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The Missing Talent in Public Sector*

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Abstract

A central question in organizational economics relates to the allocation of talent both across sectors and across responsibilities, and its consequences for performance.This question has received increasing attention due to the increasing wage dispersion, skill-biased technological change, among other forces. We examine the allocation of talent within the public sector and we make three important contributions. Fist, using individual´s high school GPA, we show that even within the public sector, talented individuals are more likely to become "leaders" and are paid more than others. This evidence supports that talent does matter for public sector decisions and there is positive assortative matching between ability and tasks. Second, we document a large decline in the share of "talented" people working for the public sector over time. Fewer people work for the public sector and they leave faster. We refer to this as "talent crisis." Third, we demonstrate that "talented leaders" affect the overall public sector performance, and the performance of their business units.

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I Introduction

The allocation of talent is increasingly important as we accelerate our transition towards knowledge-based industries and services. During the last few years, the private-public wage gap has greatly increased, in particular for the most talented individuals. Talented individuals, and in particular, those in charge of managerial roles are more likely to transfer from the public to the private sector. Such, public-sector talent gap directly impacts public welfare, because the public sector constitutes an important part of most economies. The share of labor market working in the public sector varies within OECD countries between 6 and 31 pct (OECD (2021)). Organizing public sector entities to increase quality and quantity of output while reducing cost is high on national and international policy agendas (World Bank (2021)). Reforms of public sector entities focus on improving efficiency and labor effort through streamlining organizational structures highlighting the role of good leadership and improved labor effort (World Bank (2018)).

We contribute to this literature by documenting the professional trajectory of talent across the public and private sectors and its consequences for efficiency. We use detailed employee-employer administrative data from Denmark that cover all employees in public and private sector. Moreover we link employees with their high school GPA information and other data on educational attainment. The paper makes two important contributions. First, we provide new stylized facts related to the allocation of talent (as proxied by high school educational performance) across the public and private sectors both cross-sectionally and overtime. For the entire sample, we show that a large fraction of talented individuals start their professional trajectories in the public sector; even for the top 10% of the talent pool, working for the public sector is an attractive venue to launch their careers. Over time, we demonstrate that the fraction of top talent in the public sector has declined substantially. More worrisome, the decline is even higher if we focus on government units with more than 100 employees, which may resemble the managerial traits that are in shorter supply in the market. In other words, relative to the end of the 20th century, the public sector is experiencing a talent crisis. Second, using CEO and CEO-unit fixed effects, we find causal evidence that talented leaders impact employee absenteeism. For employees that move between units, we show that good leaders both incentivize existing employees and select new employees with lower absenteeism. Using health shocks to the leader, we also demonstrate that leaders affect the employees absenteeism at the workplace. Taken together, this paper demonstrate that consistent with prior literature, managerial talent is critical for the allocation of resources, but that the public sector is increasingly facing a talent crisis that merits further analysis in subsequent work.

Measuring leadership, performance and efficiency in the public sector is challenging given that public sector units vary considerably in organizational structure, objectives and outputs across different parts of the public sector. Most of the research relies on qualitative data provided through case studies, interviews, or small-scale surveys (e.g. Parry and Proctor-Thomson (2002) and Wilson (1989)). In the absence of a common metrics to measure the impact of leadership, the economic literature has focused on sub sectors where measurements of input and output are possible either through surveys, randomized experiments or through registers. Within the health sector, Janke et al. (2018) finds little impact of hospital CEOs on survey outcomes in UK. [1] Bloom et al. (2014, 2015, 2019, 2020) link better managerial practice of hospitals to better health and efficiency outcomes. For the administrative sector Rasul and Rogger (2018) show that better management practices in Nigeria improves the efficiency of public sector projects. Fenizia (2022) finds causal impact of leadership within the Italian Social Security administration where both quality and quantity of output is measurable[2]. For the educational sector, Hoxby (2000) shows that increased competition among school leads to higher school productivity.

[1] Janke et al. (2018) exploits a small set of leaders that move across hospitals to estimate CEO fixed effects on survey outcomes of hospitals output such as capacity, use of hospital beds and on quality of services.

[2] Fenizia (2022) are able to estimate a two-way fixed effect model and document the potential productivity gains from reassigning managers within the Social Security administration

II Institutional Setup of the Public Sector in Denmark

The Danish public sector constitutes a significant portion of the national labor market, employing approximately 40pct of the workforce. This equates to roughly 400,000 individuals engaged in public service roles. The largest subsector within the public sector is healthcare, accounting for 40 pct of the total workforce. Education follows closely behind, representing 30 pct of public sector employees. Public administration comprises the remaining 25pct of the workforce. While these three subsectors dominate the Danish public sector, it's important to note that smaller sectors, such as the military, also contribute to the overall size and composition of the public service workforce. The Danish public sector labor market operates within a tripartite negotiation framework, similar to the private sector. This system involves collective bargaining between employer organizations and employee unions to establish wages, working conditions, and other employment-related terms. In the public sector, employer organizations function at three distinct levels: the municipal level, the regional level (responsible for healthcare institutions), and the central government level. These organizations represent the interests of public sector employers in negotiations with employee unions. Through collective bargaining, key issues such as wage levels, wage growth, employment and termination procedures, vacation entitlements, and other essential terms of employment are negotiated and agreed upon. This collaborative process ensures that the interests of both employers and employees are considered and balanced in shaping the public sector labor market.

While the public sector and private sector share similar rules for hiring and firing, the public sector often faces unique political constraints that can influence these decisions. For example, government mandates may require public sector organizations to reduce their workforce by a specific percentage or impose hiring freezes. Despite these constraints, unit leaders within the public sector still retain a degree of operational freedom in hiring and firing decisions. They can make staffing choices within the parameters set by government policies and regulations. In general, employment contracts in the public sector are permanent, similar to those in the private sector. This means that employees can only be terminated for a valid reason, such as misconduct or a significant breach of contract. However, if there is no such reason, their employment is considered secure. It's important to note that budget cuts, when implemented centrally, can often trigger layoffs.

