# CEO Behavior and Firm Performance

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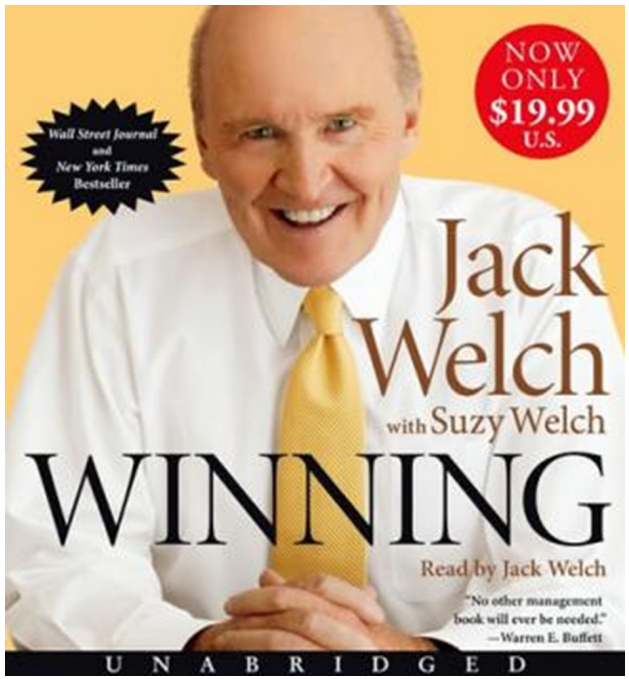
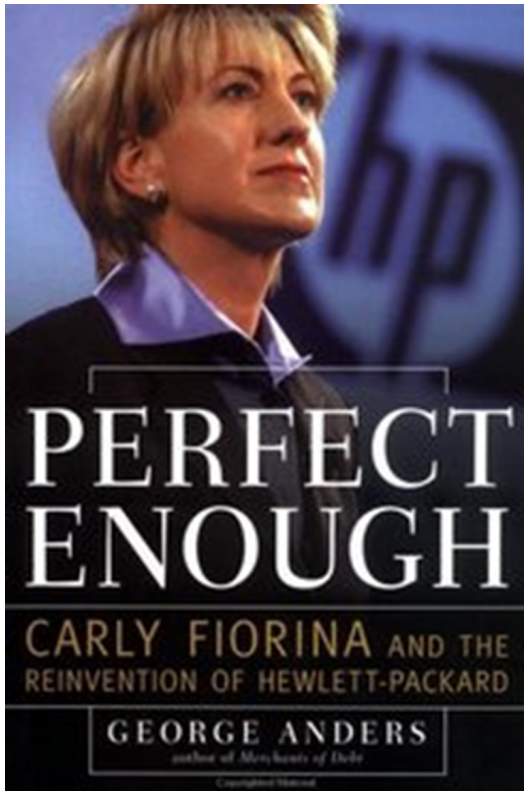
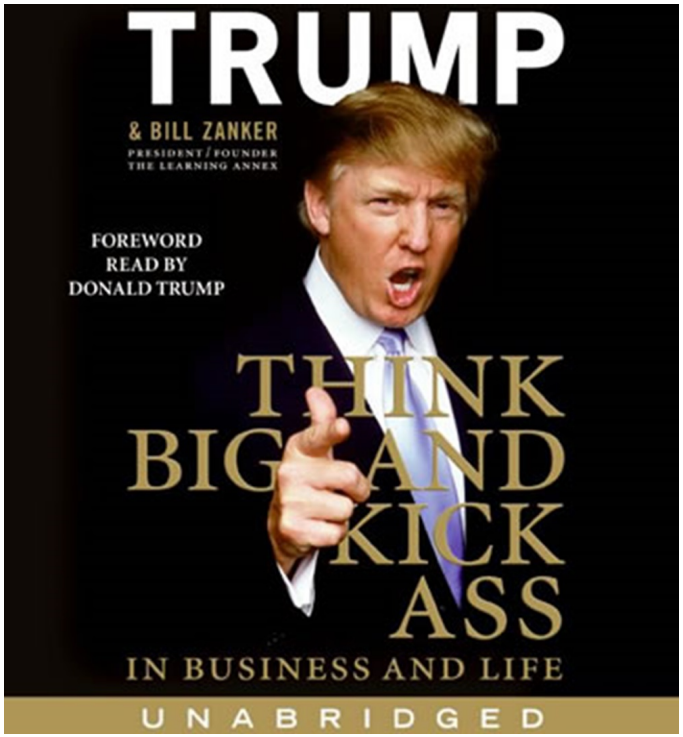
# Do CEOs Create Value?

- Large debate on role of CEOs (Bertrand 2009)
  - Origin of compensation increase? (Frydman-Jenter 2010)
  - Rent extraction (Bertrand-Mullainathan 2001) vs marginal product of better CEOs (Gabaix-Landier 2008, Tervio 2008)
  - Effectiveness of the CEO selection process (Khurana 2002)
  - Lack of accountability (Bebchuk 2009)
- Evidence that the identity of the CEO affects firm performance
  - Bertrand-Schoar (2003)
  - Bennedsen et al. (2007)
  - Kaplan et al (2012)
- But what is the channel?

# CEO Behavior?



# Research Objectives

- Comprehensive information on behavior of statistically menaingful sample of CEOs
- Matching model of CEO behavior types to firm types
- Combine CEO behavior data with information on firms (especially performance)

# Activity Analysis

- Mintzberg (1973) observed five CEOs for a week
  - Types of CEOs
  - Lessons of effectiveness of leaders
- Kotter (1999): 15 general managers
- Here: Extend exercise to a larger number of CEO (1100+)
  - Brazil, France, Germany, India, UK, US
  - Daily interaction with CEO/PA
  - Detailed activity list with: duration, planning, location, breadth, focus, participants.

# Challenges

1. **Dimensionality**: Millions of possible activities (eg 30-mins conf call planned 4 weeks ago with finance, marketing, and an investor).
2. **Endogeneity**: Horse-and-Jockey problem between CEO behavior and firm performance

# Challenges

1. **Dimensionality**: Millions of possible activities (eg 30-mins conf call planned 4 weeks ago with finance, marketing, and an investor).
   Proposed solution: Dimensionality reduction through unsupervised learning – orthogonal to performance.
2. **Endogeneity**: Horse-and-Jockey problem between CEO behavior and firm performance
   Proposed solution: Matching model with frictions. Use CEO tenure and evolution of performance within same company.

# Preview

- Two types of CEOs
- Simple CEO type strongly associated with firm performance (>10%)
- Effect of CEO type on performance 2/3 years after CEO is hired
- CEO type $\neq$ management practices
- Consistent with matching model with a scarce CEO type and an abundant CEO type

# Literature

- CEO activity analysis
  - Mintzberg (1973 – 5 CEOs), Kotter (1999 – 15 MDs), Luthans (1988 – 44 middle managers)
  - Aggregate, survey based (McKinsey 2013)
- Top Management Team theory (Hambrick-Mason 1984)
- CEO value added: Bertrand-Schoar (2003), Bennedsen et al (2007), Kaplan et al (2012), Mullins-Schoar
- Specific behaviors: Malmendier and Tate (2009)
- Management practices: Bloom-VanReenen (2007)

