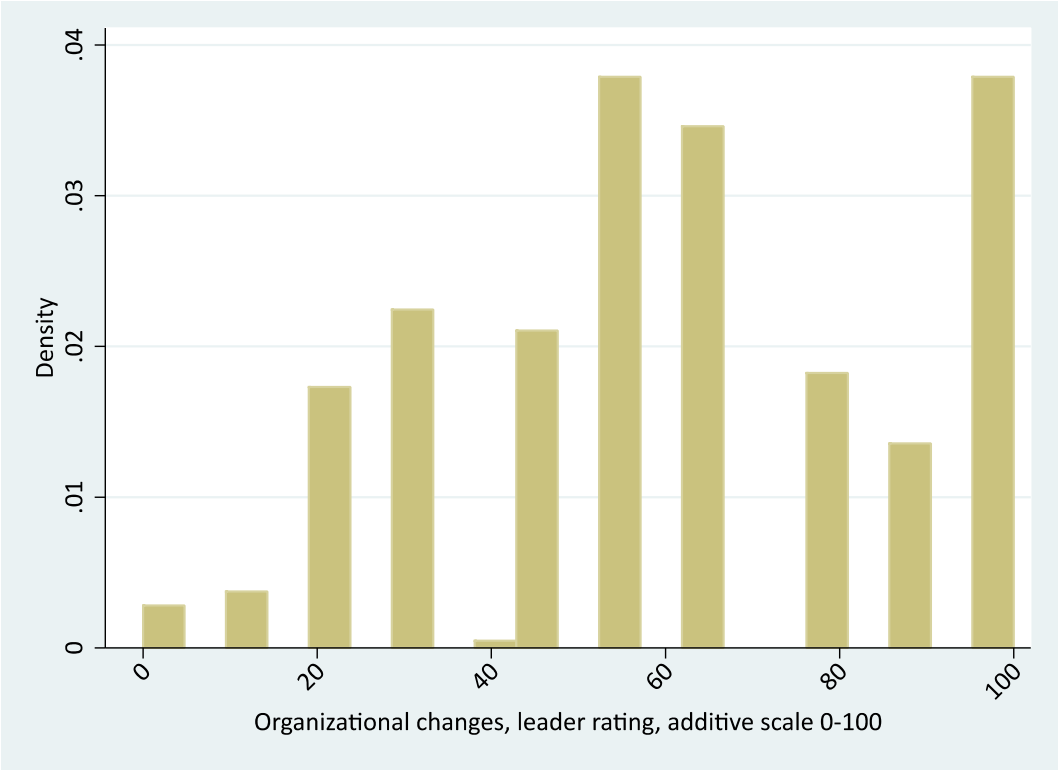
	I hvilket omfang har følgende forandringer været gennemført på din arbejdsplads inden for det seneste år?	Source
l_changes1	Changes in your own job (e.g. in terms of tasks and/or processes) *Forandringer i dit eget arbejde (fx i forhold til opgaver og/eller processer)*	Inspired by Kuipers et al., 2014
l_changes2	Changes in the organization of the workplace (e.g. re-organization, merger and/or de-merger) *Forandringer i arbejdspladsens organisation (fx omorganisering, sammenlægning og/eller opsplitning)*	Inspired by Kuipers et al., 2014
l_changes3	Changes in overall strategy (e.g. goals and priorities) *Forandringer i overordnet strategi (fx målsætninger og prioriteringer)*	Inspired by Kuipers et al., 2014

Table 22. Factor analysis: Intended organizational change

Pretext:	Loadings
Changes in your own job (e.g. in terms of tasks and/or processes)	.768
Changes in the organization of the workplace (e.g. re-organization, merger and/or de-merger)	.741
Changes in overall strategy (e.g. goals and priorities)	.679

Note: Extraction method: Principal factor analysis. One factor with an Eigenvalue higher than 1 was extracted. N = 447. Cronbach's alpha = .803

Figure 4. Intended organizational change, distribution



Note: n=449, mean = 61.68, std. dev. = 26.24, min = 0, max = 100

The distribution for intended organizational change is left-skewed, implying that employees generally perceive the vision of their organization to be important (mean = 61.68).