A notable exception to the permanent contracts exists for top leaders in the public sector. These individuals often have contracts with fixed terms, typically ranging from three to five years. This practice serves multiple purposes. First, it allows for greater flexibility in moving top leaders between positions. Second, it enables public sector organizations to offer competitive compensation packages, including additional benefits or bonuses, to attract and retain qualified leaders. Entering the public labor market is generally similar to entering the private sector. Unless a specific job category requires specialized qualifications (like doctors in hospitals or analysts in the military), there are no systematic entry barriers, such as entrance exams. Once employed in a public sector unit, individuals will encounter varying degrees of management practices and evaluation criteria. These systems may differ from one unit to another.

Promotions in the public sector are typically decided by the leadership of the individual unit. Beyond a few positions designed to support existing government secretaries, there are no politically appointed roles. All employees are expected to be generalists capable of serving in different government departments.

III Data Construction

III.1 Data sources

III.1.1 Register-Based Labour Force Statistics (RAS)

This is a employer-employee data set for the entire Danish population at Statistics Denmark. In addition to the employer's identification number, the RAS data set contains employees' demographic information, such as age, gender, and the employees' positions in the organization.

Public Units and their Leaders The dataset includes employment both in the public and private sectors. It also contains information such as subsector within the public sector (i.e., education, health or public administration), number of employees, and location.

A public organization has two identifiers. The first one denotes a broad organization such as a municipality. The second is a workplace identifier that denotes a school, a hospital, a library, etc. The workplace identifier is the smallest unit where employment, remuneration, and absenteeism are recorded. The workplace is our key unit of analysis which we refer to as a public sector unit (PU). E

We define a leader based on the Danish International Standard Classification of Occupations (ISCO-08) code. A person is considered a leader if they hold an occupation code 1 ("Managers"), which reflects the highest position in the organization. If more than one manager is identified, we use a combination of the ISCO-08 code and wage to identify the leader.

III.1.2 Educational Attainment

High School Data Statistics Denmark's UDG annual datasets provide comprehensive data on the degrees earned by the entire Danish population, including the date of degree and the grades obtained, among other variables. These grades, similar to a GPA, represent the average across courses in the final year of education.

In Denmark, education is compulsory until the 9th grade. After the 9th grade, students may attend a vocational school, a general education high school, or discontinue their education. Unfortunately, grades from the 9th grade are available only from 2008. However, high school grades have been available since the 1970s. Therefore, we use high schools, specifically the grade from the last year of high school.

For this reason, as well as for our focus on top talented individuals, we use only high school grades. We also restrict attention to individuals who studied general high school as grades from vocational and general high school are not comparable.

To minimize the effect of different grading standards across the various types of schools and over time, we rank students based on their grades relative to peers graduating in the same type of school and year.

For most of the analysis we classify individuals into two groups based on the high school GPA . The first group, "Top Graduates", are individuals whose GPA is at the top 20% of all students in the cohort. The rest are classified as "Non-Top Graduates".

University degree The UDDA annual datasets also provide information on educational attainment for all levels from elementary school to graduate schools. We use information on the date of the completion of college degree as well as the field studied.

National exam The national test iis common among all schools in Denmark. The national tests differ from the tests that are already used in the Danish schools mainly because • The tests are IT-based and the pupils answer the questions online via the internet. • Test results (e.g., scores, reports) are automatically calculated and generated. The teachers do not have to correct the tests, and the analysis of test results (or some parts of the work) has been done when the teacher can access the test results the next day. • The tests are supplied to the schools free of charge. • The tests are adaptive. Each test contains three separate adaptive test sessions which deal with different dimensions of the subject (so-called “profile areas”, described below).

III.1.3 Employee absenteeism.

Statistics Denmark collects absence data for all employees in the central and local governments. Public sector institutions are required to report each spell of absence for all employees in the institution. For each spell, the data contain the employee national identification number (CPR number), the public sector unit where he or she works, start day, end day, and one of four absence categories: “Own sickness”, “Child sickness”, “Work accident” and “Maternity/Paternity-related absence”. In the analysis below, we define absent days as the sum of the "Own sickness" and "Child sickness" not including the two latter categories which are rare events.[3]

Reporting is mandatory for each unit and stated in the law. Statistics Denmark has developed software integrated into the payroll system to facilitate collecting absence information. Thus, the cost for a unit of collecting absence data is considered minimal.

Absence days are not related to vacation days. The number of vacation days in the public sector is determined by a combination of law and centralized negotiation between central and local governments and the public sector trade unions and is not determined at the local level in the individual public sector units. The law establishes the right to five weeks (25 days) of holidays every year that are not recorded in the absence data.

We have data for all public sector employees from 2010 to 2019. In the analysis, we exclude employees with more than 120 days absenteeism in a year. We do this because the focus on the paper is how leadership may induce individuals to deliver more or less effort, not how to deal with long term absenteeism induced by serious illnesses or long term psychiatric issues.

[3] We have done the analysis below with only "Own absence" and with including all four categories. The results are qualitatively the same.

III.1.4 Other Datasets

In addition to the above datasets we complement the analysis with other information for the individuals. To identify where the individuals lived in a rural or urban area when graduating high school we use the BEFF dataset that contains all the demographic information of individuals in Denmark including family information, address etc. We also include control for family wealth. The information on wealth of the parents comes from the INCOME dataset which comes from the tax authorities.

IV Sample Selection

To capture meaningful administrative units, in our analysis, we focus on public sector units with more than 10 employees. To focus on individuals with the potential to become public sector leaders, as mentioned above, we focus on individuals who studied standard high school and subsequently graduated with a university degree.