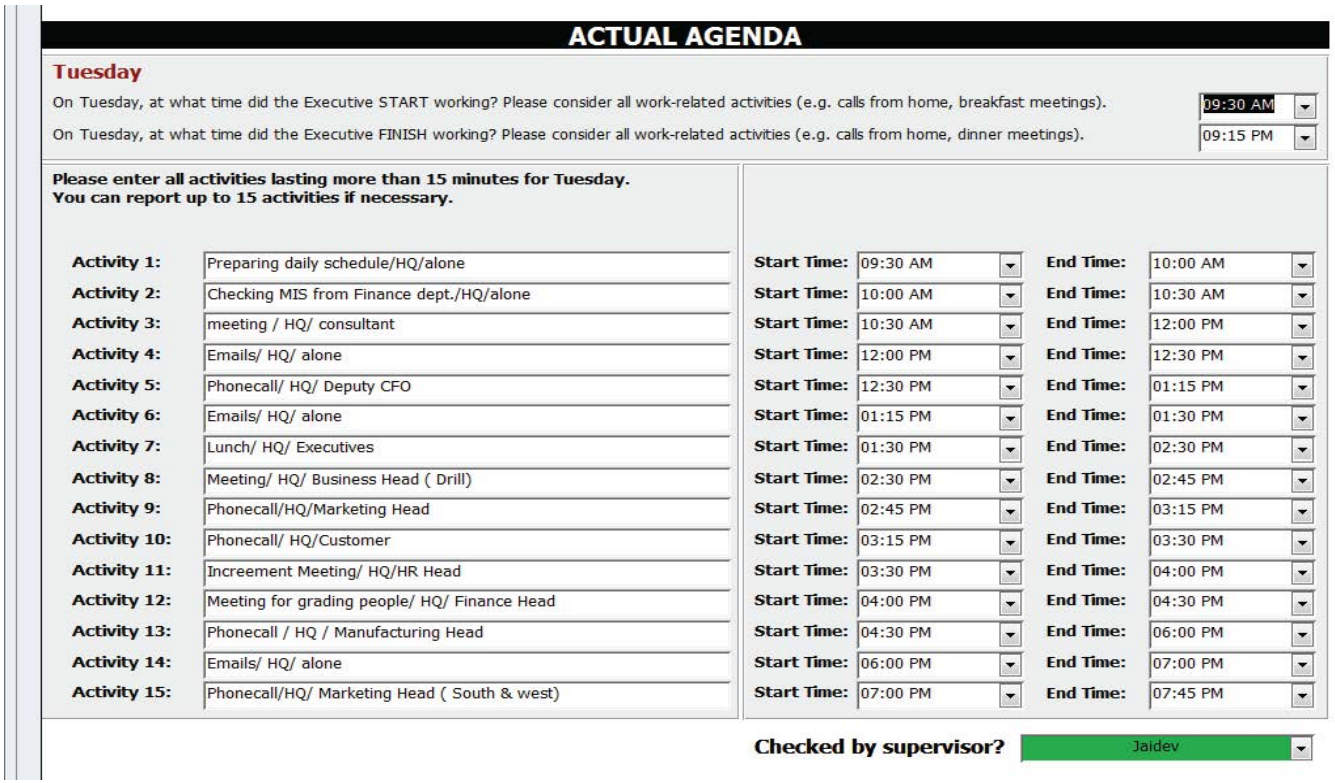
# Roadmap

1. Data
2. Types
3. Matching Model
4. Results

# Executive Time Use Project

- Collected in two waves (2011 and 2013) form a random sample of private and public manufacturing firms in Orbis:
  - Brazil, France, Germany, India, UK, US
- Team of 40 analysts and 5 managers based in London and Mumbai with two tasks:
  - Cold call CEOs
  - Randomly selected week
  - Collect detailed information on all activities lasting more than 15 minutes (via PA or CEO), in exchange of personalized time use analysis

# Example



**ACTUAL AGENDA**

**Tuesday**

On Tuesday, at what time did the Executive START working? Please consider all work-related activities (e.g. calls from home, breakfast meetings). 09:30 AM

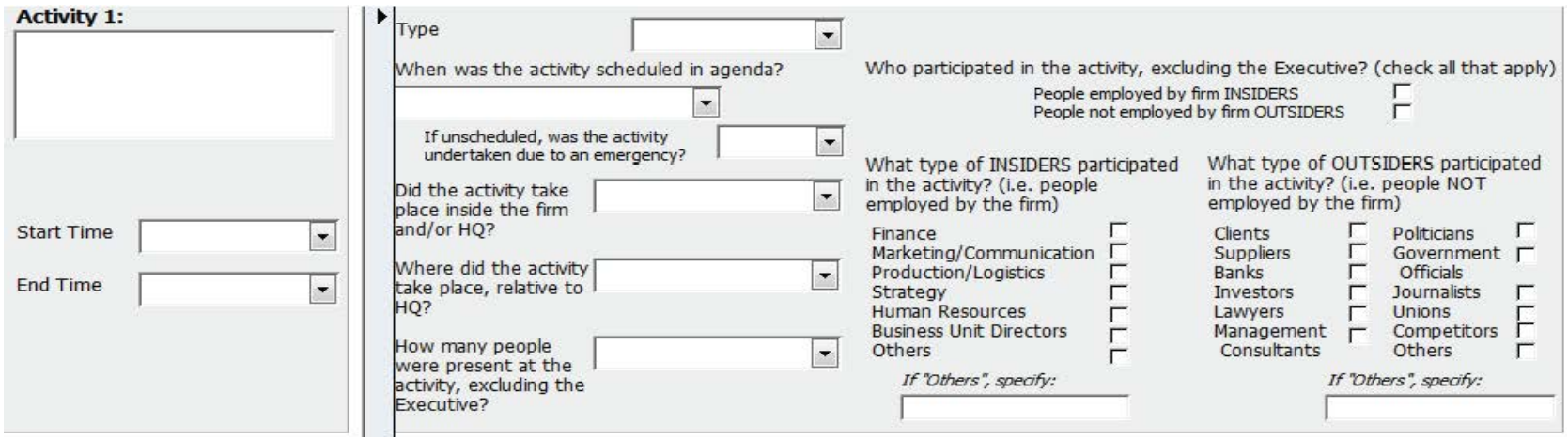
On Tuesday, at what time did the Executive FINISH working? Please consider all work-related activities (e.g. calls from home, dinner meetings). 09:15 PM

**Please enter all activities lasting more than 15 minutes for Tuesday.**
**You can report up to 15 activities if necessary.**

| | | | | | |
|---|---|---|---|---|---|
| **Activity 1:** | Preparing daily schedule/HQ/alone | **Start Time:** | 09:30 AM | **End Time:** | 10:00 AM |
| **Activity 2:** | Checking MIS from Finance dept./HQ/alone | **Start Time:** | 10:00 AM | **End Time:** | 10:30 AM |
| **Activity 3:** | meeting / HQ/ consultant | **Start Time:** | 10:30 AM | **End Time:** | 12:00 PM |
| **Activity 4:** | Emails/ HQ/ alone | **Start Time:** | 12:00 PM | **End Time:** | 12:30 PM |
| **Activity 5:** | Phonecall/ HQ/ Deputy CFO | **Start Time:** | 12:30 PM | **End Time:** | 01:15 PM |
| **Activity 6:** | Emails/ HQ/ alone | **Start Time:** | 01:15 PM | **End Time:** | 01:30 PM |
| **Activity 7:** | Lunch/ HQ/ Executives | **Start Time:** | 01:30 PM | **End Time:** | 02:30 PM |
| **Activity 8:** | Meeting/ HQ/ Business Head ( Drill) | **Start Time:** | 02:30 PM | **End Time:** | 02:45 PM |
| **Activity 9:** | Phonecall/HQ/Marketing Head | **Start Time:** | 02:45 PM | **End Time:** | 03:15 PM |
| **Activity 10:** | Phonecall/ HQ/Customer | **Start Time:** | 03:15 PM | **End Time:** | 03:30 PM |
| **Activity 11:** | Increement Meeting/ HQ/HR Head | **Start Time:** | 03:30 PM | **End Time:** | 04:00 PM |
| **Activity 12:** | Meeting for grading people/ HQ/ Finance Head | **Start Time:** | 04:00 PM | **End Time:** | 04:30 PM |
| **Activity 13:** | Phonecall / HQ / Manufacturing Head | **Start Time:** | 04:30 PM | **End Time:** | 06:00 PM |
| **Activity 14:** | Emails/ HQ/ alone | **Start Time:** | 06:00 PM | **End Time:** | 07:00 PM |
| **Activity 15:** | Phonecall/HQ/ Marketing Head ( South & west) | **Start Time:** | 07:00 PM | **End Time:** | 07:45 PM |

**Checked by supervisor?** Jaidev

# Example


Activity 1:
Start Time
End Time
Type
When was the activity scheduled in agenda?
If unscheduled, was the activity undertaken due to an emergency?
Did the activity take place inside the firm and/or HQ?
Where did the activity take place, relative to HQ?
How many people were present at the activity, excluding the Executive?
Who participated in the activity, excluding the Executive? (check all that apply)
People employed by firm INSIDERS
People not employed by firm OUTSIDERS
What type of INSIDERS participated in the activity? (i.e. people employed by the firm)
Finance
Marketing/Communication
Production/Logistics
Strategy
Human Resources
Business Unit Directors
Others
If "Others", specify:
What type of OUTSIDERS participated in the activity? (i.e. people NOT employed by the firm)
Clients
Suppliers
Banks
Investors
Lawyers
Management Consultants
Politicians
Government Officials
Journalists
Unions
Competitors
Others
If "Others", specify:

# CEO Data

Data has 1,115 CEOs who perform 43,233 separate activities.

Restructure data so that 15 minute time block is unit of analysis: e.g. repeat one hour activity four times.

This ensures that characteristics of time use that tend to appear in short (long) activities are not over-represented (under-represented) in style estimates.

Yields 225,721 observations, or over 56,000 hours of CEO time

# Features

We characterize each time unit according to five separate features:

1. *Type* broadly describes the kind of activity. E.g. "Business Meal", "Meeting", etc.
2. *Duration* describes how long the activity lasts: "15 Min.", "30 Min.", "1 Hr.", and "More than 1 Hr.".
3. *Planned* indicates whether the activity was planned in advance by the CEO.
4. *One-on-One* indicates whether the activity involves an interaction with just one other person or more than one other person.
5. *Functions* describes the functions of those involved in the activity (besides the CEO). Feature is subset of all functions present.
   - 5.1 *Inside functions*, e.g. "Finance", "Commercial Group", "Production"
   - 5.2 *Outside functions*, e.g. "Clients", "Suppliers", "Consultants", etc.

# Combining Features

We describe each time block as a combination of each separate feature. Examples:

1. meeting + 1hrplus + planned + two_plus_ppl + {production}
2. meeting + 30m + unplanned + one_ppl + {marketing}
3. meeting + 1hrplus + unplanned + two_plus_ppl + {marketing, production}
4. public event + 1hrplus + planned + two_plus_ppl + {clients, suppliers, competitors}

4,253 unique combinations in the data.

# Behavior and Dimensionality Reduction

The large number of combinations makes it difficult to include all of them in a regression.

But we also don't want to arbitrarily exclude potentially important dimensions of variation.

Problem is that *ex ante* we have no way of knowing which dimensions are important.

We adopt an algorithmic approach that projects the high-dimensional feature space onto a lower-dimensional type space $\rightarrow$ Latent Dirichlet Allocation (Blei, Ng, Jordan 2003).

