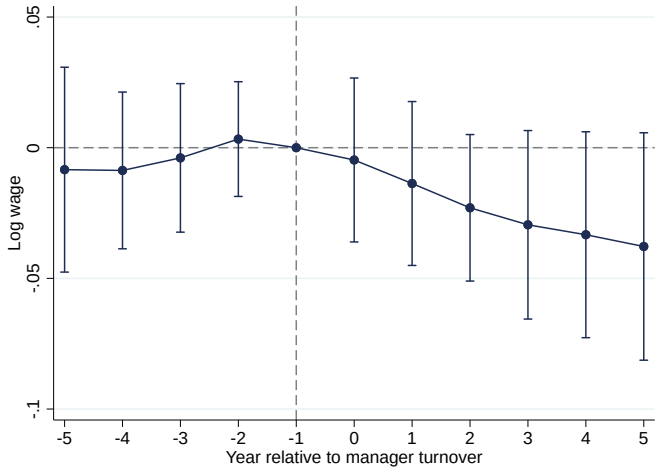
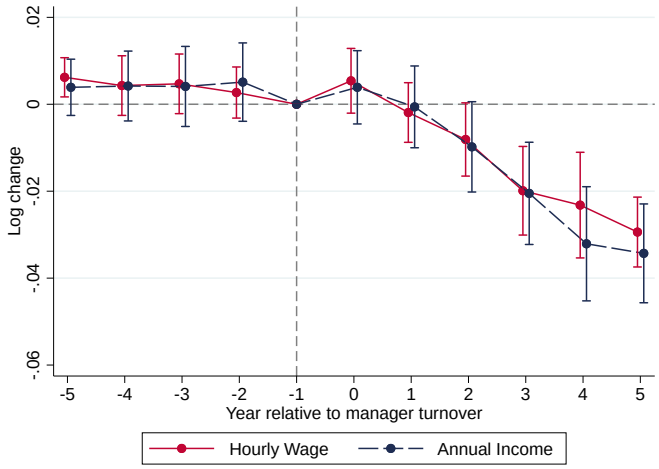
# A Appendix (For Online Publication)

## A.1 Additional Figures and Tables

Figure A1: Changes in Firm Average Wage around Non-Business to Business Manager Transitions



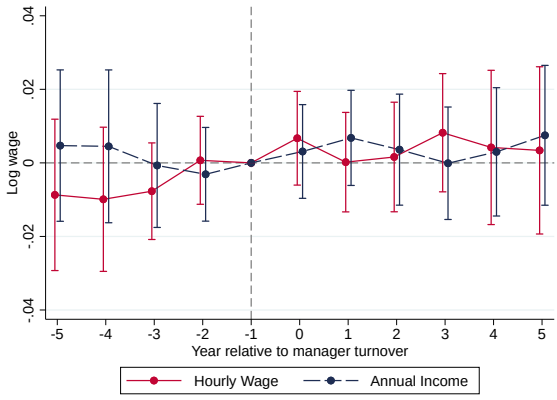

(a) US



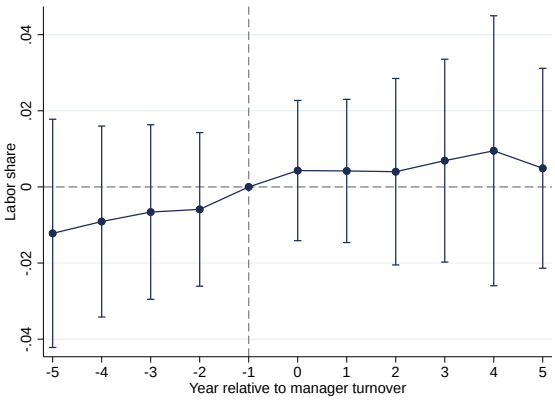

(b) Denmark

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager. Panel (a) is based on US data and the dependent variable is log average annual income. Panel (b) is based on Danish data and the dependent variables are log average hourly wage and log average annual income. All regressions include firm fixed effects, industry×year fixed effects, region(state)×year fixed effects, and initial size quintile by year fixed effects. Observations are weighted by firm employment and standard errors are clustered at the firm level.

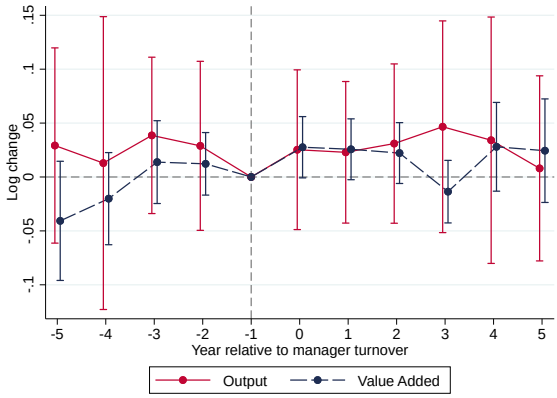
Figure A2: Changes in Firm and Worker Outcomes around Business to Non-Business Manager Transitions in Denmark




(a) Wage




(b) Labor Share

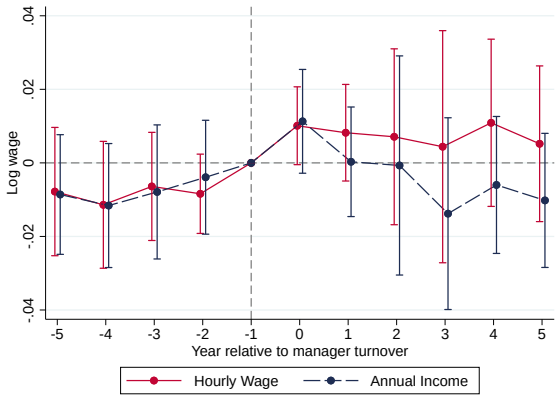



(c) Output and Value Added

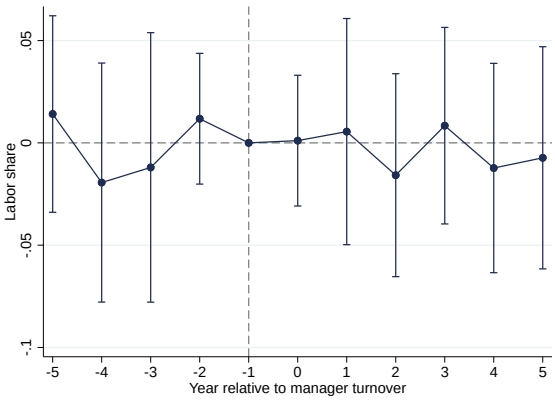

(d) Employment and Investment

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a business manager to a non-business manager in Denmark. The sample includes firms that have business managers in all years, and firms that have one business to non-business manager transition event during the sample period. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions in Panel (a) additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Firm-level regressions are weighted by employment. The dependent variables are log hourly wage and log annual income in Panel (a), the labor share in Panel (b), log output and log value added in Panel (c), and log employment and log investment in Panel (d). The labor share is defined as total wage bill divided by value added. All standard errors are clustered at the firm level.

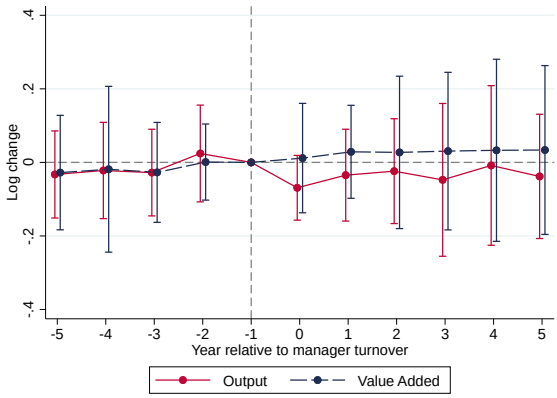
Figure A3: Changes in Firm and Worker Outcomes around Non-Economics to Economics Manager Transitions in Denmark



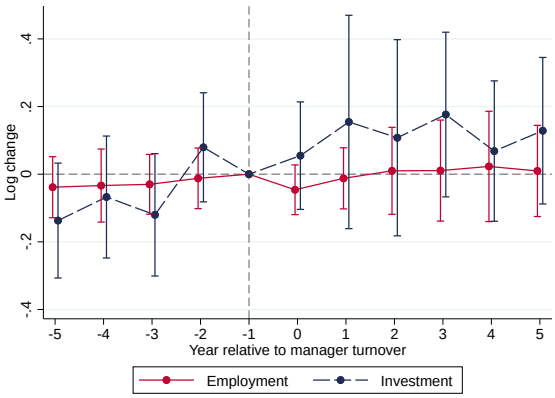

(a) Wage




(b) Labor Share



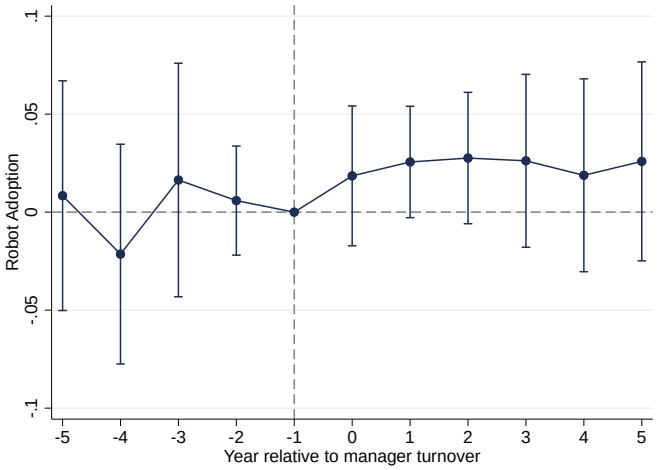

(c) Output and Value Added



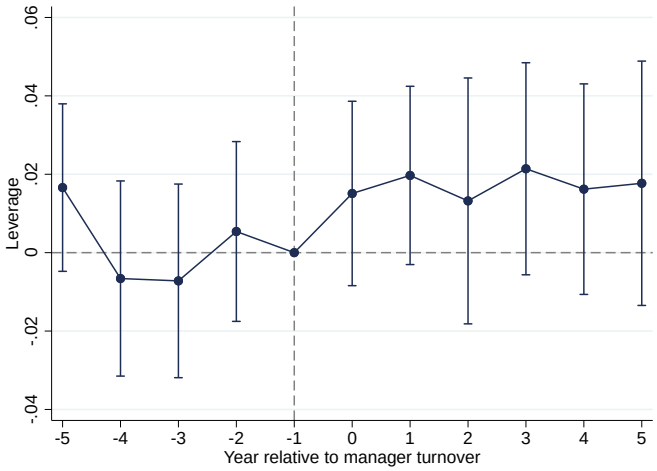

(d) Employment and Investment

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a manager without an economics degree to a manager with an economics degree in Denmark. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions in Panel (a) additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Firm-level regressions are weighted by employment. The dependent variables are log hourly wage and log annual income in Panel (a), the labor share in Panel (b), log output and log value added in Panel (c), and log employment and log investment in Panel (d). The labor share is defined as total wage bill divided by value added. All standard errors are clustered at the firm level.