IV.1 Summary statistics

In the public sector, 2.3% of workers are considered leaders. In cases where no person is set as leader in the workplace unit (23% of units), we identify one leader per unit as the person with the highest wage and longer tenure among the people with the lowest occupation code.

V Decline of talent in the public sector over time

In Figure 1 we examine the employment trends in the public sector among different segments of the population, categorized by their academic performance in high school. The x-axis denotes calendar year. The blue line represents the proportion of top graduates who are employed in the public sector, relative to all top graduates employed in the economy. Conversely, the red line depicts the equivalent proportion for the non-top graduates. We observe that 55% of top graduates work in the public sector in 2005 but this percentage declines overtime and this proportion is only 47% in 2019. Conversely the percentage of non-top graduates in the public sector is 46% in 2005, and it is relatively stable over time. [4]

Next we repeat this figure for only the top graduates for different graduating cohorts. We create four cohorts depending of the year of high school graduation: high school graduates of 1992-96, 1997-2001, 2002-2006 and 2007-2011. First we observe that for every cohort there is a decline of top graduates working in the public sector over time, so there is not one cohort that is driving the change. Moreover, we observe that more recent cohorts are less likely to start their careers in the public sector. Specifically 55.4% of top graduates finishing high school between 1992-1996 got their first job in the public sector, in contrast to only 38.7% among the top graduates finishing high-school in 2007-2011.

In Appendix Figure A1 we repeat by field of university education and we show that this pattern is evident in most disciplines.

Although identifying the causes of this decline of top graduates in the public sector is beyond the scope of the paper, over the recent period the wage gap between the private and public sector has widen. Figure A2 presents for ratio of private sector wages over public sector wages for different percentiles of the distribution. The median wage in the private sector relative to the public sector has not changed much from 1994 to 2020. However at higher wage levels, the divergence between private sector and public sector wages has widen over time. Remarkably for the top 1 percentile the ratio was about 1.4 in 2003 and shot up to 1.8 by 2020, an increase of more than approximately 35%.

To sum up Figure 1 shows that fewer top graduates work in the public sector over time. In the next sections we explore the consequences of the decline of top graduate employment

[4] The percentage of people who work in public sector among the entire population is 33% according to aggregate statistics by Danish Statistics. Our main sample contains only individuals who graduated from university and therefore the percentage of them working in public sector is different than the aggregate statistic for the entire population.

in public sector for the quality of leadership and the provision of public services.

VI Allocation of top graduates within the public sector

In this section, we study the career path of top graduates. Specifically, we study whether top graduates are more likely to reach leadership positions in the public sector.

In Figure 3 , we limit the sample to individuals who start their careers in the public sector and plot the fraction in each high school grade quintile that reaches a leadership position in the public sector. As the figure shows there is a monotonic relation between high school grade and the probability of becoming a leader. In addition, top graduates are significantly more likely to reach a leadership position relative to individuals in the second quintile of high school grades. One concern is whether these leadership positions are indeed promotions and not just strategic titles. In Appendix Table A3 we plot the average wage 15 years after school for each high school grade quintile. We observe that the higher the quintile of GPA in high school correlates with higher average wages.

To assess the relative importance of grades relative to other factors that might affect the career path of public sector employees, we estimate a linear probability model in Table 2. The dependent variable is an indicator that takes the value one if an employee is at a leadership position 15 years after high school. The regression in addition to being a top graduate, includes other individual characteristics at high school graduation, such as gender, family wealth, rural vs urban location, and citizenship. We observe that males and individuals from urban areas have higher likelihood of reaching a leadership position in the public sector. Importantly being a top graduate increases the probability of reaching a leadership position by 47 basis point, which is economically significant relative to the unconditional probability of 2.3% of holding a leadership position at the public sector.

VI.1 Fewer Top-Graduate Leaders

So far we have shown that the probability of becoming a leader is higher for top graduates as well as that there are fewer top graduates entering the public sector. Nevertheless this does not automatically imply that there are fewer leaders that are top graduates. For example, it could be that public sector leaders are drawn for the private sector. The other possibility is that although the number of top graduates working in the public sector is lower over time, there might be a sufficient number to fill all leadership positions. To address these issues we focus on individuals who are first-time leaders. In Figure 4 we examine first-time leaders public sector over time. We observe that in 2011 almost half of the individuals who attain a leadership position for the first time are top graduates. The share drops to 38% in 2019, a 24% decline. Overall we show in this section that the public sector allocates top graduates to leadership positions, and as a result that the lower flow of top graduates in the public sector, translates to less top graduates among public sector leaders.

VII Talented Leaders in the Public Sector Matter

The previous section shows a decline in the number of leaders in the public sector that are top graduates. The important question is whether this affects the provision of public services. On the one hand, it could be that top graduates are more likely to be promoted to leadership positions precisely because they are more effective leaders. On the other hand, it could be that top graduates are not more effective leaders, but that being a top graduate makes it easier for individuals to climb the professional ladder in the public sector (for example, if promotions are based on exams).

In this section we study whether top graduates leaders in the public sector improve their units' outcomes. If this is the case, it will imply that being a top graduate correlates with the characteristics needed for being an effective leader in the public sector.

Ideally, we would like to establish a causal link between the identity of the leader and an output measure of the unit. For example, in the private sector, a common output measure is profits. Because units in the public sector have different objectives and outputs that are difficult to measure and compare (e.g., education, health, administration), we first focus on one sector, education, where we can use an established measure of output, student grades.

Nevertheless, to extend our conclusion to the entire public sector, we also provide additional analysis. Instead of using an output measure, we use the efficiency by which units use one input of production: employee absenteeism. The benefit of this measure is that it is available for all public sector units. In this part, we assess whether leaders who are top graduates manage their organizations more efficiently.