# Statistical Model

## Definition

A management behavior $s$ is a distribution $\beta^s$ over the set of combinations.

- Let there be $S$ different behaviors.
- Any combination can have positive probability within any behavior.
- The same combination typically has different probabilities across behaviors.
- By allowing combinations, we admit arbitrary covariance patterns among individual features within behaviors. E.g. planning and activity length.

## Definition

A CEO $i$ is a type $\theta_i$, a distribution over set of behaviors.

- Each unit of time assigned behavior $s$ drawn independently from $\theta_i$.
- CEOs are individual-specific combinations of behaviors.

# Interpretation

We adopt a model with $S = 2$: minimal model with unobservable heterogeneity.

A CEO type is $\theta_i \in [0, 1]$.

Each unit of $i$'s time is has distribution over activities given by

$$\boldsymbol{\beta}_i = \theta_i \boldsymbol{\beta}^1 + (1 - \theta_i)\boldsymbol{\beta}^0.$$

A pure type 1 (0) has $\theta_i = 1$ $(= 0)$, and always adopts behavior $\boldsymbol{\beta}^1$ $(\boldsymbol{\beta}^0)$.

Our model allows CEOs to lie on a continuum in between these pure types $\rightarrow$ mixed-membership rather than mixture model.

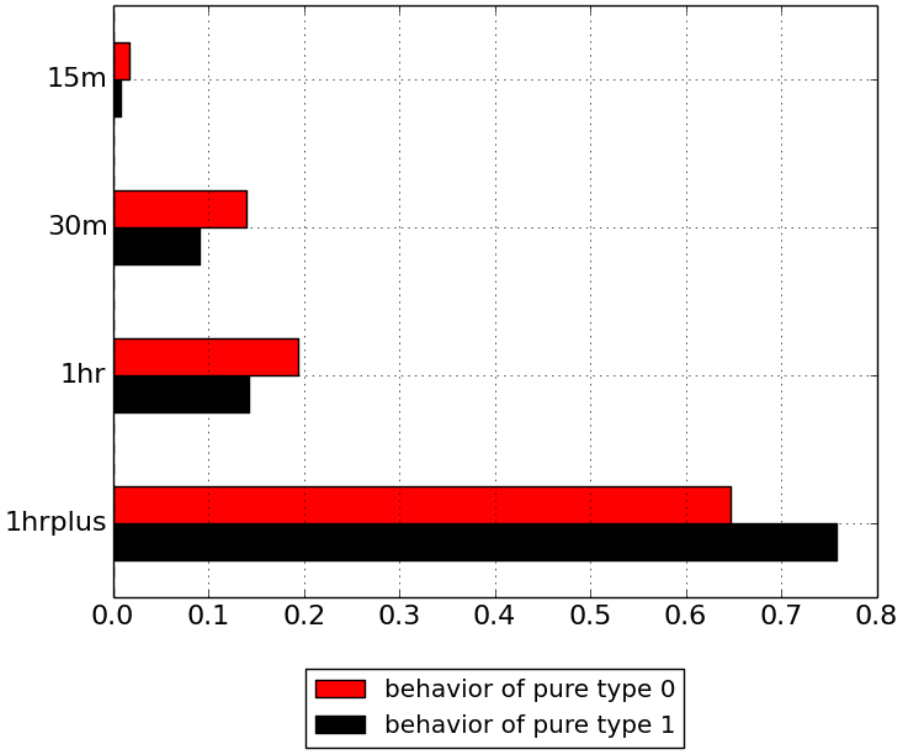
# Estimation

We use a Bayesian approach, and assign Dirichlet priors to $\beta^s$ and $\theta_i$.

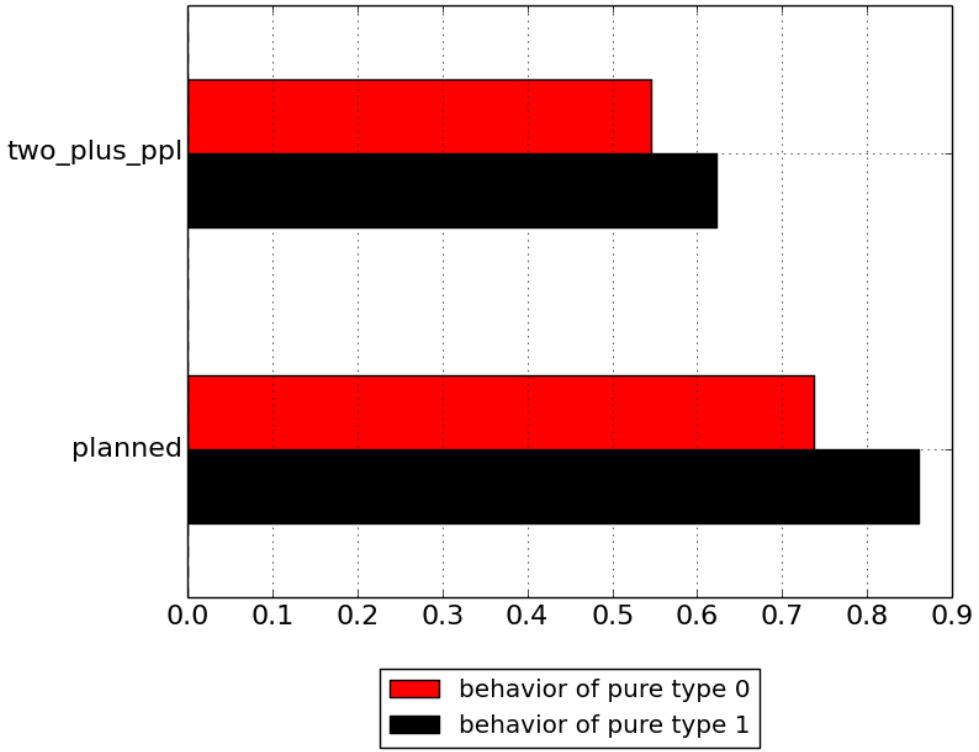
Estimate posterior distributions for $\beta^s$ and $\theta_i$ with Gibbs sampling (Griffiths and Steyvers).

Easiest to interpret behaviors of pure types in terms of marginal distributions over individual features.