Figure A4: Changes in Robot Purchases and Leverage around Non-Business to Business Manager Transitions in Denmark



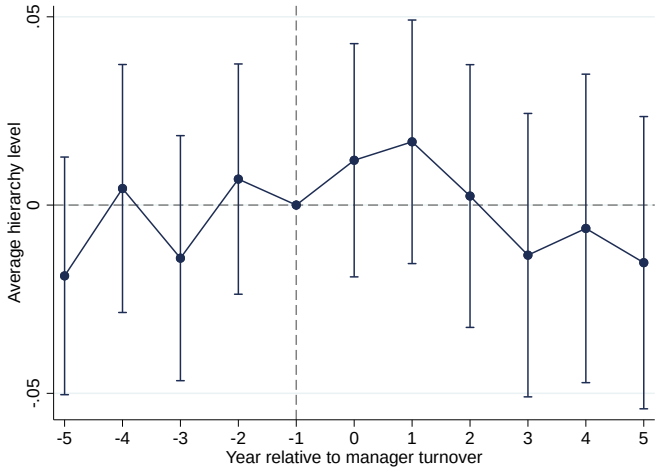

(a) Robot Adoption



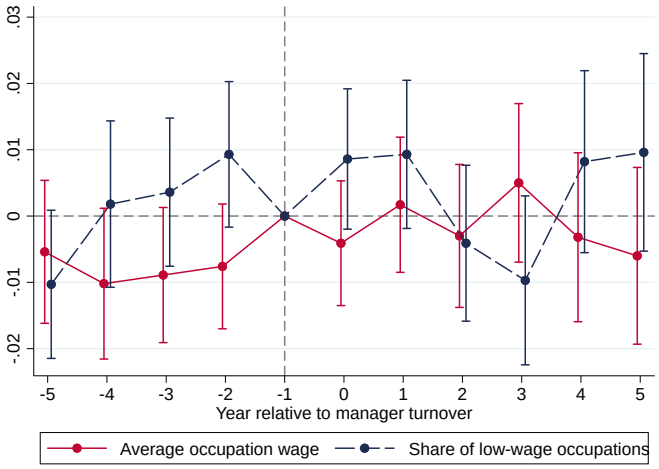

(b) Leverage

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager in Denmark. The dependent variables are a dummy variable for robot adoption in Panel (a), and leverage (total debt divided by total assets) in Panel (b). Robot adoption is proxied by positive imports of robots. All regressions include firm fixed effects, industry×year fixed effects, region×year fixed effects, and initial size quintile by year fixed effects, and observations are weighted by employment. Standard errors are clustered at the firm level.

Figure A5: Changes in Organization and Occupation Structure around Non-Business to Business Manager Transitions in Denmark



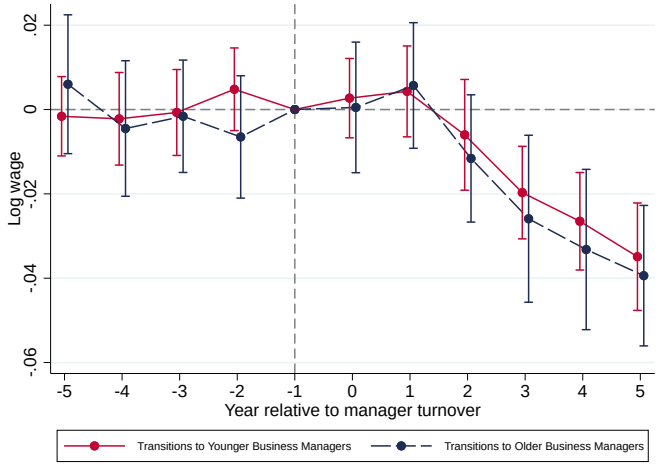

(a) Average Hierarchy Level



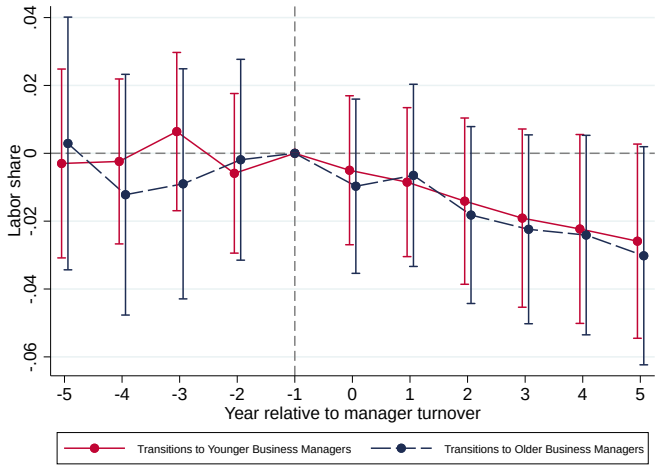

(b) Occupation Average Wage and Share of Low-skilled Occupations

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager in Denmark. In Panel (a), the dependent variable is the average hierarchy level of workers of the firm. In Panel (b), the dependent variables are mean occupation-level average wage and the share of workers in low-wage occupations (occupations in the lowest quartile of the wage distribution). All regressions include firm fixed effects, industry×year fixed effects, region×year fixed effects, and initial size quintile by year fixed effects, and observations are weighted by employment. Standard errors are clustered at the firm level.

Figure A6: Changes in Wages and the Labor Share around Non-Business to Younger or Older Business Manager Transitions in Denmark



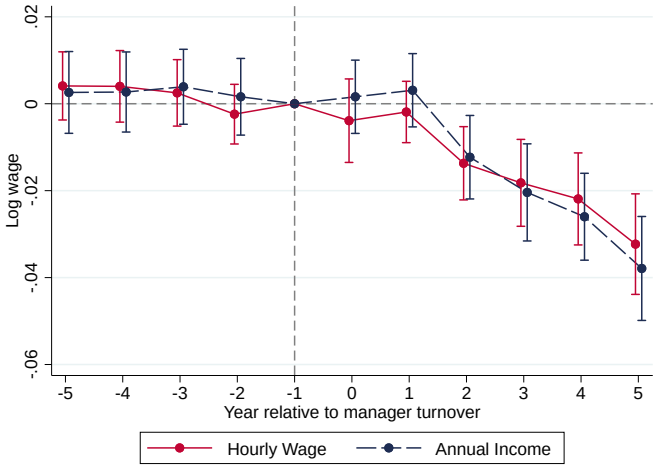

(a) Wage



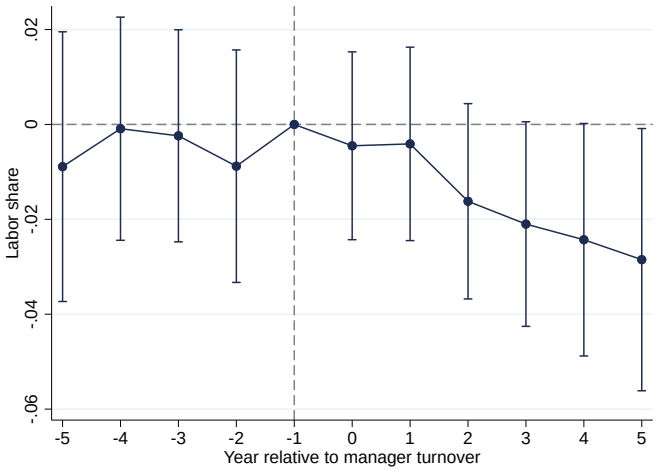

(b) Labor Share

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a younger business manager (solid lines) or an older business manager (dashed lines) in Denmark. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions in Panel (a) additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Firm-level regressions are weighted by employment. The dependent variables are log annual income in Panel (a) and the labor share in Panel (b). The labor share is defined as total wage bill divided by value added. All standard errors are clustered at the firm level.

Figure A7: Changes in Wages and the Labor Share around Non-Business to Business Manager Transitions Excluding Family CEOs in Denmark



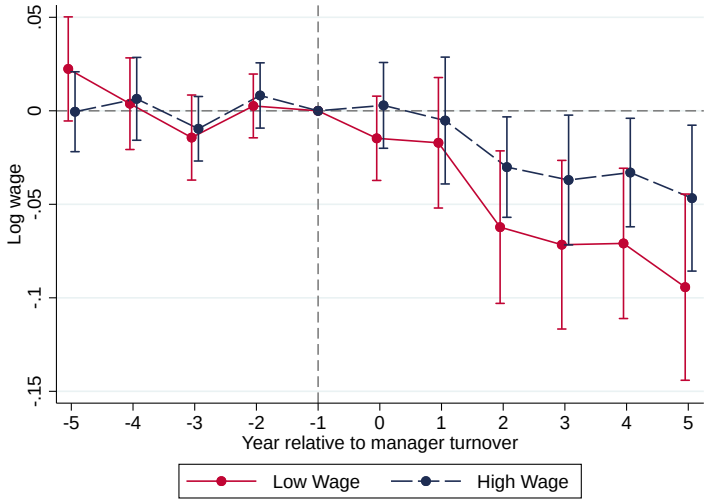

(a) Wage




(b) Labor Share

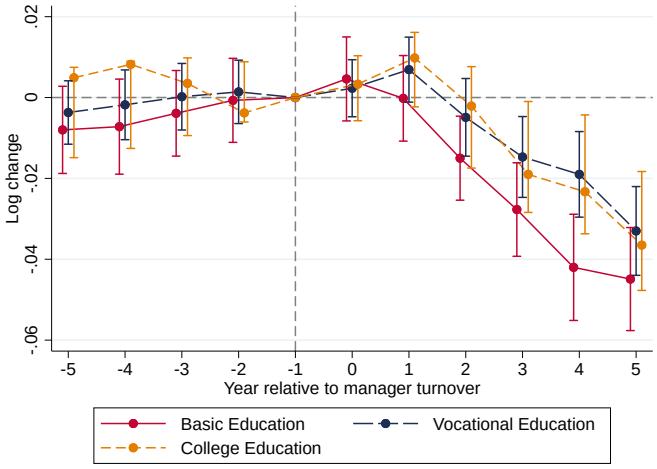
This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager in Denmark. We exclude manager transitions involving family CEOs, who are related by blood or marriage to the previous or successor CEOs at their firms. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions in Panel (a) additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Firm-level regressions are weighted by employment. The dependent variables are log hourly wage and log annual income in Panel (a) and the labor share in Panel (b). The labor share is defined as total wage bill divided by value added. All standard errors are clustered at the firm level.