VII.1 The effect of talented leaders on outcomes: Education

In this section, we study the effect of leaders in the provision of public goods. Specifically, we examine the impact of school principals on student performance.

In Table 3, we focus on high schools, and we use data on all high schools in Denmark. To identify the principal of the high school we use the ISCO occupation code provided by Danish Statistics administrative data. We measure school performance using the average score across all students in an annual national test. This national test is common for all students in a year. In addition to the overall score, we have scores for the Math and Danish sections. We regress the school performance measure on the GPA percentile of the school's principal. The regression includes year-fixed effects, and most importantly, it contains a school-fixed effect to control for differences in resources, student quality, etc. Therefore, identification comes from changes in a leader's GPA, which occur when leadership changes. The outcome is the result of an national test of the school at the 8th grade GPA of leader is the GPA of principal

Columns 1-4 shows that across all measures, higher GPA of the principal is related to better student outcomes. Moreover this is after controlling for teacher quality as we know from prior literature that teacher quality matters as well.

VII.2 Talented run the organization better

In Figure 5 we plot the average number of absence days of employees in a business unit against the unit's leader GPA. The figure shows a clear negative correlation between these two variables, with a higher leader GPA associated with a lower average absence.

While Figure 5 is consistent with the positive effect high GPA leaders on their organizations, the correlation could also be driven by matching, where high GPA individuals are promoted to leadership positions in organizations where employees have a better work ethic.

To address this issue, we estimate a model a la Bertrand and Schoar (Bertrand and Schoar (2003)) where average absenteeism in the organization is the dependent variable, and where we control for both leader and unit fixed effects. In this regression, employee work ethic and other characteristic of the business units are controlled for by the unit fixed effect, allowing for a cleaner interpretation of the leader fixed effect.

In Table 4, we compare the fixed effect of leaders who are top graduates with the fixed effect of other leaders. The test shows that the fixed effect of top graduate leaders is significantly lower, suggesting they reduce absenteeism in organizations relative to other leaders.

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VIII Figures

Figure 1: Share in the public sector among top 20% GPA

This figure illustrates the employment trends in the public sector among different segments of the population, categorized by their academic performance in high school. TThe x-axis denotes the years since joining the labor force. The blue line represents the proportion of top graduates who are employed in the public sector, relative to all top graduates employed in the economy. Conversely, the red line depicts the equivalent proportion for the non-top graduates.

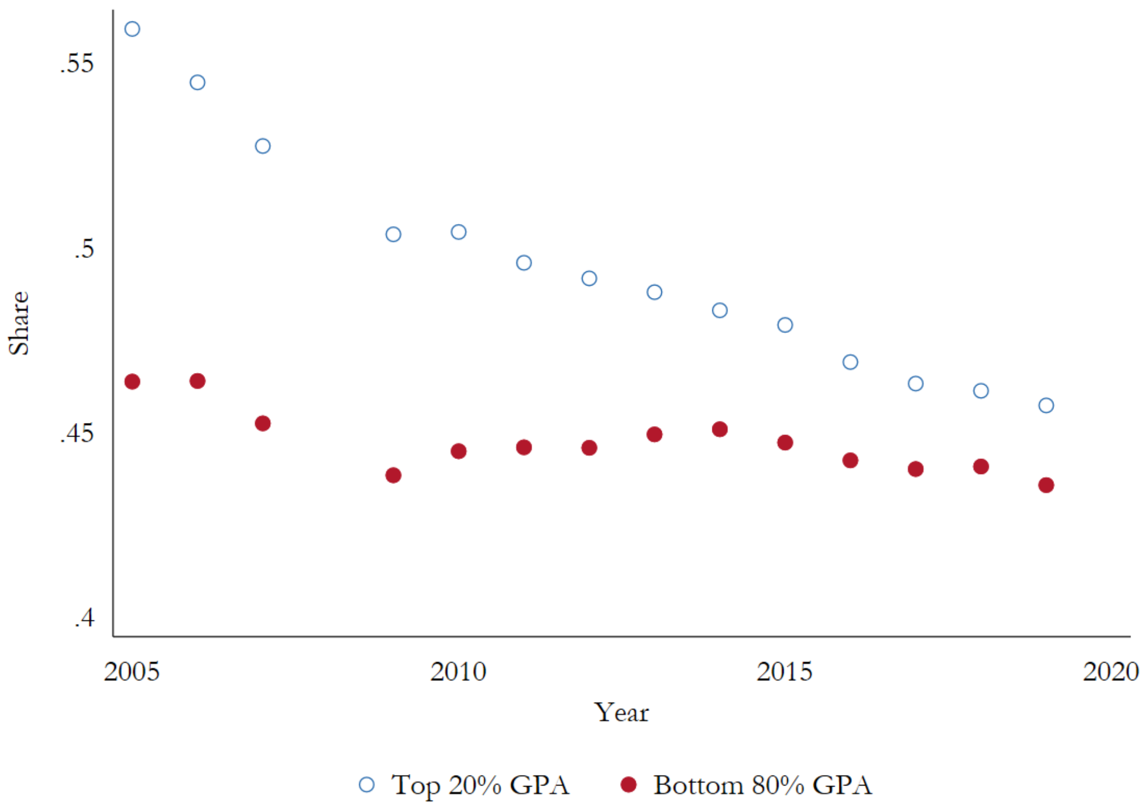


Figure 2: Share in the public sector among top 20% GPA by cohort

This figure illustrates the employment trends in the public sector among University graduate workers split by GPA. The panel on the left shows workers who ranked in the top 20% based on their high school GPA, categorized by high school cohort. Each line represents a specific cohort, showing the proportion of individuals from the top 20% GPA who are employed in the public sector. The y-axis represents the ratio of individuals working in the public sector to the total workforce, calculated as the number of individuals employed in the public sector divided by the sum of individuals employed in both the public and private sectors. The x-axis denotes the passage of time, with year zero marking the culmination of the highest level of education attained. The panel on the right covers the bottom 80% high school GPA