# Behavioral Differences I




(A) Duration




(B) Meeting Size and Planning

Figure: Basic Differences

# Behavioral Differences II

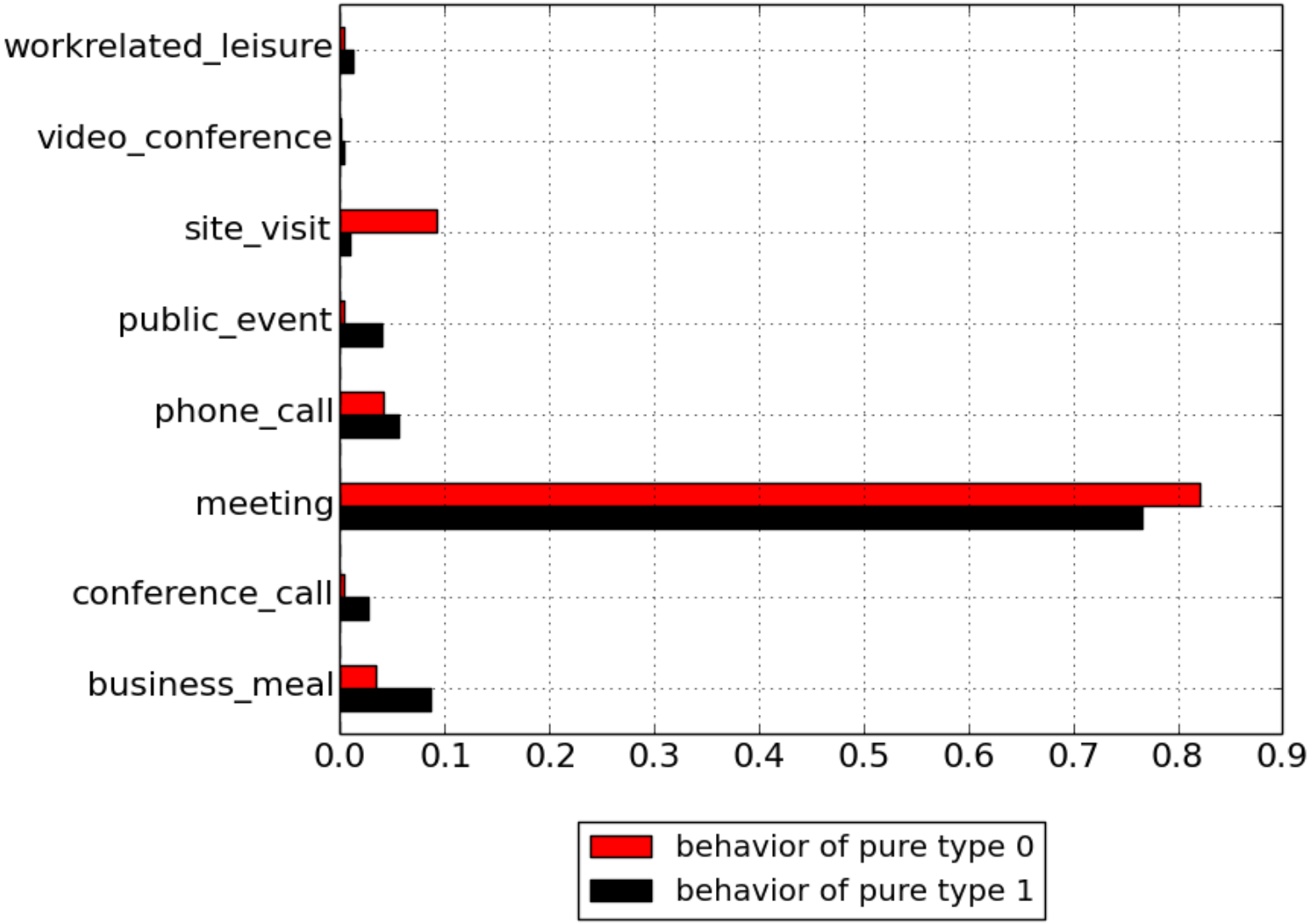
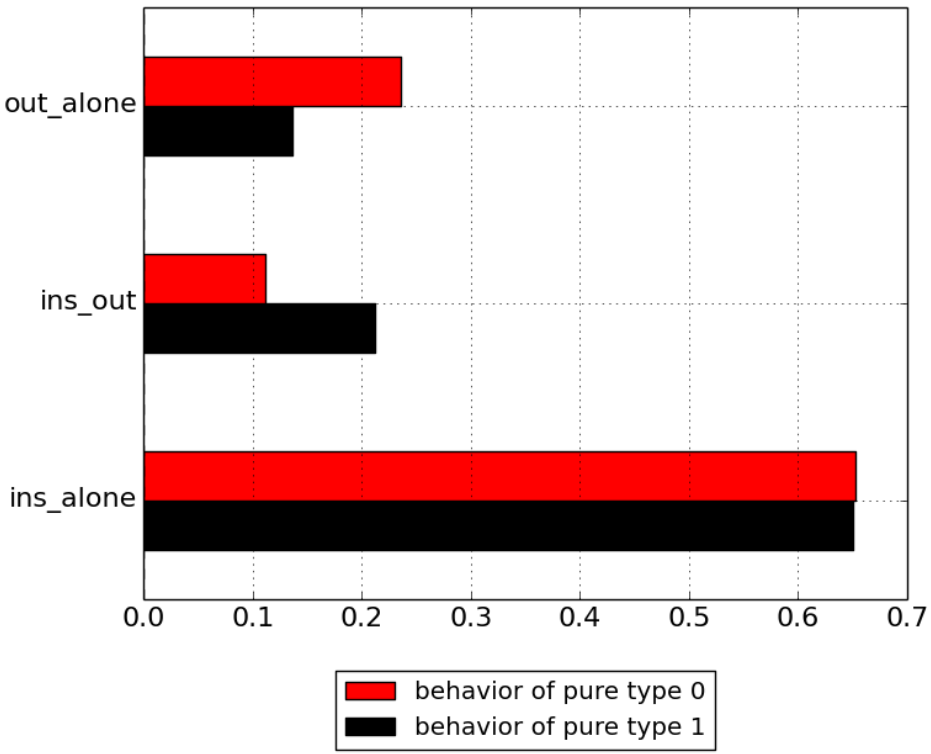
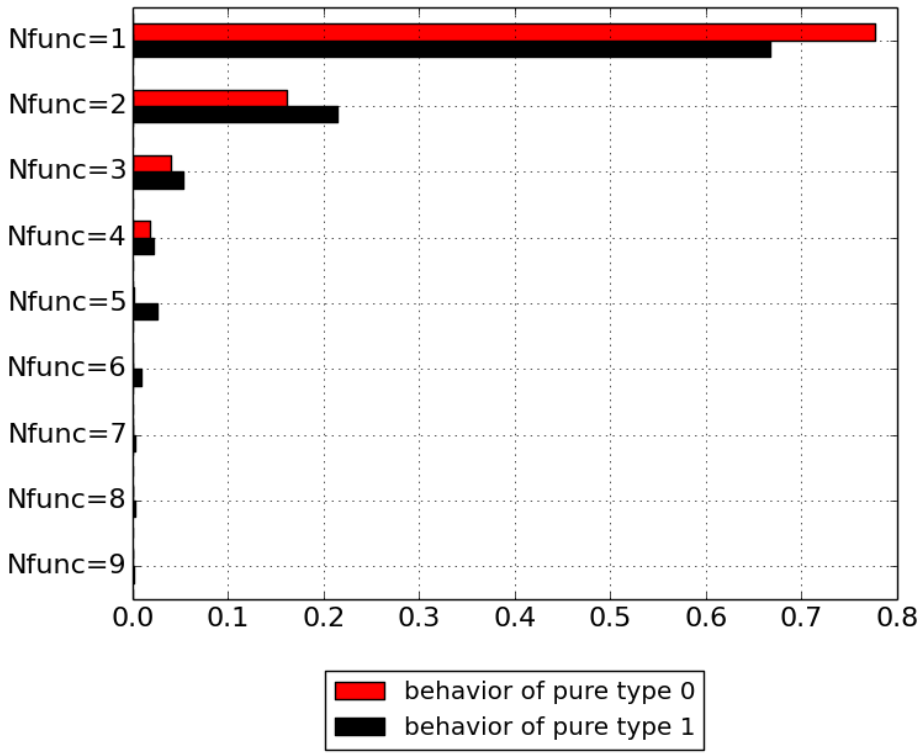