Figure A8: Heterogeneous Effects of Business Managers on Wages in the US

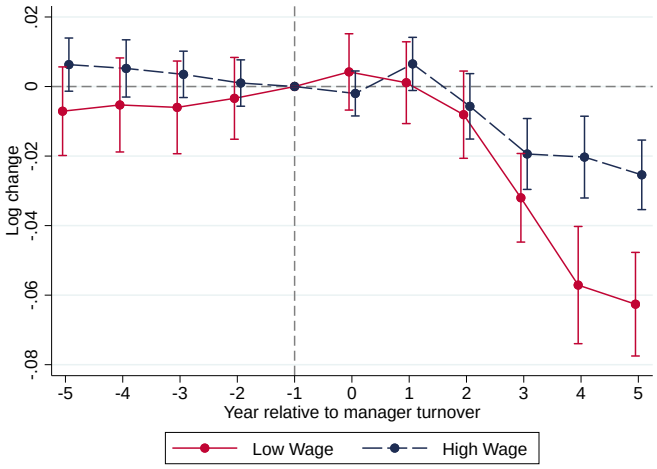



This figure plots event-study estimates and 95% confidence intervals separately by different worker groups, where events are manager transitions from a non-business manager to a business manager in the US. The blue line plots wage effects for workers with initial wage above the median ("high wage" workers), and the red line plots wage effects for workers with initial wage below the median ("low wage" workers). The dependent variable is log annual wage.

Figure A9: Heterogeneous Effects of Business Managers on Wages in Denmark



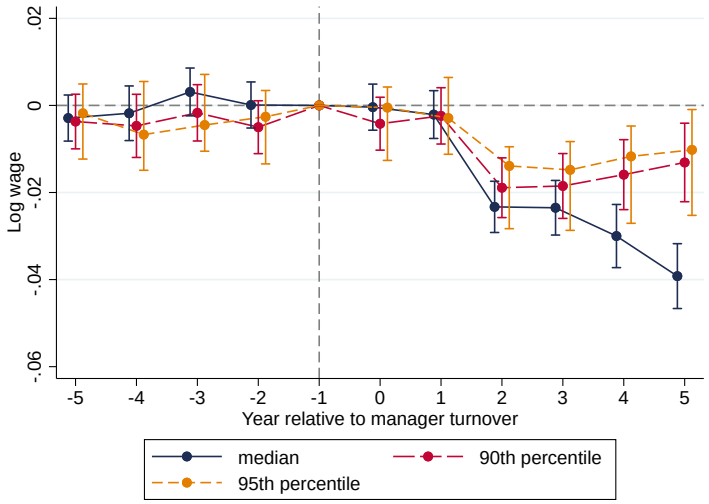

(a) By Education




(b) By Wage Level

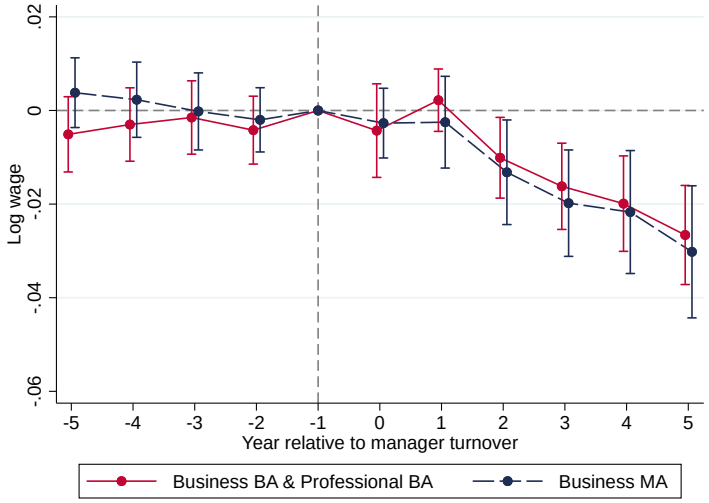
This figure plots event-study estimates and 95% confidence intervals separately by different worker groups, where events are manager transitions from a non-business manager to a business manager in Denmark. Panel (a) separately estimates the event-study regressions by workers' education level (basic education, vocational education, and college education). Panel (b) splits the workers into two groups based on their initial wage level ("high wage" workers are workers with initial wage above the median, and "low wage" workers are workers with initial wage below the median). The dependent variable is log annual wage.

Figure A10: Changes in Wage Percentiles around Non-Business to Business Manager Transitions in Denmark



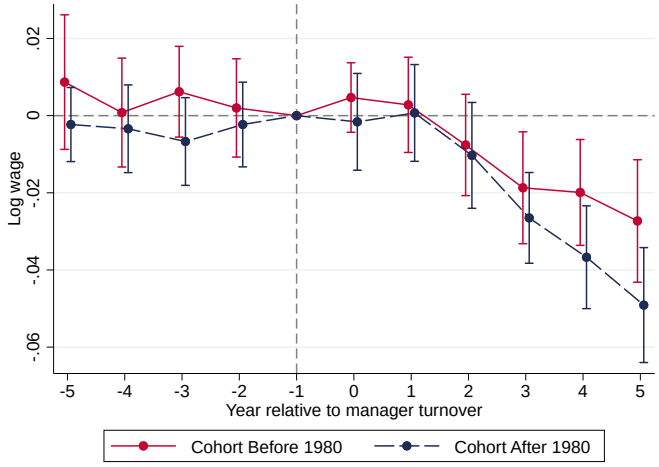

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager in Denmark. The dependent variables are percentiles of the wage distribution (median, 90th percentile, 95th percentile) within the firm in a given year. All regressions include firm fixed effects, industry×year fixed effects, state(region)×year fixed effects, and initial size quintile by year fixed effects, and observations are weighted by employment. Standard errors are clustered at the firm level.

Figure A11: Heterogeneous Effects on Wages by the Degree Level of Business Managers in Denmark

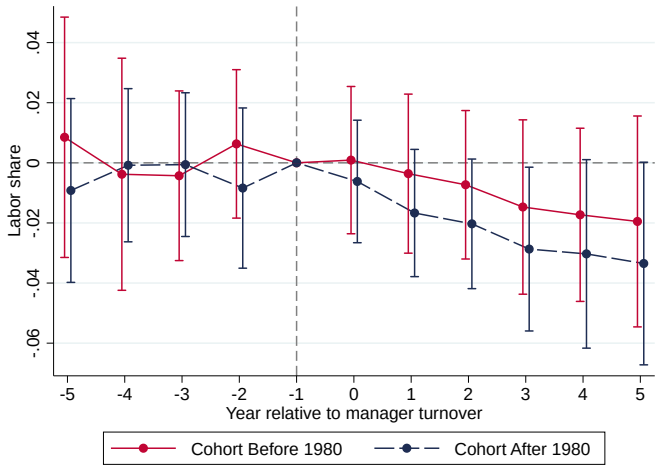



This figure plots event-study estimates and 95% confidence intervals from separate regressions for manager transitions from a non-business manager to a business manager who has a business BA or professional BA degree but doesn't have a business MA degree (red line) and manager transitions from a non-business manager to a business manager with a business MA degree (blue line) in Denmark. The dependent variable is log annual wage. Standard errors are clustered at the firm level.

Figure A12: Changes in Wages and the Labor Share around Non-Business to Business Manager Transitions for Business Managers in Different Cohorts in Denmark



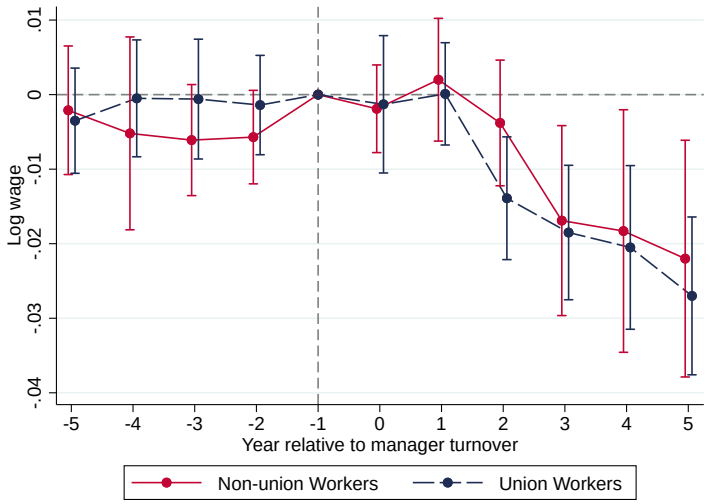

(a) Wage




(b) Labor Share

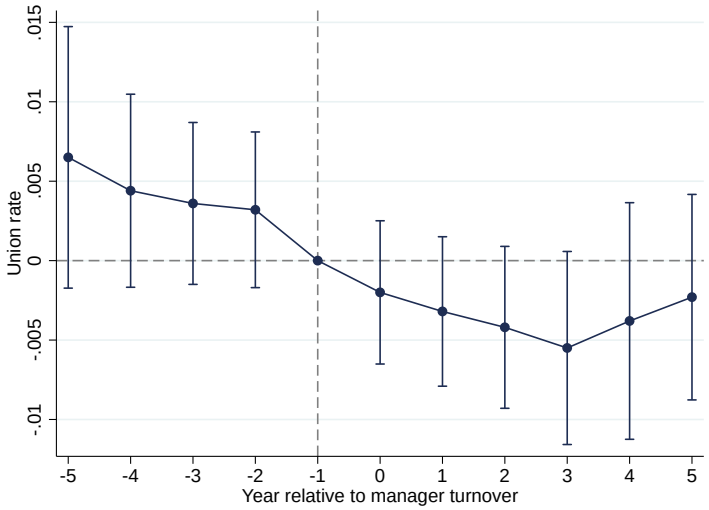
This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager who gets the business degree before 1980 (solid line) or after 1980 (dashed line) in Denmark. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions in Panel (a) additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Firm-level regressions are weighted by employment. The dependent variables are log hourly wage and log annual income in Panel (a) and the labor share in Panel (b). The labor share is defined as total wage bill divided by value added. All standard errors are clustered at the firm level.