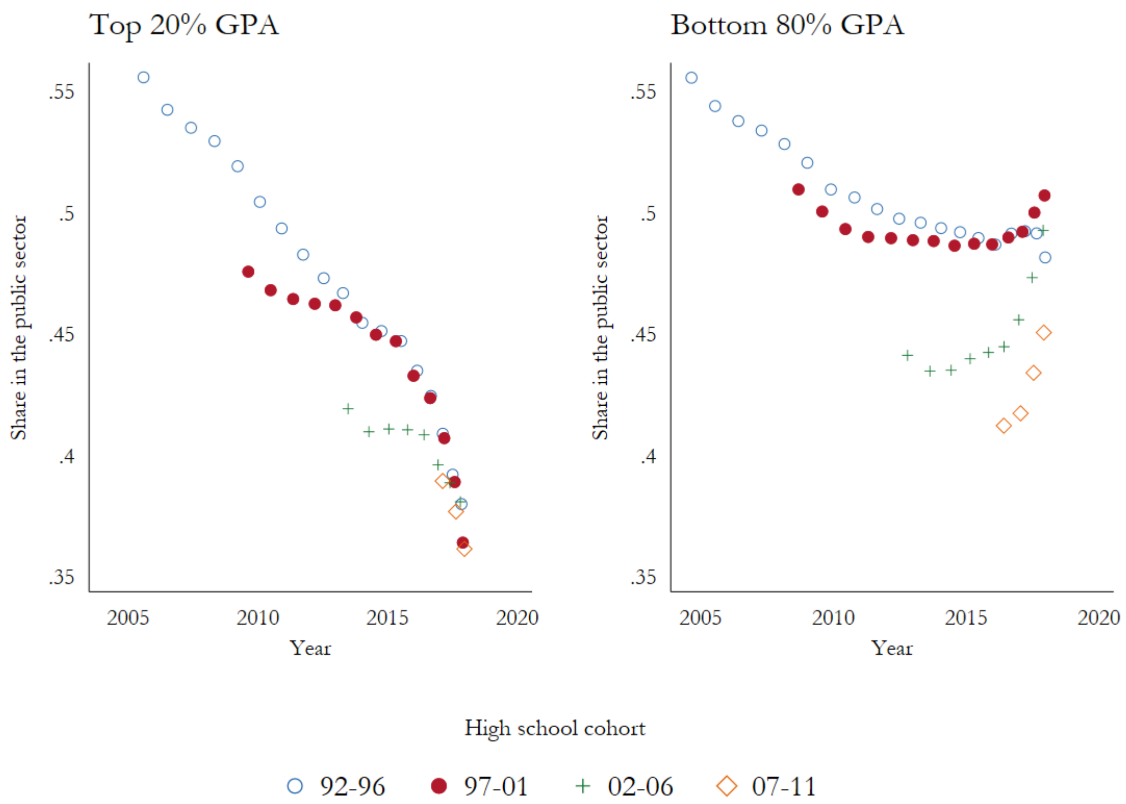


Figure 3: Probability of becoming leader

This figure presents the share of people who are managers 15 years after finishing high school. The sample is divided by quintile of high school GPA. A person is defined a manager if they hold a ISCO occupation code 1. The population sample includes those who completed high school between 1997 and 2001 and that work in the public sector 15 years after.

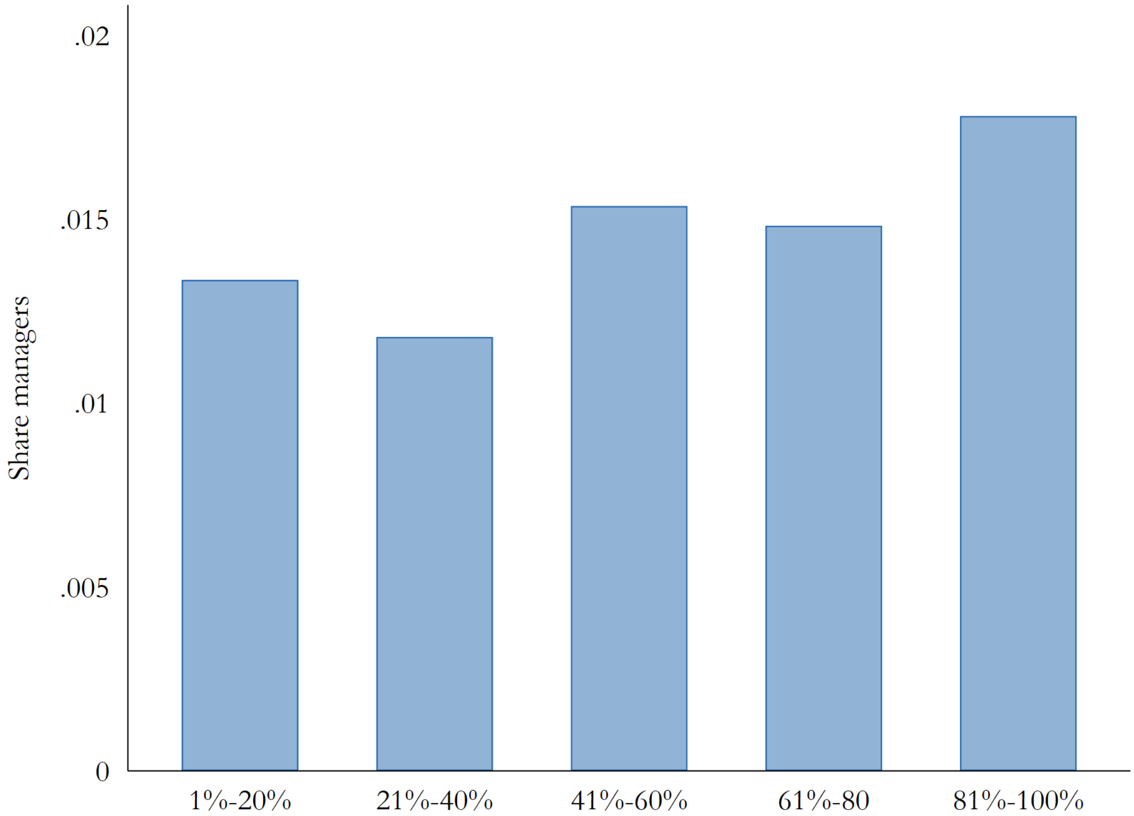


Figure 4: Entrant leaders and top 20% GPA

This figure shows the share of entrant leaders that were top 20% GPA in the public sector in 2011 and 2019. An entrant leader is a leader that was not working in the firm the previous year and enters the firm in a managerial position.