Figure: Type of Activity

# Behavioral Differences III



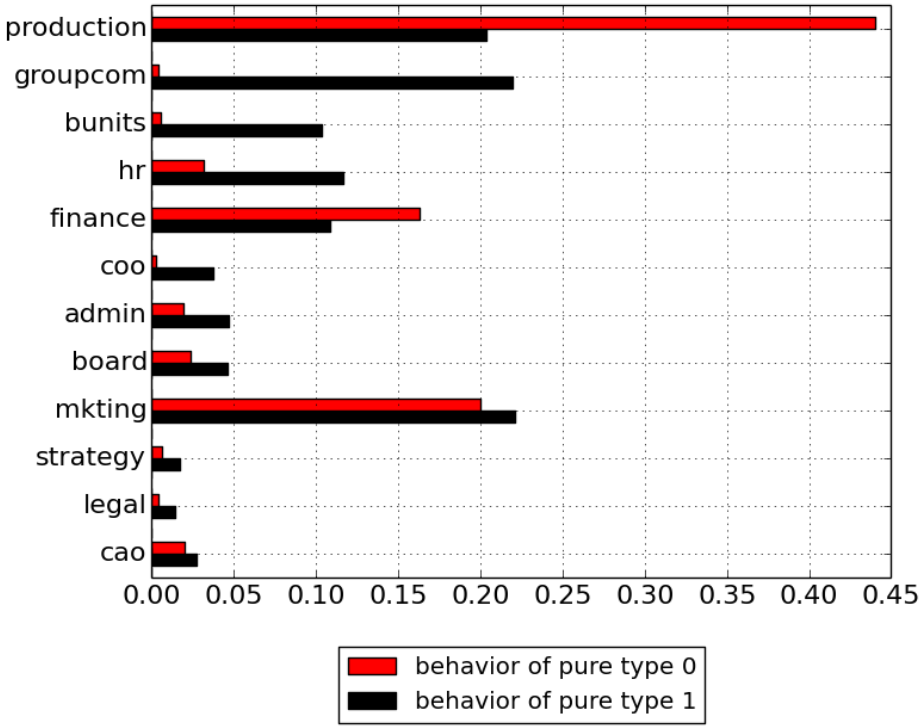

(A) Inside vs Outside Functions



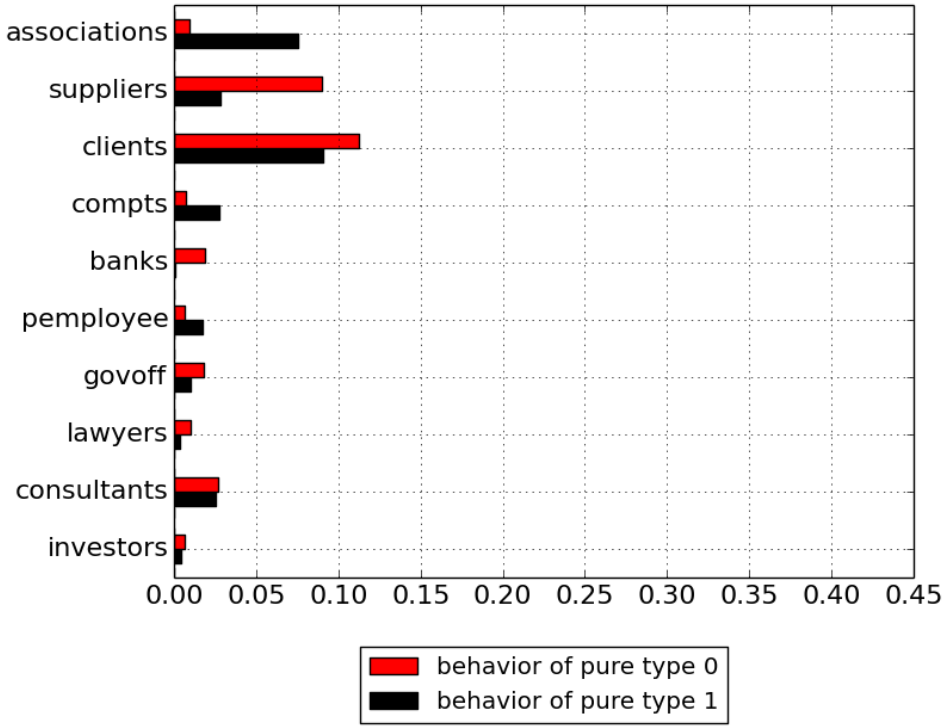

(B) Number of Functions

Figure: Aggregate Function Differences

# Behavioral Differences IV




(A) Inside Functions

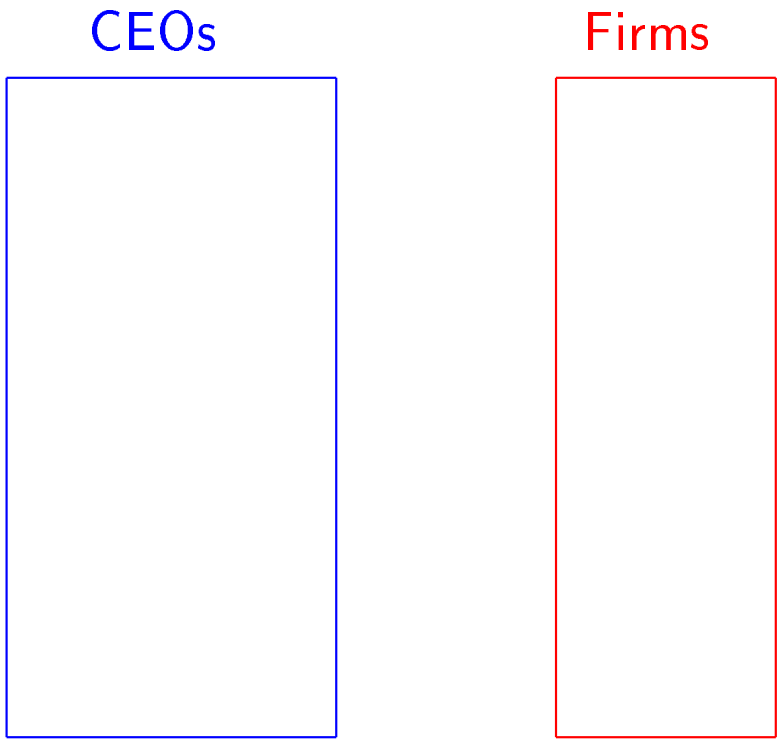



(B) Outside Functions

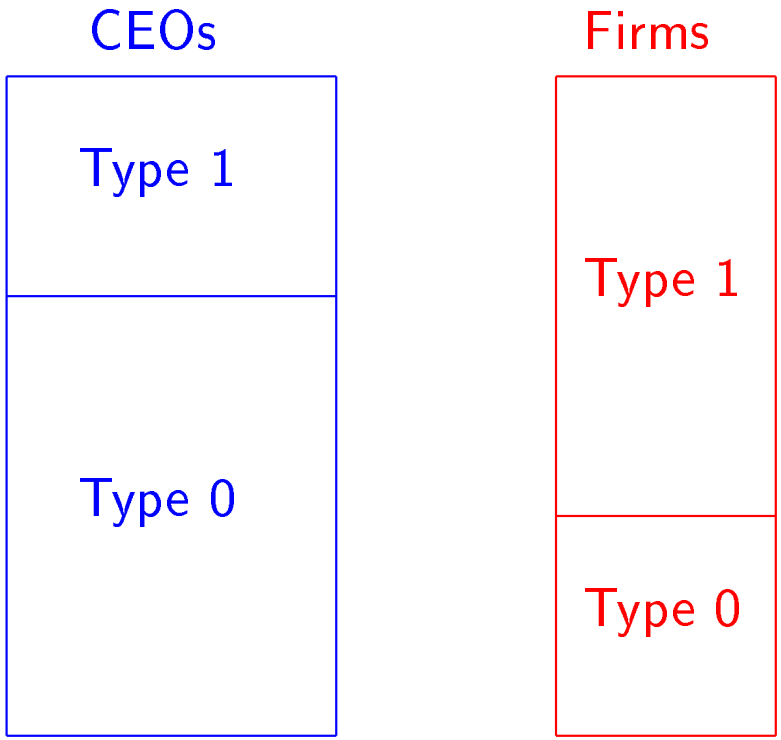
Figure: Detailed Function Differences

# CEO-Firm Matching Model

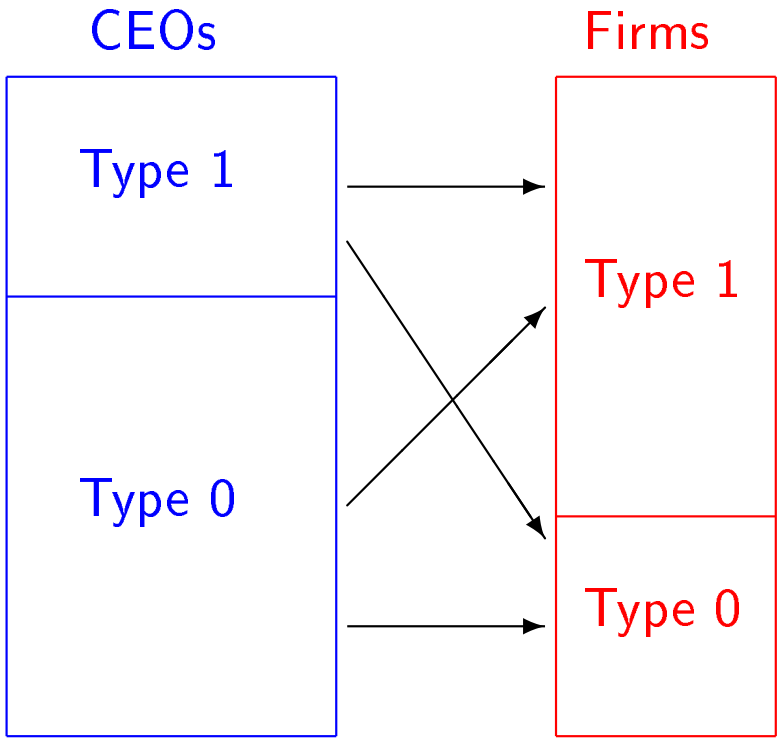
- Different types of CEOs and Firms. If a firm is run by the right type of CEO, productivity is higher
- Some CEO types may be more abundant
- CEO screening is imperfect (Khurana 2002)
- Dismissing CEOs is difficult (Bebchuk 2009)



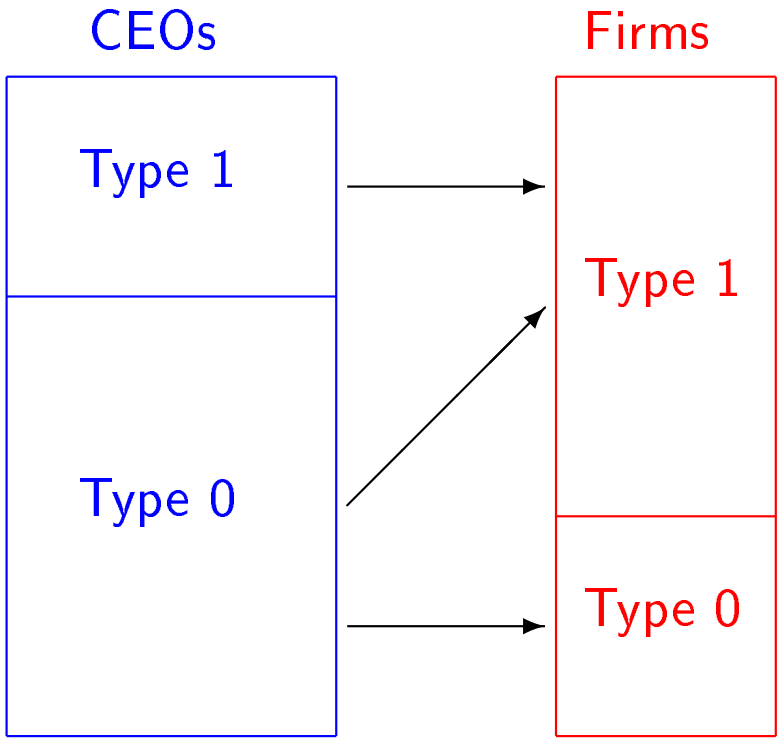

- Mass of firms: 1
- Mass of CEOs: $m > 1$




- Share of Type 1 CEOs: $\gamma$
- Share of Type 1 Firms: $\phi > 1$
- Type 1 CEOs are scarce
- Firm productivity is 1 if CEO type = Firm type and zero if it is mismatched