Figure A13: Changes in Wages around Non-Business to Business Manager Transitions for Union and Non-Union Workers in Denmark



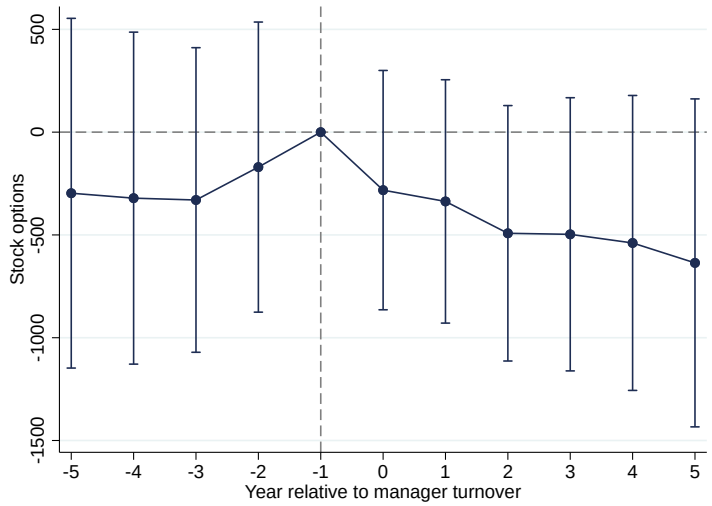

This figure plots event-study estimates and 95% confidence intervals separately for workers who are union members and workers who are not union members, where events are manager transitions from a non-business manager to a business manager in Denmark. The dependent variable is log annual wage. Standard errors are clustered at the firm level.

Figure A14: Changes in Unionization Rates around Non-Business to Business Manager Transitions in Denmark



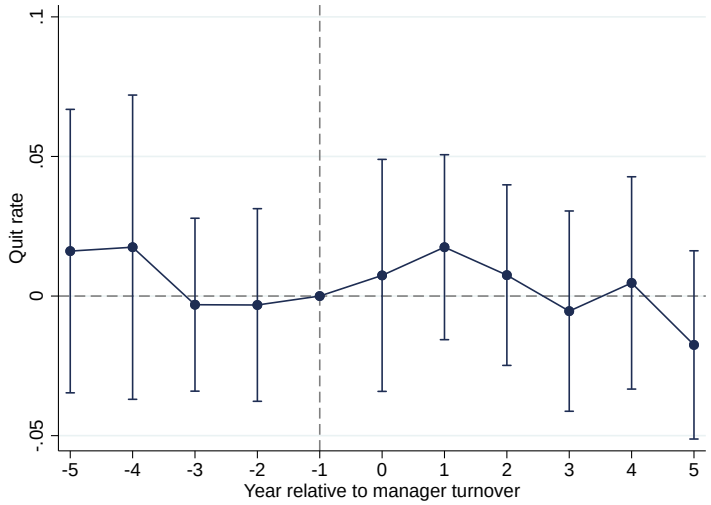

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager in Denmark. The regression controls for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects, and observations are weighted by firm employment. The dependent variable is the share of workers at the firm who are union members. Standard errors are clustered at the firm level.

Figure A15: Changes in Stock Options around Non-Business to Business Manager Transitions in Denmark



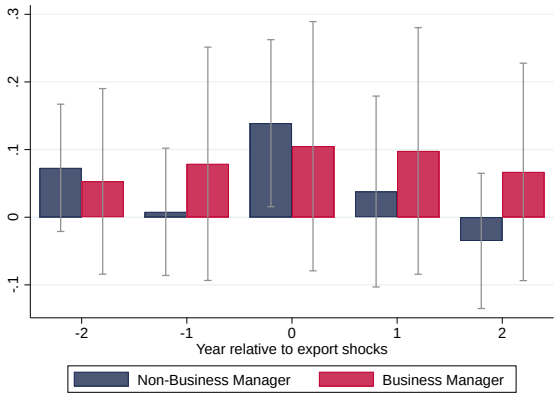

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager in Denmark. The sample includes firms that have non-business managers in all years, and firms that have one non-business to business manager transition event during the sample period. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects, industry×year fixed effects, firm×worker fixed effects, quadratic in experience, and union and marital status dummies. The dependent variable is the value of stock option payments. Standard errors are clustered at the firm level.

Figure A16: Changes in Quit Rates around Placebo Manager Transitions in Denmark

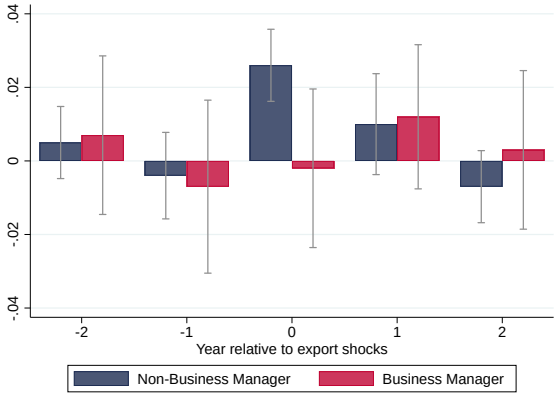



This figure plots event-study estimates and 95% confidence intervals, where events are placebo manager transitions from a non-business manager to a non-business manager in Denmark. The dependent variable is the share of workers that quit the firm to join another firm or become unemployed in the following year. All regressions include firm fixed effects, industry×year fixed effects, state(region)×year fixed effects, and initial size quintile by year fixed effects, and observations are weighted by employment. Standard errors are clustered at the firm level.

Figure A17: Output and Wage Response to Leads and Lags of Trade Shocks in Denmark



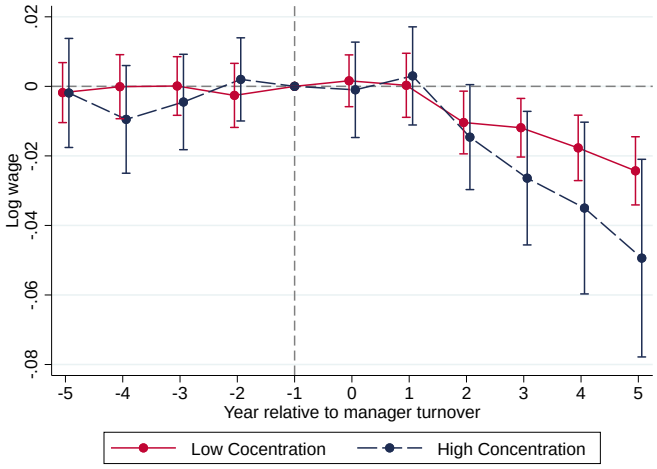

(a) Value Added



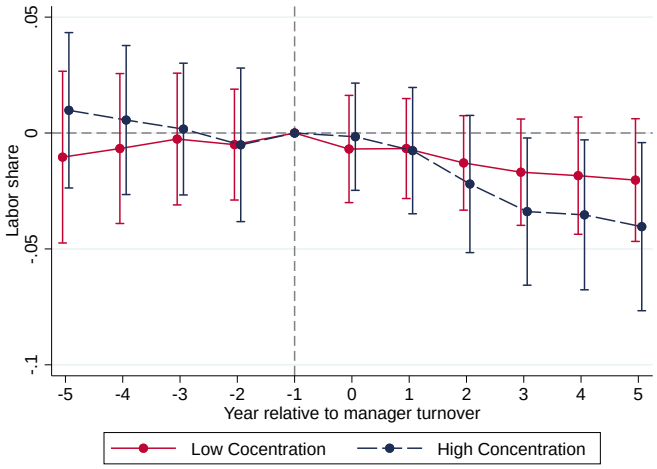

(b) Wage

This figure reports the coefficients and 95% confidence intervals from regressing log value added (in Panel (a)) and log annual income (in Panel (b)) on the leads and lags of export shocks interacted with business manager. The blue bars are coefficients for leads and lags of export shocks interacted with business manager dummy, and red bars are coefficients for leads and lags of export shocks interacted with non-business manager dummy. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions in Panel (b) additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. In Panel (a), observations are weighted by firm employment. Standard errors are clustered at the firm level.

Figure A18: Changes in Wages and the Labor Share around Non-Business to Business Manager Transitions in High-Concentration and Low Concentration Industries in Denmark




(a) Wage




(b) Labor Share

This figure plots event-study estimates and 95% confidence intervals, where events are manager transitions from a non-business manager to a business manager in Denmark. The dependent variables are log annual income in Panel (a) and the labor share in Panel (b). In each panel, the solid lines use the sample of firms in low-concentration industries, and the dashed lines use the sample of firms in high-concentration industries. High-concentration (low-concentration) industries are industries with above-median (or below-median) Herfindahl–Hirschman index. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions in Panel (a) additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Firm-level regressions are weighted by employment. The labor share is defined as total wage bill divided by value added. All standard errors are clustered at the firm level.

Table A1: OLS Estimates of Business Managers on Firm Outcomes with Varying Fixed Effects in Denmark

| | Log Value Added | | | Log Average Wage | | | Labor Share | | |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Business Manager | 0.007 | 0.009 | 0.013 | -0.026 | -0.029 | -0.033 | -0.023 | -0.021 | -0.019 |
| | (0.022) | (0.021) | (0.017) | (0.005) | (0.005) | (0.005) | (0.007) | (0.007) | (0.006) |
| Year FE | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Industry-year FE | N | Y | Y | N | Y | Y | N | Y | Y |
| Region-year FE | N | Y | Y | N | Y | Y | N | Y | Y |
| Size quintile-year FE | N | N | Y | N | N | Y | N | N | Y |
| Obs | 44,731 | 44,731 | 44,731 | 44,731 | 44,731 | 44,731 | 44,962 | 44,962 | 44,962 |

This table reports the OLS estimates regressing firm-level value added, average wage, and the labor share on a dummy for business manager using the same sample as Table 2 in Denmark. All columns control for firm fixed effects and year fixed effects. Columns 2, 3, 5, 6, 7, and 9 additionally control for industry×year fixed effects and region×year fixed effects, and columns 3, 6, and 9 additionally control for initial size quintile by year fixed effects. The dependent variables are log sales in columns 1–3, log average annual wage in columns 4–6, and the labor share (wage bill divided by value added) in columns 7–9. Observations are weighted by firm employment and standard errors are clustered at the firm level.