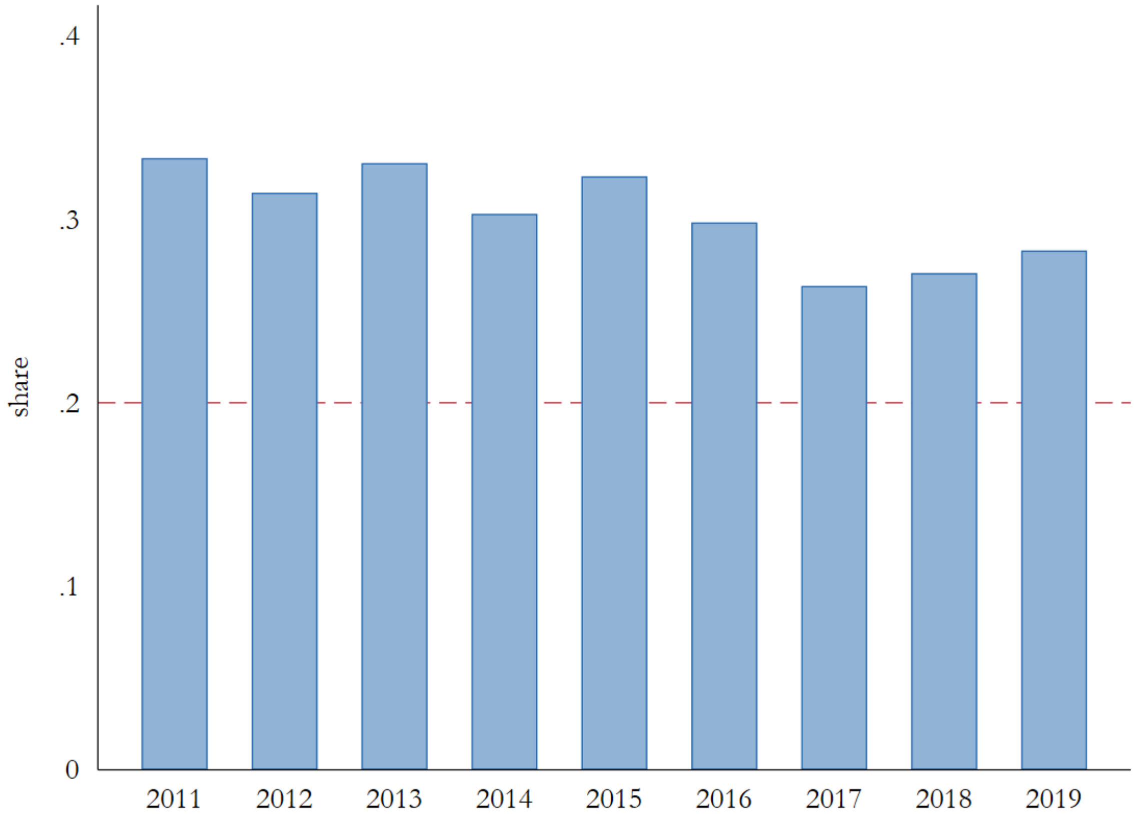
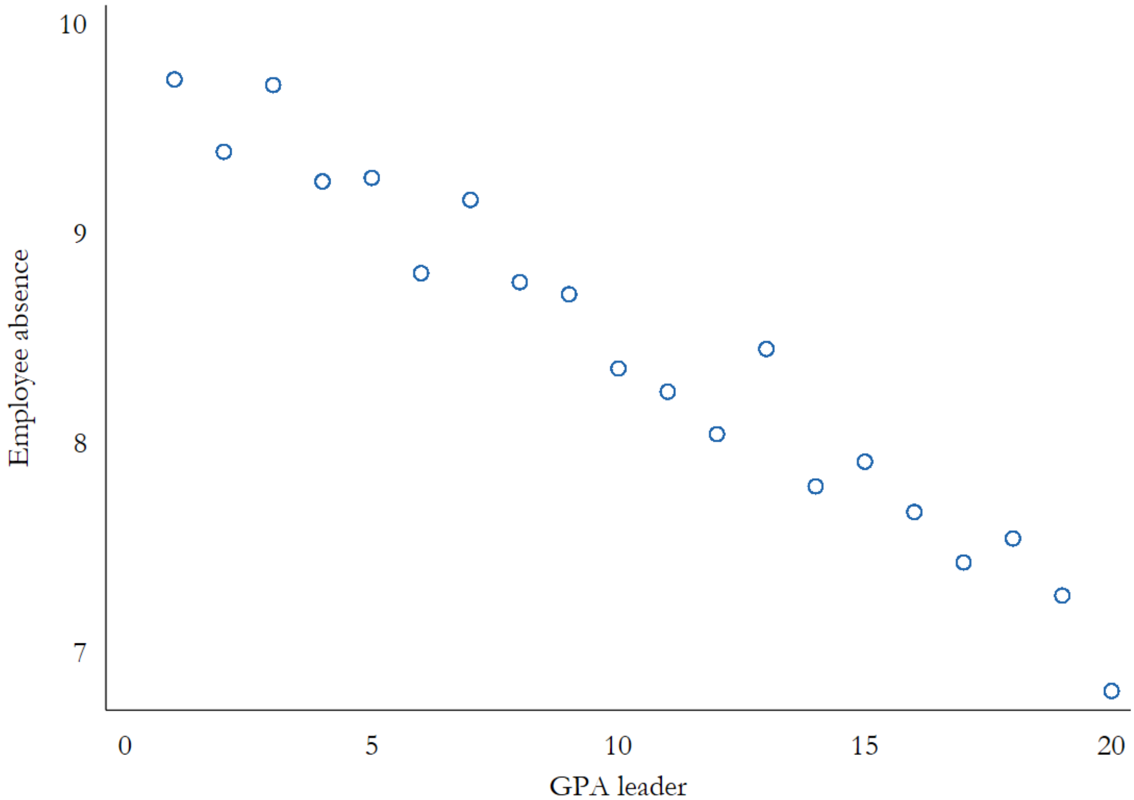