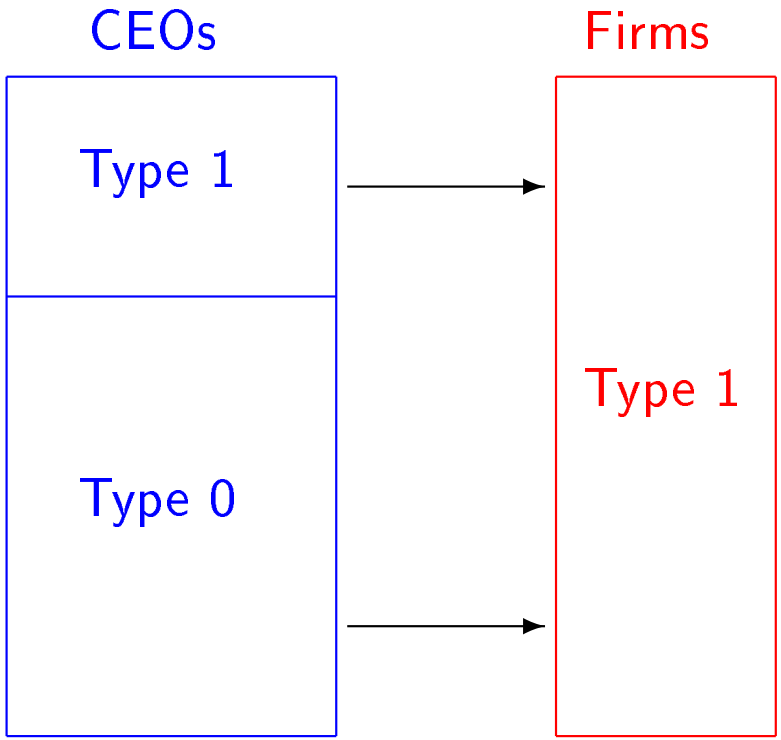

- CEOs submit applications to a job market
- They declare their type
- Firms process applications sequentially at cost $c$ and can detect liars with probability $\rho \in (0, 1)$




## Proposition

*In equilibrium:*

- *All scarce-type CEOs are correctly matched;*
- *Some abundant-type CEOs are mismatched;*
- *The average productivity of firms run by abundant-type CEOs is lower than that of firms run by scarce-type*




## Corollary

*If all firms are Type 1:*

- *All scarce-type CEOs are correctly matched;*
- *All abundant-type CEOs are mismatched;*
- *The average productivity of firms run by abundant-type CEOs is lower than that of firms run by scarce-type*

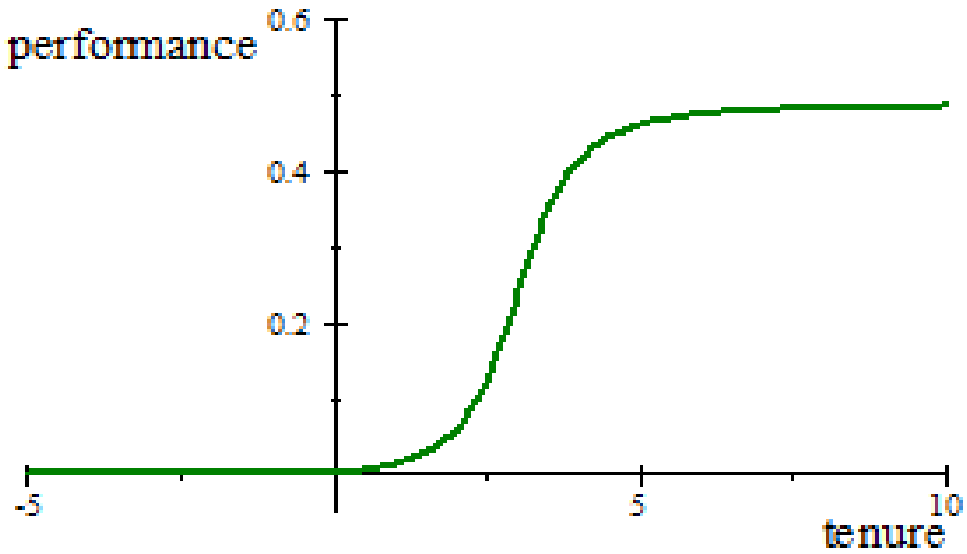
# CEO-Firm Matching Model: Dynamics

- Suppose a new CEO affects productivity gradually

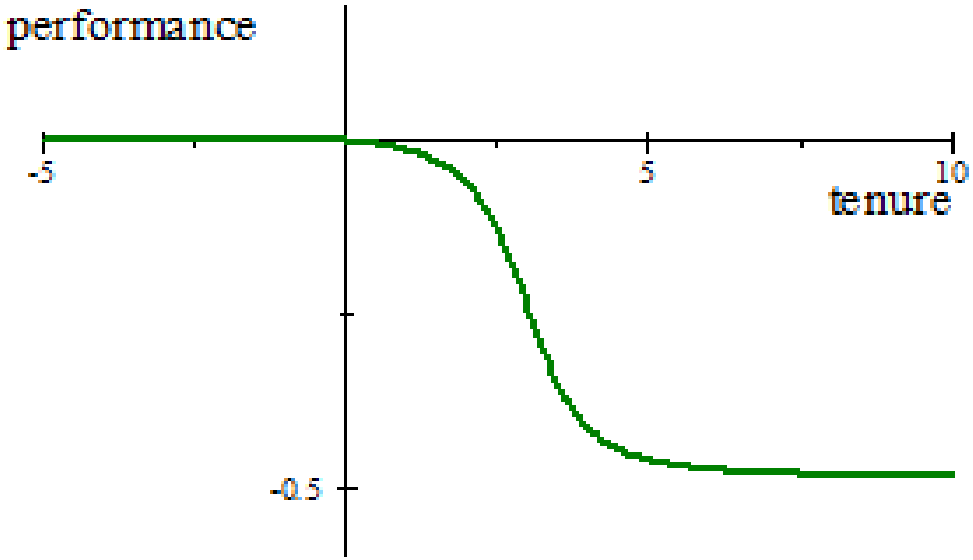
$$y_t = w_f + (1 - \alpha_t)\, x_{fc}^{\text{old}} + \alpha_t x_{fc}^{\text{new}},$$

- Consider a sample of firms for which: (i) we know the type of the current CEO; (ii) we do not know the firm type; (iii) we do not know the type of the previous CEO

- Suppose the current CEO belongs to the **scarce type** (hence we know it's a match).
- The previous CEO may have belonged to the scarce type (match) or the abundant type (mismatch).



- Suppose the current CEO belongs to the **abundant type** (hence we know it's a mismatch with some probability).
- If it is a match, it was a match with the previous CEO. If it is a mismatch, it might have been a match with the previous CEO.



# Estimation Exercise

- Cross-section of CEOs and firms.
- We observe the types of CEOs at a given time as well as the performance of their firms over the years before and after the CEO started
- We do not observe the type of the firm (nor the distribution of firm types) and the type of the previous CEO
- We do not know which CEO type is scarce and which is abundant.
- Within the matching model, we can tell which type of CEO is relatively scarce and which type is relatively abundant.
- (Alternative stories...)

# The Horse, Not the Jockey?

- We observe the performance of CEO/Firm pairs and the type of CEOs. Our story is that firms may end up with the wrong type of CEO and that hurts performance/.
- Reverse Causality stories:
  - Firms with different performance levels hire different CEO types (OR have CEOs/PAs who answer our survey in different ways)
  - When a firm's performance changes, the firm fires its CEO and hires a new one with a different type
  - When a firm predicts that its performance will change, it fires its CEO and hires a new one with a different type (two years before the change)

**Table 1: Summary Statistics**

| Variable | N | Mean | Median | Standard Deviation |
|---|---|---|---|---|
| CEO type | 1055 | 0.35 | 0.25 | 0.33 |
| Total Hours Recorded | 1055 | 51.99 | 51.25 | 11.08 |
| Total hours Worked | 1055 | 41.44 | 41.00 | 10.02 |
| Number of days worked in the week | 1055 | 5.36 | 5.00 | 0.68 |
| CEO age | 1050 | 51.00 | 52.00 | 8.49 |
| CEO gender | 1055 | 0.96 | 1.00 | 0.18 |
| CEO has college degree | 1055 | 0.92 | 1.00 | 0.27 |
| CEO has MBA | 1055 | 0.54 | 1.00 | 0.50 |
| CEO tenure in post | 1052 | 10.41 | 7.00 | 9.59 |
| CEO tenure in firm | 1051 | 17.25 | 16.00 | 11.56 |
| CEO has studied abroad | 1055 | 0.48 | 0.00 | 0.50 |
| CEO has appointments in other firms | 1055 | 0.26 | 0.00 | 0.44 |
| Multinational firm | 1055 | 0.24 | 0.00 | 0.43 |
| Employment | 1054 | 1275.47 | 300.00 | 6497.72 |
| Number of CEO direct reports | 1055 | 7.76 | 7.00 | 3.70 |
| COO exists | 1055 | 0.32 | 0.00 | 0.46 |

**Table 2: CEO Type and Firm Performance**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| Dependent Variable | | | | Log(sales) | | | Profits/Emp | Tobin's Q |
| CEO type | 0.476*** | 0.394*** | 0.367*** | 0.327** | 0.633** | 0.422** | 9.307** | 0.191 |
| | (0.110) | (0.114) | (0.113) | (0.129) | (0.298) | (0.195) | (4.730) | (0.195) |
| log(employment) | 1.045*** | 1.045*** | 1.030*** | 0.578*** | 0.581*** | 0.432*** | -0.909 | 0.140*** |
| | (0.044) | (0.049) | (0.049) | (0.075) | (0.138) | (0.142) | (1.190) | (0.050) |
| log(capital) | | | | 0.460*** | 0.529*** | 0.171*** | | |
| | | | | (0.041) | (0.068) | (0.055) | | |
| log(materials) | | | | | | 0.480*** | | |
| | | | | | | (0.089) | | |
| R-squared | 0.688 | 0.694 | 0.698 | 0.819 | 0.819 | 0.899 | 0.529 | 0.127 |
| Observations | 712 | 712 | 712 | 536 | 285 | 334 | 458 | 257 |
| Number of firms | 712 | 712 | 712 | 536 | 285 | 334 | 458 | 257 |
| Sample | all | all | all | with k | with k, listed | with k & m | all | listed |
| Controls: | | | | | | | | |
| CEO (skills & age) | n | n | y | n | n | n | n | n |
| Year | y | y | y | y | y | y | y | y |
| Industry | y | y | y | y | y | y | y | y |
| Country | y | y | y | y | y | y | y | y |
| Noise | | y | y | y | y | y | y | y |
| Cluster | firm | firm | firm | firm | firm | firm | firm | firm |

| | | |
|---|---|---|
| Magnitudes (column 4) | sd style0 | 0.32 |
| | implied change (log points) | 0.12 |