Table A2: The Effect of Business Managers on Other Firm Outcomes in Denmark

| | Payout | Log Cash | Log Rent | Log Liability | Leverage | Avg Routine Index | Purchase Robot |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Business Manager | 0.009 | -0.028 | 0.015 | 0.009 | 0.014 | -0.005 | 0.024 |
| | (0.005) | (0.016) | (0.009) | (0.002) | (0.003) | (0.004) | (0.008) |
| Firm FE | Y | Y | Y | Y | Y | Y | Y |
| Industry-year FE | Y | Y | Y | Y | Y | Y | Y |
| Region-year FE | Y | Y | Y | Y | Y | Y | Y |
| Size quintile-year FE | Y | Y | Y | Y | Y | Y | Y |
| Obs | 267,472 | 267,472 | 267,472 | 267,472 | 267,472 | 267,472 | 267,472 |

This table reports the coefficients from regressions of firm outcomes on an indicator for having a business manager for the sample of all firms in Denmark from 1995 to 2011. All regressions control for firm fixed effects and industry×year fixed effects, region×year fixed effects, and initial size quintile by year fixed effects. Payout is a dummy variable that equals one if the divided payment is positive. Leverage is total debt divided by total assets. The routine index is defined as in Autor and Dorn (2013). Purchase of robots is measured using the imports of robot as in Humlum (2019). Observations are weighted by firm employment and standard errors are clustered at the firm level.

Table A3: First Stage of Diffusion IV in the US

| | Business Manager | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Peer Firm Business Manager t-1 | 0.160 | 0.083 | 0.158 | 0.081 | 0.164 | 0.066 | 0.149 | 0.053 |
| | (0.039) | (0.059) | (0.039) | (0.059) | (0.047) | (0.065) | (0.047) | (0.065) |
| Peer Firm Business Manager t-2 | | 0.270 | | 0.274 | | 0.285 | | 0.291 |
| | | (0.058) | | (0.058) | | (0.065) | | (0.065) |
| Peer Firm Business Manager t-3 | | 0.242 | | 0.239 | | 0.411 | | 0.394 |
| | | (0.052) | | (0.052) | | (0.059) | | (0.059) |
| Firm FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Year FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Size quintile-year FE | | | Y | Y | Y | Y | Y | Y |
| Industry*year FE | | | | | Y | Y | Y | Y |
| Lagged sales and wages | | | | | | | Y | Y |
| F statistic | 16.7 | 30.2 | 16.2 | 29.8 | 12.3 | 43.6 | 9.9 | 41.9 |

This table reports the first stage estimates instrumenting business manager with up to three lags of average business manager of peer firms (those in the same industry, region and size quartile) in the US. The first stage equation is described in equation (2). The dependent variable is a dummy for business manager. Odd columns regress on one-year lag of the average business manager of peer firms, and even columns include three years' lags of the average business manager of peer firms. All columns control for firm fixed effects and year fixed effects. We add initial size quintile by year fixed effects in columns 3 and 4, industry×year fixed effects and region×year fixed effects in columns 5 and 6, and lags of firm value added and average wage as controls in columns 7 and 8. Observations are weighted by firm employment and standard errors are clustered at the firm level. First-stage F-statistics for the excluded instruments are reported at the bottom.

Table A4: First Stage of Diffusion IV in Denmark

| | Business Manager | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Peer Firm Business Manager t-1 | 0.115 | 0.098 | 0.166 | 0.095 | 0.277 | 0.226 | 0.324 | 0.326 |
| | (0.035) | (0.040) | (0.034) | (0.040) | (0.038) | (0.042) | (0.049) | (0.052) |
| Peer Firm Business Manager t-2 | | 0.258 | | 0.255 | | 0.331 | | 0.141 |
| | | (0.045) | | (0.045) | | (0.045) | | (0.054) |
| Peer Firm Business Manager t-3 | | 0.225 | | 0.219 | | 0.216 | | 0.361 |
| | | (0.047) | | (0.047) | | (0.048) | | (0.057) |
| Firm FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Year FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Size quintile-year FE | | | Y | Y | Y | Y | Y | Y |
| Industry*year FE | | | | | Y | Y | Y | Y |
| Region*year FE | | | | | Y | Y | Y | Y |
| Lagged value added and wages | | | | | | | Y | Y |
| F statistic | 11.0 | 30.6 | 23.5 | 28.9 | 52.8 | 44.4 | 43.8 | 32.9 |
| Obs | 82,805 | 76,516 | 82,805 | 76,516 | 82,805 | 76,516 | 51,246 | 48,649 |

This table reports the first stage estimates instrumenting business manager with up to three lags of average business manager of peer firms (those in the same industry, region and size quartile) in Denmark. The first stage equation is described in equation (2). The dependent variable is a dummy for business manager. Odd columns regress on one-year lag of the average business manager of peer firms, and even columns include three years' lags of the average business manager of peer firms. All columns control for firm fixed effects and year fixed effects. We add initial size quintile by year fixed effects in columns 3 and 4, industry×year fixed effects and region×year fixed effects in columns 5 and 6, and lags of firm sales and average wage as controls in columns 7 and 8. Observations are weighted by firm employment and standard errors are clustered at the firm level. First-stage F-statistics for the excluded instruments are reported at the bottom.

Table A5: Robustness of 2SLS Estimates of Business Managers on Firm Outcomes in Denmark

| | Log Value Added | | | Log Average Wage | | | Labor Share | | |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Business Manager | 0.064 | 0.029 | 0.046 | -0.040 | -0.063 | -0.046 | -0.053 | -0.066 | -0.056 |
| | (0.067) | (0.083) | (0.075) | (0.024) | (0.031) | (0.027) | (0.027) | (0.032) | (0.029) |
| Log Average Wage t-1 | -0.152 | -0.156 | -0.157 | 0.122 | 0.139 | 0.125 | 0.008 | 0.003 | 0.012 |
| | (0.010) | (0.011) | (0.010) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) |
| Log Average Wage t-2 | -0.020 | 0.007 | -0.025 | -0.012 | -0.007 | -0.008 | -0.011 | -0.021 | -0.008 |
| | (0.011) | (0.013) | (0.011) | (0.005) | (0.006) | (0.006) | (0.005) | (0.006) | (0.005) |
| Log Average Wage t-3 | -0.067 | -0.050 | -0.066 | -0.040 | -0.034 | -0.035 | -0.020 | -0.033 | -0.019 |
| | (0.010) | (0.010) | (0.010) | (0.005) | (0.005) | (0.005) | (0.004) | (0.005) | (0.005) |
| Log Value Added t-1 | 0.436 | 0.468 | 0.434 | 0.007 | 0.006 | 0.006 | -0.020 | -0.031 | -0.020 |
| | (0.005) | (0.005) | (0.005) | (0.002) | (0.003) | (0.002) | (0.002) | (0.002) | (0.002) |
| Log Value Added t-2 | 0.062 | 0.068 | 0.064 | 0.003 | 0.003 | 0.002 | 0.004 | -0.001 | 0.004 |
| | (0.005) | (0.005) | (0.005) | (0.003) | (0.003) | (0.003) | (0.002) | (0.002) | (0.002) |
| Log Value Added t-3 | 0.015 | 0.004 | 0.016 | -0.009 | -0.007 | -0.007 | 0.024 | 0.034 | 0.026 |
| | (0.004) | (0.005) | (0.004) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |
| Size quintile-year FE | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Industry-year FE | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Region-year FE | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| F statistic | 32.3 | 28.1 | 25.5 | 31.2 | 27.8 | 24.6 | 31.6 | 28.2 | 24.8 |
| Obs | 44,474 | 44,474 | 43,631 | 44,490 | 44,490 | 43,650 | 44,697 | 44,697 | 43,853 |

This table reports 2SLS estimates of business managers on log value added, log average wage and the labor share in Denmark. The first stage is described in equation (2) and is based on the average lagged business manager of peer firms (those in the same industry, region and size quartile). Table A4 in the Appendix presents the first-stage estimates and Figure 7 shows them visually. In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects, and one, two and three-year lags of firm value added and average wage. Columns 1, 4, and 7 control for a full set of interactions between wage quintile in 1995 and year dummies. Columns 2, 5, and 8 control for cell-specific trends (year interacted with dummies for each cell). Columns 3, 6, and 9 control for three lags of value added and wages of other firms in the same cell. The dependent variables are log value added in columns 1–3, log average annual wage in columns 4–6, and the firm's labor share (wage bill divided by value added) in columns 7–9. Observations are weighted by firm employment and standard errors are clustered at the firm level. First-stage F-statistics for the excluded instruments are reported at the bottom of Panel A.

Table A6: Compensation of Business Managers in the US

**Panel A: Compensation Level**

| | Log Wage of Managers | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Business Degree | 0.164 | 0.137 | 0.065 | 0.048 |
| | (0.012) | (0.012) | (0.010) | (0.013) |
| Year FE | Y | Y | Y | Y |
| Manager Characteristics | N | Y | Y | Y |
| Firm Characteristics | N | N | Y | Y |
| Firm FE | N | N | N | Y |
| Obs | 37,873 | 36,495 | 36,049 | 35,971 |

**Panel B: Composition of Compensation**

| | Percent Salary | Percent Bonus | Percent Stock | Percent Options | Percent Incentive Plan | Percent Other |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Business Major | -0.004 | -0.005 | -0.001 | 0.006 | 0.002 | 0.002 |
| | (0.003) | (0.003) | (0.003) | (0.004) | (0.002) | (0.003) |
| Year FE | Y | Y | Y | Y | Y | Y |
| Manager Characteristics | Y | Y | Y | Y | Y | Y |
| Firm Characteristics | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Obs | 35,971 | 35,971 | 35,971 | 35,971 | 35,971 | 35,971 |

This table reports the coefficients from regressions of compensation of CEOs from the Execucomp dataset on an indicator for having a business degree. The sample includes all CEOs from 1992 to 2019. In Panel A, the dependent variable is log total compensation (including salary, bonus, total value of restricted stock granted, total value of stock options granted using Black-Scholes, incentive plan payouts, and other compensation). All columns include year fixed effects, column 2 additionally controls for manager characteristics (gender, experience, age), column 3 additionally controls for firm characteristics (log employment and log value added), and column 4 additionally controls for firm fixed effects. In Panel B, the dependent variable is each form of compensation as a percentage of total compensation, and all columns include year and firm fixed effects, manager characteristics (gender, experience, age), firm characteristics (log employment and log value added). Standard errors are clustered at person level.