Perceived performance (UTJ/PAN)

Organizational performance can be conceptualized and measured in various ways. To capture different dimensions of performance, we include measures of managers' perceptions of their organization's performance on three parameters: Academic performance (rated by school principals), student/child wellbeing (rated by school principals and day care managers) and parent satisfaction (rated by school principals and day care managers). One argument for doing this is that managers are often able to include a broader set of performance criteria in their evaluations than administrative register data on performance (e.g., Brewer 2005). The items used here are inspired by Thomas, Walker, and Meier (2011), but were adapted to the Danish school and day care context. Based on Nielsen (2014), we asked school principals and day care managers to compare their organization's performance to the national average (for student academic performance), other schools/day care centers within the municipality (for student/child wellbeing and parent satisfaction), socio-economically comparable schools/day care centers, and last year's performance.

Perceived performance: Parents' satisfaction (UTJ)

Only daycare and primary schools

Table 23. Perceived performance, parent's satisfaction, items

	I de følgende spørgsmål beder vi dig give en vurdering af, hvordan din [ORGANISATION] klarer sig i forhold til forældretilfredshed.	Source
l_parsatis1	How do you assess your [school's/day care's] performance in terms of parents' satisfaction compared to other [schools/day care centers] in the municipality? *Hvordan vurderer du, at forældretilfredsheden med din [ORGANISATION] samlet set er sammenlignet med andre skoler i kommunen?*	Inspired by Thomas, Walker, and Meier (2011), Nielsen (2014)
l_parsatis2	How do you assess your [school's/day care's] performance in terms of parents' satisfaction compared to other [schools/day care centers] in the municipality with similar [student/child] socio-demographic background? *Hvordan vurderer du, at forældretilfredsheden med din [ORGANISATION] samlet set er sammenlignet med andre skoler, der har et lignende elevgrundlag?*	Inspired by Thomas, Walker, and Meier (2011), Inspired by Thomas, Walker, and Meier (2011), Nielsen (2014)
l_parsatis3	How do you assess your [school's/day care's] performance in terms of parents' satisfaction compared to last year? *Hvordan vurderer du, at forældretilfredsheden med din [ORGANISATION] er lige nu sammenlignet med for et år siden?*	Inspired by Thomas, Walker, and Meier (2011), Nielsen (2014)

Table 24. Perceived performance, parent's satisfaction, frequencies

	Somewhat worse	A little worse	About the same	A little better	Somewhat better	N
l_parsatis1	0.00%	2.52%	37.41%	30.22	29.86%	278
l_parsatis2	0.00%	0.72%	40.79%	37.91%	20.58%	277
l_parsatis3	0.00%	2.88%	50.36%	30.58%	16.19%	278

Note: For question wording see table 23.

Users' well-being (UTJ)

Table 25. Perceived performance, users' well-being, items

	I de følgende spørgsmål beder vi dig give en vurdering af, hvordan din [ORGANISATION] klarer sig i forhold til [BRUGERGRUPPES] trivsel.	Source
l_userwb1	How do you assess your [school's/day care's] performance in terms of [students'/children's] well-being compared to other [schools/day care centers] in the municipality? *Hvordan vurderer du, at [BRUGERGRUPPES] trivsel er i din [ORGANISATION] samlet set sammenlignet med andre skoler i kommunen?*	Nielsen (2014)
l_userwb2	How do you assess your [school's/day care's] performance in terms of [students'/children's] well-being compared to other [schools/day care centers] in the municipality with similar [student/child] socio-demographic background? *Hvordan vurderer du, at [BRUGERGRUPPES] trivsel er i din [ORGANISATION] samlet set sammenlignet med andre skoler, der har et lignende elevgrundlag?*	Nielsen (2014)
l_userwb3	How do you assess your [school's/day care's] performance in terms of [students'/children's] well-being compared to last year? *Hvordan vurderer du, at [BRUGERGRUPPES] trivsel på din [ORGANISATION] er lige nu sammenlignet med for et år siden?*	Nielsen (2014)

Table 26. Perceived performance, users' well-being, frequencies

	Somewhat worse	A little worse	About the same	A little better	Somewhat better	N
l_userwb1	0.00%	1.84%	41.91%	37.13%	19.12%	272
l_userwb2	0.00%	0.37%	43.54%	43.54%	12.55%	271
l_userwb3	0.00%	1.84%	51.47%	34.19%	12.50%	272

Note: For question wording see table 25.

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