## Figure 1 - Correlation CEO type and TFP over CEO tenure

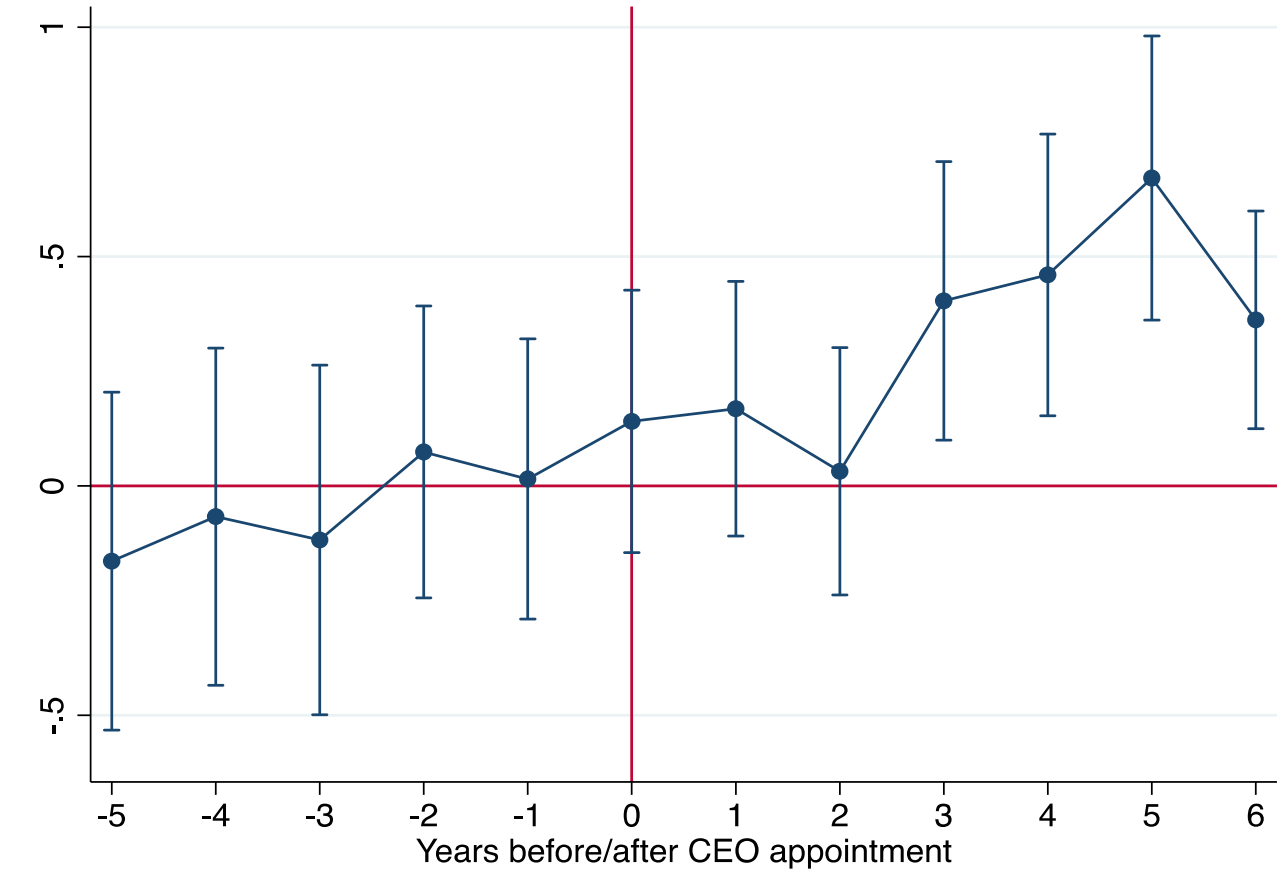


**Table 3: CEO Type and Firm Performance - Tenure Regressions**

| Dependent Variable | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| | Log(sales) | | | | |
| CEO type | 0.246*** | 0.063 | 0.049 | 0.063 | |
| | (0.092) | (0.131) | (0.134) | (0.120) | |
| log(employment) | 0.578*** | 0.578*** | 0.578*** | 0.578*** | 0.845*** |
| | (0.038) | (0.038) | (0.038) | (0.038) | (0.109) |
| log(capital) | 0.348*** | 0.348*** | 0.347*** | 0.348*** | 0.098** |
| | (0.032) | (0.032) | (0.032) | (0.032) | (0.038) |
| after CEO appt | | -0.205*** | | | |
| | | (0.079) | | | |
| CEO coordinator type*after CEO appt | | 0.261** | | | |
| | | (0.131) | | | |
| year 0-2 after CEO appt | | | -0.046 | | |
| | | | (0.066) | | |
| CEO coordinator type*year 0-2 after CEO appt | | | 0.043 | | |
| | | | (0.112) | | |
| year 3-6 after CEO appt | | | -0.256*** | -0.237*** | -0.062 |
| | | | (0.089) | (0.075) | (0.041) |
| CEO coordinator type*year 3-over after CEO appt | | | 0.334** | 0.317** | 0.123** |
| | | | (0.151) | (0.131) | (0.059) |
| R-squared | 0.874 | 0.875 | 0.876 | 0.876 | 0.984 |
| Observations | 2457 | 2457 | 2457 | 2457 | 651 |
| Number of firms | 591 | 591 | 591 | 591 | 125 |
| Sample | all | all | all | all | balanced |
| Controls: | | | | | |
| Year | y | y | y | y | y |
| Industry | y | y | y | y | y |

**Table 4: CEO Type, Management and Firm Performance**

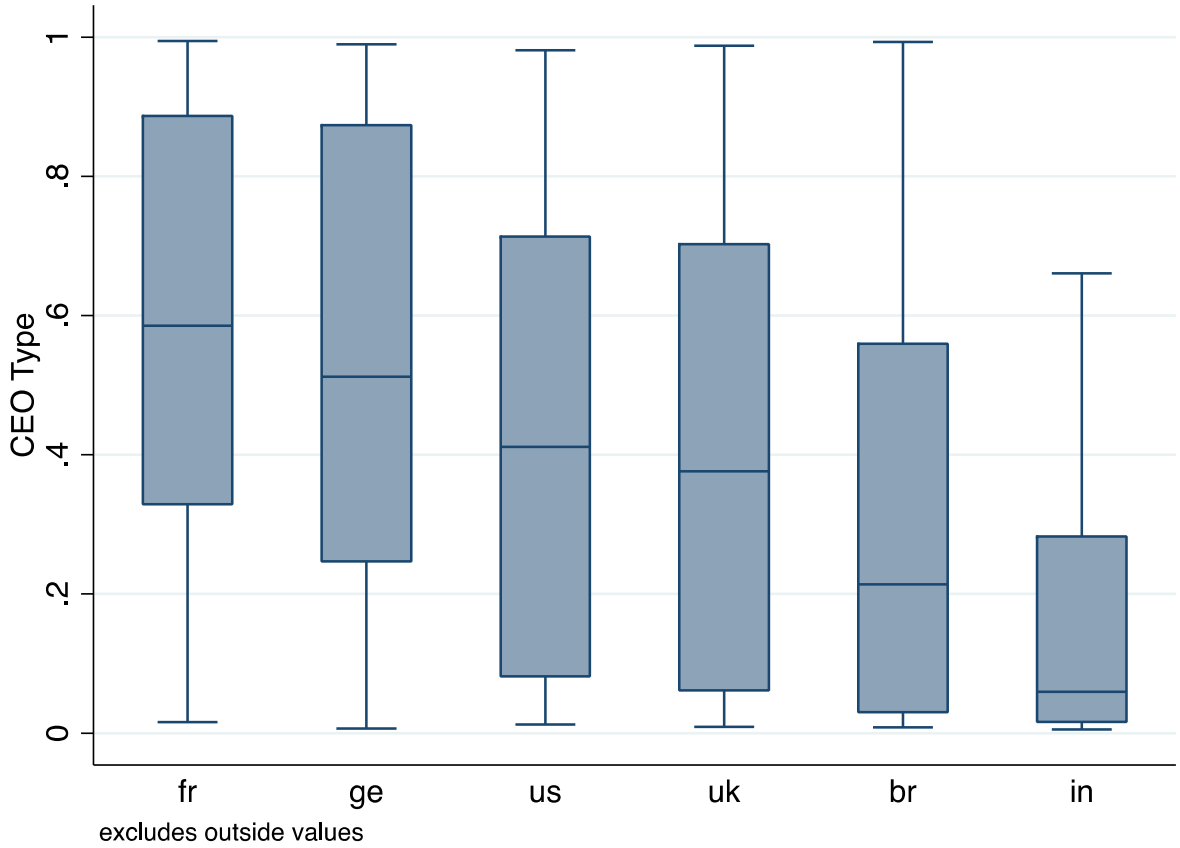
| Dependent Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| | CEO coordinator type | | | | | Log(sales) | | |
| CEO type | | | | | | 0.581** | | 0.519** |
| | | | | | | (0.258) | | (0.254) |
| Management (z-score) | 0.061* | | | | | | 0.233*** | 0.217*** |
| | (0.031) | | | | | | (0.072) | (0.069) |
| Operations (z-score) | | 0.069** | | | | | | |
| | | (0.032) | | | | | | |
| Monitoring (z-score) | | | 0.077** | | | | | |
| | | | (0.032) | | | | | |
| Targets (zscore) | | | | 0.018 | | | | |
| | | | | (0.028) | | | | |
| People (zscore) | | | | | 0.045 | | | |
| | | | | | (0.031) | | | |
| log(employment) | 0.084** | 0.090*** | 0.086*** | 0.088*** | 0.082** | 0.923*** | 0.873*** | 0.875*** |
| | (0.034) | (0.034) | (0.033) | (0.033) | (0.034) | (0.078) | (0.067) | (0.063) |
| R-squared | 0.135 | 0.142 | 0.151 | 0.110 | 0.123 | 0.713 | 0.723 | 0.735 |
| Observations | 177 | 177 | 177 | 177 | 177 | 344 | 344 | 344 |
| Number of firms | 177 | 177 | 177 | 177 | 177 | 120 | 120 | 120 |
| Controls: | | | | | | | | |
| Year | y | y | y | y | y | y | y | y |
| Industry | y | y | y | y | y | y | y | y |
| Country | y | y | y | y | y | y | y | y |
| Noise | y | y | y | y | y | y | y | y |
| Cluster | Firm | Firm | Firm | Firm | Firm | Firm | Firm | Firm |