Table A7: Compensation of Business Managers in Denmark

| | Log Wage of Managers | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Business Degree | 0.451 | 0.142 | 0.105 | 0.084 |
| | (0.005) | (0.005) | (0.004) | (0.005) |
| Year FE | Y | Y | Y | Y |
| Manager Characteristics | N | Y | Y | Y |
| Firm Characteristics | N | N | Y | Y |
| Firm FE | N | N | N | Y |
| Obs | 280,389 | 280,012 | 280,012 | 267,850 |

This table reports the coefficients from regressions of log annual wage of managers on an indicator for having a business degree. The sample includes all managers from 1995 to 2011. All columns include year fixed effects, column 2 additionally controls for manager characteristics (gender, education level, experience, age), column 3 additionally controls for firm characteristics (log employment and log value added), and column 4 additionally controls for firm fixed effects. Standard errors are clustered at person level.

Table A8: The Effect of Business Managers on Quit Rates in Denmark

| | All workers | High-wage workers | Low-wage workers |
|---|---|---|---|
| | (1) | (2) | (3) |
| Business Manager | 0.037 | 0.039 | 0.035 |
| | (0.021) | (0.022) | (0.021) |
| Firm FE | Y | Y | Y |
| Industry-year FE | Y | Y | Y |
| Region-year FE | Y | Y | Y |
| Size quintile-year FE | Y | Y | Y |
| Obs | 44,731 | 44,731 | 44,731 |

This table reports the OLS estimates regressing firm-level quit rates on business manager using the same sample as Table 2 in Denmark. All columns control for firm fixed effects, industry×year fixed effects, region×year fixed effects, and initial size quintile by year fixed effects. The dependent variable is the share of workers who leave the firm in the next year. Observations are weighted by firm employment and standard errors are clustered at the firm level.

Table A9: Business Managers and Firm Output Response to Export Shocks in Denmark

| | Log Profit Per Worker | Log Value Added Per Worker | Log Export | Log Value Added | Log Employment | Log Investment |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Export Shock*Non-Business Manager | 0.157 | 0.093 | 0.384 | 0.243 | 0.150 | 0.457 |
| | (0.086) | (0.031) | (0.084) | (0.065) | (0.030) | (0.101) |
| Export Shock*Business Manager | 0.171 | 0.086 | 0.424 | 0.265 | 0.179 | 0.491 |
| | (0.093) | (0.040) | (0.122) | (0.077) | (0.049) | (0.142) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Obs | 6,686 | 8,285 | 8,285 | 8,285 | 8,285 | 8,173 |

This table reports the coefficients from regressions of firm-level outcomes on export shocks and their interactions with a firm-level indicator for having a business manager. Export shocks are shocks to export demand from destination-product combinations the firm exports to as defined in the text. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects, and industry×year fixed effects. The dependent variables are log profits per worker in column 1, log value added per worker in column 2, log value of exports in column 3, log value added in column 4, log employment in column 5, and log investment in column 6. Regressions are weighted by firm employment, and standard errors are clustered at the firm level.

Table A10: Wage Response to Export Shocks Controlling for Product Export Shocks in Denmark

| | Log Hourly Wage | Log Income | Labor Share | Log Hourly Wage | Log Income | Labor Share |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Export Shock*Non-Business Manager | 0.019 | 0.022 | -0.005 | 0.016 | 0.016 | -0.003 |
| | (0.004) | (0.005) | (0.011) | (0.004) | (0.005) | (0.011) |
| Export Shock*Business Manager | 0.002 | 0.008 | -0.025 | -0.003 | 0.000 | -0.015 |
| | (0.009) | (0.008) | (0.015) | (0.009) | (0.008) | (0.014) |
| Log Output | | | | 0.012 | 0.011 | -0.182 |
| | | | | (0.004) | (0.005) | (0.015) |
| Log Employment | | | | 0.017 | 0.051 | 0.163 |
| | | | | (0.004) | (0.006) | (0.016) |
| Log Capital-labor Ratio | | | | 0.005 | 0.001 | -0.013 |
| | | | | (0.002) | (0.002) | (0.005) |
| Share of High-skilled Workers | | | | 0.082 | 0.058 | 0.156 |
| | | | | (0.025) | (0.028) | (0.067) |
| Product Export Shocks | 0.010 | 0.016 | -0.016 | 0.012 | 0.012 | -0.014 |
| | (0.005) | (0.005) | (0.013) | (0.005) | (0.005) | (0.010) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Worker-firm FE | Y | Y | | Y | Y | |
| Firm FE | | | Y | | | Y |
| Obs | 1,783,859 | 1,783,694 | 5,157 | 1,783,859 | 1,783,694 | 5,157 |

This table reports the coefficients from regressions of wages and the labor share on export shocks and their interactions with a firm-level indicator for having a business manager. All regressions control for product demand shocks at the firm level, constructed as the weighted average of total imports (excluding imports from Denmark) at six-digit product level, with the weights being the ex-ante shares of sales in each six-digit product. In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Columns 3–6 also control for time-varying firm characteristics (log output, log employment, log capital-labor ratio, share of high-skilled workers). The dependent variables are log hourly wage of workers in columns 1 and 4, log annual income of workers in columns 2 and 5, and the labor share of firms (wage bill divided by value added) in columns 3 and 6. Firm-level regressions in columns 3 and 6 are weighted by firm employment. Standard errors are clustered at the firm level.

Table A11: Wage Response to Export Shocks Using a Balanced Panel of Firms in Denmark

| | Log Hourly Wage | Log Income | Labor Share | Log Hourly Wage | Log Income | Labor Share |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Export Shock*Non-Business Manager | 0.020 | 0.033 | -0.012 | 0.014 | 0.024 | -0.008 |
| | (0.004) | (0.005) | (0.012) | (0.004) | (0.004) | (0.011) |
| Export Shock*Business Manager | 0.006 | 0.013 | -0.024 | 0.002 | 0.001 | -0.019 |
| | (0.007) | (0.008) | (0.013) | (0.007) | (0.007) | (0.012) |
| Log Output | | | | 0.013 | 0.009 | -0.148 |
| | | | | (0.004) | (0.004) | (0.014) |
| Log Employment | | | | 0.019 | 0.047 | 0.168 |
| | | | | (0.005) | (0.005) | (0.015) |
| Log Capital-labor Ratio | | | | 0.002 | -0.001 | -0.020 |
| | | | | (0.001) | (0.001) | (0.005) |
| Share of High-skilled Workers | | | | 0.085 | 0.111 | 0.216 |
| | | | | (0.024) | (0.029) | (0.072) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Worker-firm FE | Y | Y | | Y | Y | |
| Obs | 1,082,559 | 1,082,553 | 3,156 | 1,082,559 | 1,082,553 | 3,156 |

This table reports the coefficients from regressions of wages and the labor share on export shocks and their interactions with a firm-level indicator for having a business manager. The sample is a balanced sample of firms between 1995 and 2006 (i.e. firms that exit in every single year of that period). In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Columns 3–6 also control for time-varying firm characteristics (log output, log employment, log capital-labor ratio, share of high-skilled workers). The dependent variables are log hourly wage of workers in columns 1 and 4, log annual income of workers in columns 2 and 5, and the labor share of firms (wage bill divided by value added) in columns 3 and 6. Firm-level regressions in columns 3 and 6 are weighted by firm employment. Standard errors are clustered at the firm level.

Table A12: College-Degree Managers and Wage Response to Trade Shocks in Denmark

| | Log Hourly Wage | Log Income | Labor Share | Log Hourly Wage | Log Income | Labor Share |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Export Shock*Non-College Non-Business Manager | 0.016 | 0.030 | -0.016 | 0.014 | 0.025 | -0.000 |
| | (0.005) | (0.005) | (0.012) | (0.005) | (0.005) | (0.011) |
| Export Shock*College Non-Business Manager | 0.017 | 0.016 | -0.011 | 0.014 | 0.010 | -0.004 |
| | (0.003) | (0.005) | (0.013) | (0.003) | (0.004) | (0.012) |
| Export Shock*Business Manager | 0.001 | 0.009 | -0.025 | -0.004 | -0.001 | -0.018 |
| | (0.007) | (0.007) | (0.015) | (0.007) | (0.006) | (0.013) |
| Log Output | | | | 0.012 | 0.013 | -0.163 |
| | | | | (0.003) | (0.005) | (0.012) |
| Log Employment | | | | 0.013 | 0.045 | 0.165 |
| | | | | (0.004) | (0.005) | (0.012) |
| Log Capital-labor Ratio | | | | 0.003 | 0.000 | -0.010 |
| | | | | (0.001) | (0.001) | (0.004) |
| Share of High-skilled Workers | | | | 0.076 | 0.075 | 0.208 |
| | | | | (0.021) | (0.026) | (0.057) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Worker-firm FE | Y | Y | | Y | Y | |
| Obs | 1,783,859 | 1,783,694 | 5,157 | 1,783,859 | 1,783,694 | 5,157 |

This table reports the coefficients from regressions of wages and the labor share on export shocks and their interactions with whether the manager has no college degree, has a college degree but no business degree, or has a business degree. Export shocks are shocks to export demand from destination-product combinations the firm exports to as defined in the text. In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Columns 3–6 also control for time-varying firm characteristics (log output, log employment, log capital-labor ratio, share of high-skilled workers). The dependent variables are log hourly wage of workers in columns 1 and 4, log annual income of workers in columns 2 and 5, and the labor share of firms (wage bill divided by value added) in columns 3 and 6. Firm-level regressions in columns 3 and 6 are weighted by firm employment. Standard errors are clustered at the firm level.

Table A13: Wage Response to Export Shocks for Union and Non-Union Workers in Denmark

| | Union | | Non-Union | |
|---|---|---|---|---|
| | Log Hourly Wage | Log Income | Log Hourly Wage | Log Income |
| | (1) | (2) | (3) | (4) |
| Export Shock*Non-Business Manager | 0.018 | 0.024 | 0.010 | 0.016 |
| | (0.003) | (0.005) | (0.004) | (0.007) |
| Export Shock*Business Manager | 0.001 | 0.009 | 0.002 | -0.001 |
| | (0.007) | (0.007) | (0.008) | (0.010) |
| Industry-year FE | Y | Y | Y | Y |
| Worker-firm FE | Y | Y | Y | Y |
| Obs | 1,555,089 | 1,554,942 | 197,545 | 197,528 |

This table reports the coefficients from regressions of wages on export shocks and their interactions with a firm-level indicator for having a business manager. Columns 1 and 2 only include union workers, and columns 3 and 4 include only non-union workers. In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects, industry×year fixed effects, firm×worker fixed effects, quadratic in experience, and union and marital status dummies. The dependent variables are log hourly wage in columns 1 and 3, and log annual income in columns 2 and 4. Standard errors are clustered at the firm level.