Figure 5: GPA leader and workers absence

This figures present the average level of employee absence for each vintile of GPA of the leader. A person is defined a leader if its ISCO occupation code is equal to 1. It includes only the highest leader in the unit.



IX Tables

Table 1: The Sample Size of Production Units and Workers

The table displays various statistics for units and employees. It covers the entire population working in the public sector between 1995 and 2019 (Column 1), the population holding an university degree and working in the public sector between 1995 and 2019 (Column 2) and the subsample of the population holding an university degree and working in the public sector from 2010 (Column 3).

Panel A: Production units

	Public Sector	P sector university education	Sample 2010+
N employees	38	11	14
N unit years	24,147	15,699	15,545
N unique units	68,019	45,399	26,212
N managers	.	.	1
Absence	.	.	8

Panel B: Employees

	Public Sector	P sector university education	Sample 2010+
Share male	0.34	0.26	0.25
GPA	43.52	45.97	44.41
Wage	293,637.78	280,338.50	329,484.13
Rural	0.45	0.35	0.35
Employee years	22,879,992	4,317,837	2,237,117

Table 2: Leader in the public sector 15 years after high school and characteristics at high school

This table presents an OLS regression where the dependent variable takes the value 1 if the person holds a managerial position in the public sector and 0 otherwise. A managerial position is defined as having an ISCO occupation code 1. The independent variables are characteristics of workers at the time they finished high school. "Top 20%" takes the value 1 if the person was among the top 20% GPA in high school, and 0 otherwise. "Danish" takes the value 1 if the person is Danish and at least one parent is Danish. "Age" is the age at the end of high school. "Rural" takes the value 1 if the person was living in a rural area at the end of high school. "Number of siblings" is the number of maternal siblings at the end of high school. "Wealth of the parents" is the reported added wealth of the parents at the time of high school graduation. The population sample includes those who completed high school between 1995 and 2004, chosen to allow sufficient time to have data 15 years after graduation.

	(1) Leader
Top 20% GPA	0.0029**
	(0.0014)
Male	0.0131***
	(0.0012)
Danish	0.0061*
	(0.0034)
Age at end of high school	-0.0006
	(0.0006)
Number of siblings at end of high school	0.0012*
	(0.0006)
Wealth parents at high school	0.0000
	(0.0000)
Constant	0.0172
	(0.0123)
Observations	63392

Table 3: Leader GPA and school performance

This table reports regression estimates between leader GPA and multiple measures of school performance.It includes one leader per unit corresponding to the school principal. The first three columns show the results of the National test. They are not standardized as the test is done at the national level. It includes leader controls, employee controls and unit controls. Robust standard errors are shown in parentheses. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively

	(1)	(2)	(3)
	National test	National test: Danish	National test: Math
Percentile GPA leader	0.0112	0.0204***	0.00334
	(0.00678)	(0.00672)	(0.0101)
Male	0.496	0.561	0.478
	(0.403)	(0.412)	(0.557)
Share male workers	-1.620	-1.543	-1.691
	(2.224)	(2.170)	(2.944)
Average workers age	-0.0623	-0.0352	-0.0533
	(0.124)	(0.140)	(0.132)
1 if rural	-0.829	-0.874*	-0.664
height	(0.512)	(0.466)	(0.739)
Size cvrnr	-0.000900***	-0.00107***	-0.000742**
	(0.000232)	(0.000234)	(0.000294)
Constant	62.36***	63.40***	59.53***
	(3.855)	(4.143)	(4.759)
Observations	3,636	3,635	3,598
R-squared	0.690	0.656	0.637
Average	55.8069	54.6877	57.0167
sd	8.7812	8.6267	10.3623
Sample	Schools	Schools	Schools
Year FE	Yes	Yes	Yes
Schools FE	Yes	Yes	Yes

Table 4: Average leader FE by GPA

This table presents difference between average fixed effect of leader in the top 20% of grades vs. the average fixed effects of leaders in the bottom 80%

Panel A: Average absence

	Difference	Bottom 80%	Top 20%
Leader FE	1.540*** (8.04)	0.238	-1.302
Observations	5845		

A Appendix

Figure: A1: Share in the public sector among top 20% GPA by field of education

The figure presents share in the public sector among top 20% GPA across high school cohorts. For each cohort, year 0 is the year after graduation of maximum level of graduation.