Table A14: Effects of Trade Shocks on Firm Exit in Denmark

| | Exit - 1 year | | | Exit - 3 years | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Export Shock*Non-Business Manager | -0.003 | | | 0.026 | | |
| | (0.021) | | | (0.023) | | |
| Export Shock*Business Manager | -0.045 | | | -0.028 | | |
| | (0.028) | | | (0.029) | | |
| Intermediate Import Shock*Non-Business Manager | | 0.014 | | | 0.001 | |
| | | (0.012) | | | (0.017) | |
| Intermediate Import Shock*Business Manager | | 0.008 | | | 0.001 | |
| | | (0.020) | | | (0.024) | |
| Chinese Import Shock*Non-Business Manager | | | 0.000 | | | 0.033 |
| | | | (0.011) | | | (0.016) |
| Chinese Import Shock*Business Manager | | | 0.006 | | | 0.035 |
| | | | (0.010) | | | (0.020) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Obs | 8,286 | 8,286 | 6,380 | 8,286 | 8,286 | 6,380 |

This table reports the coefficients from regressions of firm exit on trade shocks (export shocks, intermediate import shocks, and Chinese import shocks) and their interactions with a firm-level indicator for having a business manager. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. The dependent variable is an indicator variable for firm exit in next year in columns 1–3, and an indicator variable for firm exit in the next 3 years in columns 4–6. Regressions are weighted by firm employment, and standard errors are clustered at the firm level.

Table A15: Business Managers and Firm Response to Intermediate Import Shocks in Denmark

| | Log Profit Per Worker | Log Value Added Per Worker | Log Intermediate Imports | Log Value Added | Log Employment | Log Investment |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Intermediate Import Shock*Non-Business Manager | 0.101 | 0.043 | 0.309 | 0.136 | 0.093 | 0.152 |
| | (0.067) | (0.026) | (0.102) | (0.045) | (0.024) | (0.094) |
| Intermediate Import Shock*Business Manager | 0.115 | 0.049 | 0.370 | 0.137 | 0.088 | 0.126 |
| | (0.070) | (0.033) | (0.146) | (0.064) | (0.042) | (0.142) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Obs | 6,686 | 8,285 | 8,072 | 8,285 | 8,285 | 8,173 |

This table reports the coefficients from regressions of firm-level outcomes on intermediate import shocks and their interactions with a firm-level indicator for having a business manager. Intermediate import shocks are shocks to intermediate imports supply from origin country-product combinations the firm imports from as defined in the text. All regressions control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. The dependent variables are log profits per worker in column 1, log value added per worker in column 2, log value of exports in column 3, log value added in column 4, log employment in column 5, and log investment in column 6. Regressions are weighted by firm employment, and standard errors are clustered at the firm level.

Table A16: Business Managers and Wage Response to Intermediate Import Shocks in Denmark

| | Log Hourly Wage | Log Income | Labor Share | Log Hourly Wage | Log Income | Labor Share |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Intermediate Import Shock*Non-Business Manager | 0.012 | 0.011 | -0.005 | 0.009 | 0.005 | -0.000 |
| | (0.003) | (0.003) | (0.009) | (0.003) | (0.003) | (0.008) |
| Intermediate Import Shock*Business Manager | -0.000 | 0.007 | -0.016 | -0.004 | 0.001 | -0.012 |
| | (0.005) | (0.005) | (0.014) | (0.005) | (0.005) | (0.014) |
| Log Output | | | | 0.013 | 0.013 | -0.163 |
| | | | | (0.003) | (0.005) | (0.011) |
| Log Employment | | | | 0.014 | 0.045 | 0.164 |
| | | | | (0.004) | (0.005) | (0.012) |
| Log Capital-labor Ratio | | | | 0.003 | 0.000 | -0.010 |
| | | | | (0.001) | (0.001) | (0.004) |
| Share of High-skilled Workers | | | | 0.088 | 0.076 | 0.224 |
| | | | | (0.020) | (0.025) | (0.056) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Worker-firm FE | Y | Y | | Y | Y | |
| Firm FE | | | Y | | | Y |
| Obs | 1,783,859 | 1,783,694 | 5,157 | 1,783,859 | 1,783,694 | 5,157 |

This table reports the coefficients from regressions of wages and the labor share on intermediate import shocks and their interactions with a firm-level indicator for having a business manager. Intermediate import shocks are shocks to intermediate imports supply from origin country-product combinations the firm imports from as defined in the text. In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Columns 3–6 also control for time-varying firm characteristics (log output, log employment, log capital-labor ratio, share of high-skilled workers). The dependent variables are log hourly wage of workers in columns 1 and 4, log annual income of workers in columns 2 and 5, and the labor share of firms (wage bill divided by value added) in columns 3 and 6. Firm-level regressions in columns 3 and 6 are weighted by firm employment. Standard errors are clustered at the firm level.

Table A17: Response to Positive and Negative Intermediate Import Shocks in Denmark

| | Log Hourly Wage | Log Income | Labor Share | Log Hourly Wage | Log Income | Labor Share |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Pos Intermediate Import Shock*Non-Business Manager | 0.025 | 0.017 | 0.007 | 0.023 | 0.011 | 0.009 |
| | (0.005) | (0.004) | (0.013) | (0.005) | (0.005) | (0.012) |
| Pos Intermediate Import Shock*Business Manager | -0.002 | 0.009 | -0.015 | 0.006 | 0.002 | -0.014 |
| | (0.010) | (0.005) | (0.014) | (0.010) | (0.006) | (0.013) |
| Neg Intermediate Import Shock*Non-Business Manager | -0.004 | 0.006 | -0.004 | 0.007 | 0.008 | -0.010 |
| | (0.005) | (0.005) | (0.012) | (0.005) | (0.005) | (0.011) |
| Neg Intermediate Import Shock*Business Manager | 0.002 | 0.010 | -0.002 | 0.011 | 0.008 | -0.011 |
| | (0.008) | (0.006) | (0.012) | (0.009) | (0.006) | (0.015) |
| Log Output | | | | 0.012 | 0.013 | -0.164 |
| | | | | (0.003) | (0.005) | (0.011) |
| Log Employment | | | | 0.013 | 0.044 | 0.165 |
| | | | | (0.004) | (0.005) | (0.012) |
| Log Capital-labor Ratio | | | | 0.003 | 0.000 | -0.010 |
| | | | | (0.001) | (0.001) | (0.004) |
| Share of High-skilled Workers | | | | 0.079 | 0.072 | 0.228 |
| | | | | (0.020) | (0.028) | (0.056) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Worker-firm FE | Y | Y | | Y | Y | |
| Firm FE | | | Y | | | Y |
| Obs | 1,783,859 | 1,783,694 | 5,157 | 1,783,859 | 1,783,694 | 5,157 |

This table reports the coefficients from regressions of wages and the labor share on positive and negative intermediate import shocks and their interactions with a firm-level indicator for having a business manager. Positive and negative intermediate import shocks are defined in the text. In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Columns 3–6 also control for time-varying firm characteristics (log output, log employment, log capital-labor ratio, share of high-skilled workers). The dependent variables are log hourly wage of workers in columns 1 and 4, log annual income of workers in columns 2 and 5, and the labor share of firms (wage bill divided by value added) in columns 3 and 6. Firm-level regressions in columns 3 and 6 are weighted by firm employment. Standard errors are clustered at the firm level.

Table A18: Response to Intermediate Import Shocks Before and After Non-Business to Business Manager Turnovers in Denmark

**Panel A: Non-Business to Business Manager Transitions**

| | Value Added per Worker | | Log Hourly Wage | | Log Income | | Labor Share | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Intermediate Import Shock*Pre | 0.034 | 0.021 | 0.018 | 0.016 | 0.026 | 0.023 | -0.005 | -0.006 |
| | (0.037) | (0.034) | (0.010) | (0.003) | (0.011) | (0.004) | (0.010) | (0.008) |
| Intermediate Import Shock*Post | 0.061 | 0.026 | -0.001 | -0.004 | -0.007 | -0.016 | -0.015 | -0.017 |
| | (0.039) | (0.038) | (0.005) | (0.006) | (0.005) | (0.008) | (0.012) | (0.0011) |
| Industry-year FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Worker-firm FE | | | Y | Y | Y | Y | | |
| Obs | 1,582 | 6,296 | 544,119 | 1,303,209 | 544,117 | 1,303,050 | 1,402 | 5,504 |

**Panel B: Placebo Non-Business to Non-Business Manager Transitions**

| | Value Added per Worker | | Log Hourly Wage | | Log Income | | Labor Share | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Intermediate Import Shock*Pre | 0.054 | 0.019 | 0.013 | 0.016 | 0.011 | 0.016 | -0.006 | -0.006 |
| | (0.041) | (0.022) | (0.004) | (0.003) | (0.004) | (0.004) | (0.014) | (0.009) |
| Intermediate Import Shock*Post | 0.052 | 0.018 | 0.013 | 0.015 | 0.014 | 0.017 | -0.004 | -0.006 |
| | (0.041) | (0.022) | (0.004) | (0.003) | (0.004) | (0.003) | (0.013) | (0.009) |
| Industry-year FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y | Y | Y |
| Worker-firm FE | | | Y | Y | Y | Y | | |
| Obs | 1,881 | 5,950 | 597,871 | 1,244,708 | 597,808 | 1,244,543 | 1,770 | 5,211 |

This table reports the coefficients from the regression of wages, value added per woker and the labor share on intermediate import shocks before and after manager transitions. *Pre* is a dummy variable that equals 1 if the observation is before the manager transition, and *Post* is a dummy variable that equals 1 if the observation is after the manager transition. In Panel A, columns 1, 3, 5 include firms with one manager transition from a non-business manager to a business manager, and columns 2, 4, 6 also include firms that always had non-business managers (for which *Pre* equals 1 for all years). In Panel B, columns 1, 3, 5 include firms with one manager transition from a non-business manager to a non-business manager, and columns 2, 4, 6 also include firms that always had non-business managers and no manager transitions (for which *Pre* equals 1 for all years). In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Dependent variables are log value added per worker in columns 1 and 2, log hourly wage in columns 3 and 4, log annual income in columns 5 and 6, and the labor share (wage bill divided by value added) in columns in columns 7 and 8. Firm-level regressions in columns 1, 3, 7, 8 are weighted by firm employment. Standard errors are clustered at the firm level.

Table A19: IV Estimates of Response to Intermediate Import Shocks in Denmark

| | Log Hourly Wage | | Log Income | | Labor Share | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Log Intermediate Shock*(1-Predicted Business Manager) | 0.010 | 0.011 | 0.007 | 0.008 | -0.014 | -0.007 |
| | (0.002) | (0.001) | (0.003) | (0.002) | (0.011) | (0.010) |
| Log Intermediate Shock*Predicted Business Manager | -0.001 | 0.002 | -0.005 | -0.003 | -0.026 | -0.019 |
| | (0.004) | (0.002) | (0.007) | (0.004) | (0.011) | (0.012) |
| Log Output | | 0.047 | | 0.066 | | -0.176 |
| | | (0.003) | | (0.005) | | (0.016) |
| Log Employment | | -0.021 | | -0.022 | | 0.173 |
| | | (0.005) | | (0.009) | | (0.017) |
| Log Capital-labor Ratio | | 0.001 | | -0.007 | | -0.011 |
| | | (0.001) | | (0.001) | | (0.005) |
| Share of High-skilled Workers | | -0.251 | | -0.418 | | 0.328 |
| | | (0.031) | | (0.054) | | (0.075) |
| Industry-year FE | Y | Y | Y | Y | Y | Y |
| Worker-firm FE | Y | Y | Y | Y | | |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Obs | 737,000 | 737,000 | 737,000 | 737,000 | 2,917 | 2,917 |

This table reports the IV estimates of the effect of business manager on the relationship between intermediate import shocks and wages and the labor share. The predicted business manager in each column is the predicted value from regressing whether a firm has a business manager on the lags of the share of its peer firms in the same industry×region×size cell that have a business manager, controlling for the same variables and fixed effects as that column. Intermediate import shocks are shocks to intermediate imports supply from origin country-product combinations the firm imports from as defined in the text. In all columns we control for firm fixed effects, initial size quintile by year fixed effects, region×year fixed effects and industry×year fixed effects. Worker-level regressions additionally control for firm×worker fixed effects, quadratic in experience, and union and marital status dummies. Columns 2, 4 and 6 also control for time-varying firm characteristics (log output, log employment, log capital-labor ratio, share of high-skilled workers). The dependent variables are log hourly wage of workers in columns 1 and 2, log annual income of workers in columns 3 and 4, and the labor share of firms (wage bill divided by value added) in columns 5 and 6. Standard errors are clustered at the firm level.

Table A20: 2SLS Estimates of Business Major Choice on Firm Outcomes Without Controlling for Probability of Becoming a Manager in Denmark

| | Residual log annual wage | Residual log hourly wage | Residual labor share |
|---|---|---|---|
| | (1) | (2) | (3) |
| Business Degree | -0.038 | -0.046 | -0.027 |
| | (0.017) | (0.023) | (0.015) |
| School-cohort FE | Y | Y | Y |
| GPA Quartile FE | Y | Y | Y |
| F statistic | 12.1 | 12.1 | 12.8 |
| Obs | 13,076 | 13,076 | 9,191 |

This table reports 2SLS estimates of the effect of business major choice of managers on workers annual and hourly wages and the firm's labor share. The first stage is provided in Table 7. Column 1 looks at the effect of becoming a manager for the full sample of students (first stage corresponding to column 2 of Table 7) , while columns 2–4 are for the sample of managers (first stage corresponding to column 4 of Table 7). In column 2 the dependent variable is residualized log average annual wage of workers employed under the manager. In column 3 the dependent variable is residualized log average hourly wage of workers employed under the manager. In column 4, the dependent variable is residualized labor share of the firm operated by the manager. These outcomes are residualized by regressing them on industry×year fixed effects, firm fixed effects, region×year fixed effects, and initial size quintile by year fixed effects. All columns control for high school×cohort fixed effects and GPA quartile fixed effects. Standard errors are clustered at the high-school level. First-stage F-statistics for the excluded instruments are reported at the bottom.

Table A21: 2SLS Estimates of Business Major Choice on Firm Performance Measures in Denmark

| | Residual log employment | Residual log sales | Residual log value added | Residual log investment |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Business Degree | 0.061 | -0.064 | -0.029 | -0.044 |
| | (0.104) | (0.161) | (0.144) | (0.182) |
| School-cohort FE | Y | Y | Y | Y |
| GPA Quartile FE | Y | Y | Y | Y |
| F statistic | 12.4 | 13.0 | 13.0 | 13.0 |
| Obs | 13,076 | 9,191 | 9,191 | 9,191 |

This table reports 2SLS estimates of the effect of business major choice of managers on workers annual and hourly wages and the firm's labor share. The first stage is provided in Table 7. The sample includes all students who later become a manager in at least one firm in our data set (first stage corresponding to column 4 of Table 7). In column 1 the dependent variable is residualized log employment of the firm(s) operated by the manager. In column 2 the dependent variable is residualized log sales of the firm(s) operated by the manager. In column 3 the dependent variable is residualized log value added of the firm(s) operated by the manager. In column 4 the dependent variable is residualized log investment of the firm(s) operated by the manager. These outcomes are residualized by regressing them on industry×year fixed effects, firm fixed effects, region×year fixed effects, and initial size quintile by year fixed effects. All columns control for high school×cohort fixed effects, GPA quartile fixed effects, as well as the average propensity to become a manager within the school-cohort-GPA quartile group. Standard errors are clustered at the high-school level. First-stage F-statistics for the excluded instruments are reported at the bottom.

Table A22: 2SLS Estimates of Business Major Choice on Firm and Worker Outcomes with School and Cohort Fixed Effects in Denmark

| | Becoming a manager | Residual log annual wage | Residual log hourly wage | Residual labor share |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Business Degree | 0.064 | -0.035 | -0.039 | -0.022 |
| | (0.037) | (0.021) | (0.028) | (0.017) |
| School FE | Y | Y | Y | Y |
| Cohort FE | Y | Y | Y | Y |
| GPA Quartile FE | Y | Y | Y | Y |
| F statistic | 187.2 | 10.7 | 10.7 | 10.9 |
| Obs | 505,971 | 13,076 | 13,076 | 9,191 |

This table reports 2SLS estimates of the effect of business major choice of managers on workers annual and hourly wages and the firm's labor share. The first stage is provided in Table 7. Column 1 looks at the effect of becoming a manager for the full sample of students (first stage corresponding to column 2 of Table 7) , while columns 2–4 are for the sample of managers (first stage corresponding to column 4 of Table 7). In column 2 the dependent variable is residualized log average annual wage of workers employed under the manager. In column 3 the dependent variable is residualized log average hourly wage of workers employed under the manager. In column 4, the dependent variable is residualized labor share of the firm operated by the manager. These outcomes are residualized by regressing them on industry×year fixed effects, firm fixed effects, region×year fixed effects, and initial size quintile by year fixed effects. All columns control for high school fixed effects, cohort fixed effects, and GPA quartile fixed effects. Columns 2–4 additionally control for the average propensity to become a manager within the school-cohort-GPA quartile group. Standard errors are clustered at the high-school level. First-stage F-statistics for the excluded instruments are reported at the bottom.

Table A23: First Stage and Reduced Form Estimates of Business Major Choice Based on Placebo Role Models in Denmark

**Panel A: Placebo peers in same high school and different GPA quartile**

| | Business degree | | Becoming a manager | Residual log annual wage | Residual log hourly wage | Residual labor share |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Share of Business Degrees in Same High School and Different GPA Quartiles | 0.010 | -0.052 | -0.010 | 0.006 | 0.032 | 0.010 |
| | (0.012) | (0.108) | (0.006) | (0.039) | (0.044) | (0.044) |
| School FE | Y | Y | Y | Y | Y | Y |
| Cohort FE | Y | Y | Y | Y | Y | Y |
| GPA Quartile FE | Y | Y | Y | Y | Y | Y |
| Obs | 505,963 | 13,076 | 505,963 | 13,076 | 13,076 | 9,191 |

**Panel B: Placebo peers in different high school and same GPA quartile**

| | Business degree | | Becoming a manager | Residual log annual wage | Residual log hourly wage | Residual labor share |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Share of Business Degrees in Same GPA Quartile and Different High Schools | 0.046 | 0.042 | 0.027 | -0.029 | -0.055 | 0.011 |
| | (0.036) | (0.332) | (0.019) | (0.121) | (0.136) | (0.137) |
| School FE | Y | Y | Y | Y | Y | Y |
| Cohort FE | Y | Y | Y | Y | Y | Y |
| GPA Quartile FE | Y | Y | Y | Y | Y | Y |
| Obs | 505,970 | 13,076 | 505,970 | 13,076 | 13,076 | 9,191 |

**Panel C: Placebo peers in same high school, GPA quartile, but more than three cohorts ahead**

| | Business degree | | Becoming a manager | Residual log annual wage | Residual log hourly wage | Residual labor share |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Share of Business Degrees in Same High School, GPA Quartile, and Three Cohorts Ahead | 0.018 | 0.051 | 0.007 | 0.005 | -0.014 | 0.019 |
| | (0.008) | (0.059) | (0.005) | (0.021) | (0.024) | (0.024) |
| School FE | Y | Y | Y | Y | Y | Y |
| Cohort FE | Y | Y | Y | Y | Y | Y |
| GPA Quartile FE | Y | Y | Y | Y | Y | Y |
| Obs | 504,138 | 13,076 | 504,138 | 13,076 | 13,076 | 9,191 |

This table reports the placebo first stage and reduced form of the role model IV. The dependent variable is whether a person has a business degree in columns 1 and 2, whether a person becomes a manager in column 3, residualized log average annual wage of workers employed under the manager in column 4, residualized log average hourly wage of workers employed under the manager in column 5, and residualized labor share of the firm operated by the manager in column 6. These outcomes are residualized by regressing them on industry×year fixed effects, firm fixed effects, region×year fixed effects, and initial size quintile by year fixed effects. Columns 3–6 include only individuals who end up becoming a manager in at least one firm during our sample period. In Panel A, the independent variable is the share of students in the same school, previous cohort, but different GPA quartile who have business degrees. In Panel B, the independent variable is the share of students in the previous cohort, same GPA quartile, but a different high school who have business degrees. In Panel C, the independent variable is the share of students in the same high school and same GPA quartile, but more than three cohorts ahead who have business degrees. All columns control for high school fixed effects, cohort fixed effects, and GPA quartile fixed effects. Columns 4–6 additionally control for the average propensity to become a manager within the school-cohort-GPA quartile group. Standard errors are clustered at the high-school level.