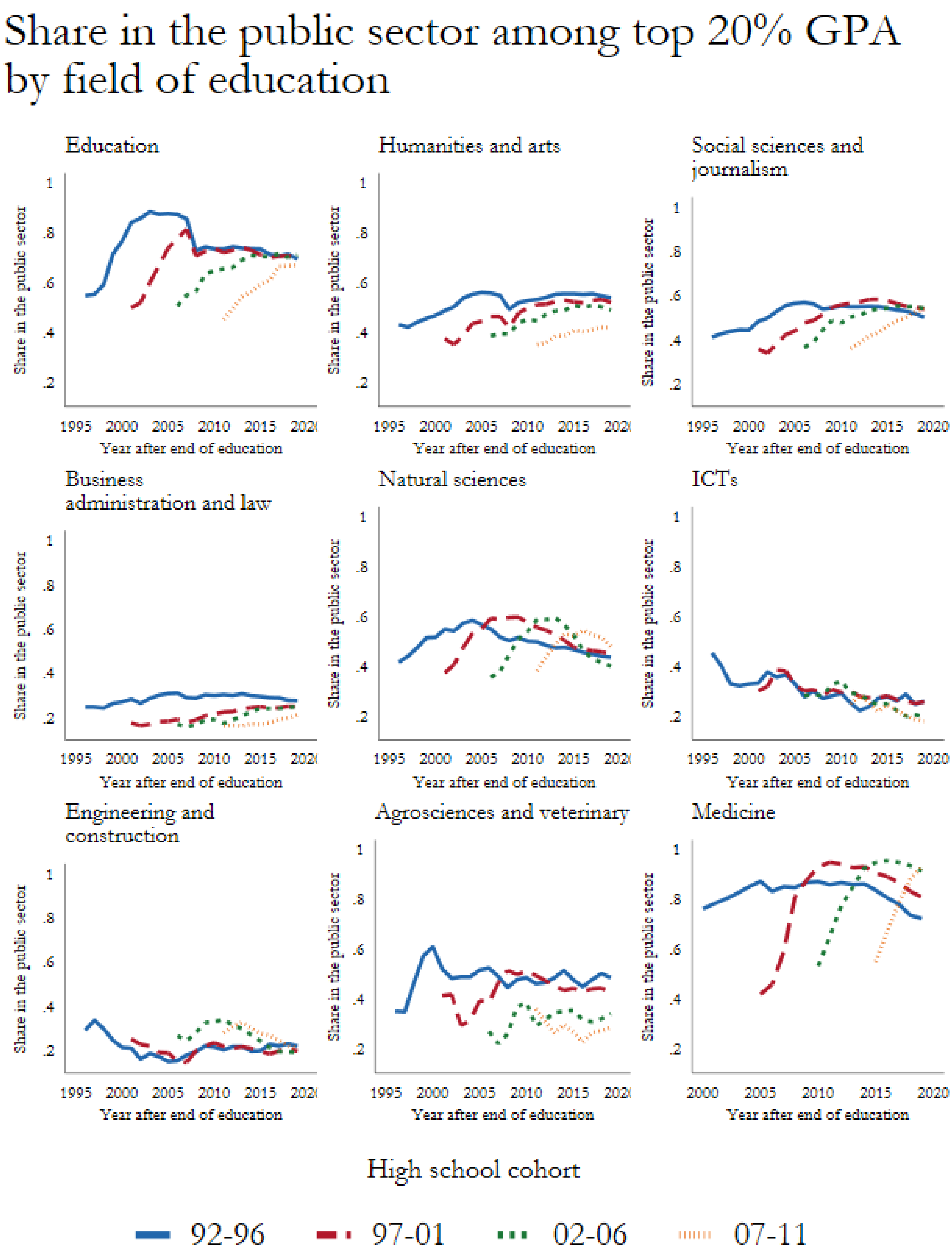


Figure: A2: Wage ratio between top earners in the private and in the public sector

This figure presents an analysis of wage differentials between various segments of the workforce across the public and private sectors over time. The data is categorized based on percentile rankings of real wages, including the top 1%, 5%, 10%, 20%, and 50% for each sector. For each percentile category, the average wage of the top earners in the private sector is compared to that of the public sector. The y-axis depicts the ratio of average wages between the top earners in the private sector and their counterparts in the public sector.

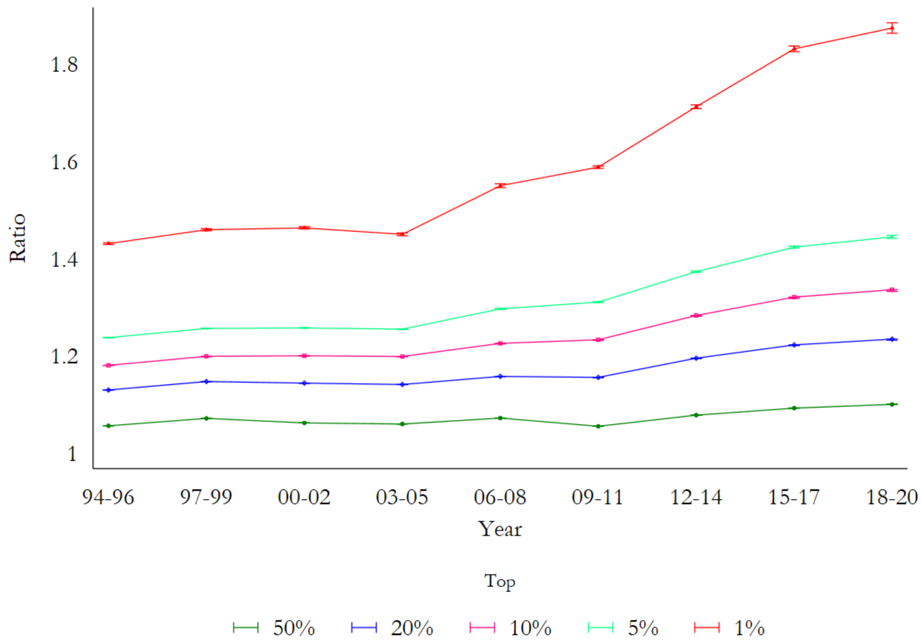


Figure: A3: Real wages in the public sector

Something here...