**Table 5: CEO-Firm Match**

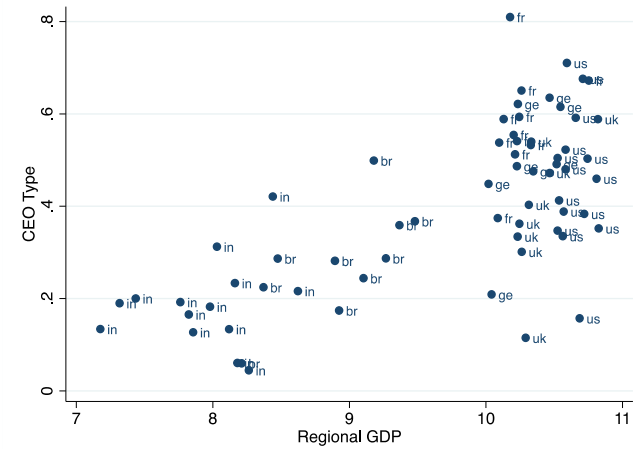
| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Dependent Variable | | CEO type | | |
| firm size | 0.052*** | 0.055*** | 0.054*** | 0.056*** |
| | (0.008) | (0.007) | (0.007) | (0.007) |
| task abstraction | | 0.036*** | 0.033** | |
| | | (0.013) | (0.013) | |
| log(CEO age) | | | -0.003 | -0.016 |
| | | | (0.043) | (0.052) |
| MBA | | | 0.060*** | 0.067** |
| | | | (0.022) | (0.026) |
| R-squared | 0.229 | 0.240 | 0.246 | 0.250 |
| Observations | 1055 | 1055 | 1055 | 1055 |
| Controls: | | | | |
| Country | y | y | y | y |
| Noise | y | y | y | y |
| CEO (mba & age) | | | y | y |
| Industry | | | | y |
| Cluster | Industry | Industry | Industry | Industry |

**Figure 2: CEO TYPE ACROSS COUNTRIES AND REGIONS**

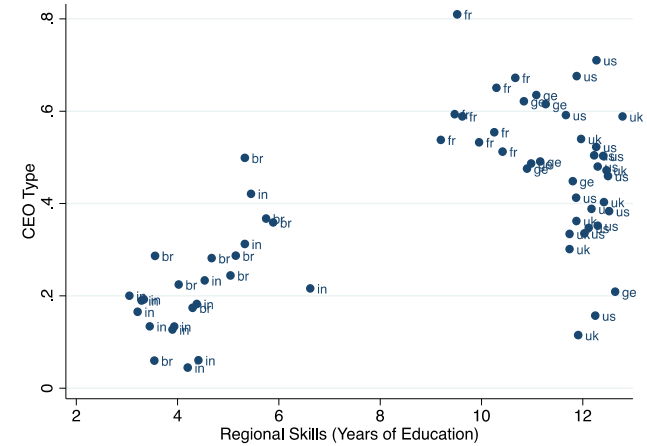
**A. CEO Type by country**



**B. CEO Type by regional GDP per capita**




**C. CEO Type by regional skills**



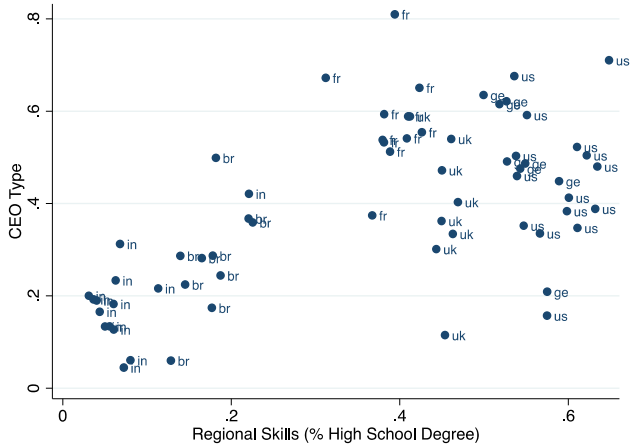
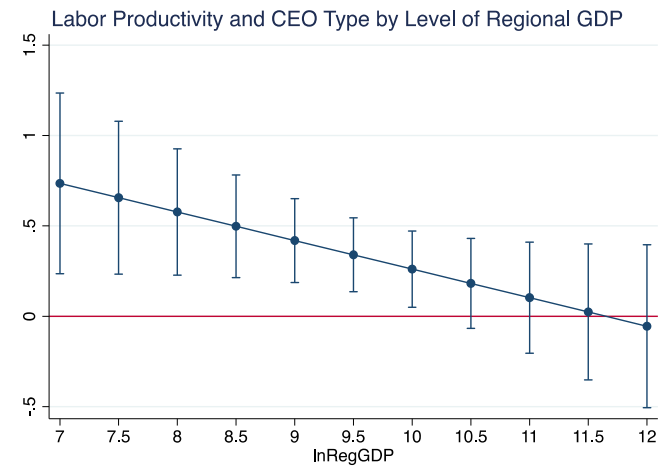
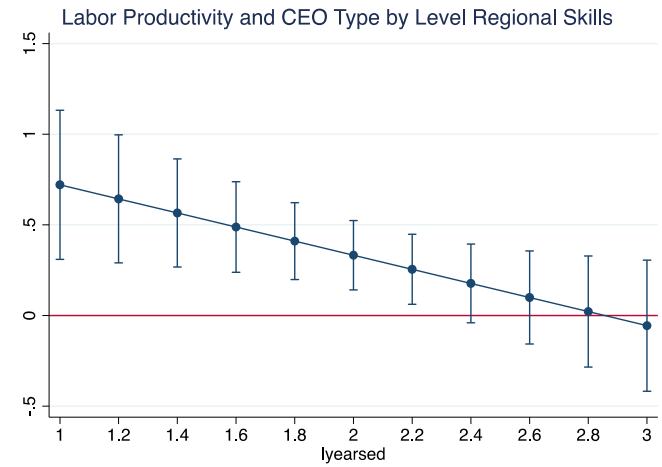



**Table 6: CEO and Firm Performance by Region**

| Dependent Variable | | | | Log(sales) | | |
|---|---|---|---|---|---|---|
| CEO type | | 0.358*** | 0.548*** | 1.841** | 1.110*** | 0.702*** |
| | | (0.094) | (0.141) | (0.843) | (0.367) | (0.184) |
| CEO type* high income country | | | -0.432** | | | |
| | | | (0.172) | | | |
| CEO type*region gdp | | | | -0.158* | | |
| | | | | (0.087) | | |
| CEO type*region skills level | | | | | -0.389** | -1.149*** |
| | | | | | (0.170) | (0.423) |
| region gdp | | | | 0.201* | | |
| | | | | (0.103) | | |
| region skills level | | | | | 0.306 | 0.716 |
| | | | | | (0.254) | (0.947) |
| log(employment) | | 0.911*** | 0.912*** | 0.913*** | 0.912*** | 0.913*** |
| | | (0.029) | (0.029) | (0.030) | (0.030) | (0.030) |
| R-squared | | 0.791 | 0.792 | 0.792 | 0.792 | 0.793 |
| N | | 1905 | 1905 | 1905 | 1905 | 1905 |
| Number of firms | | 712 | 712 | 712 | 712 | 712 |
| Skill measure | | | | | log(years of education) | % pop with high school degree |
| Controls: | | | | | | |
| | Year | y | y | y | y | y |
| | Industry | y | y | y | y | y |
| | Country | y | y | y | y | y |
| | Noise | y | y | y | y | y |
| Cluster | | Firm | Firm | Region | Region | Region |

**Figure 3 CEO and Firm Performance by Region**



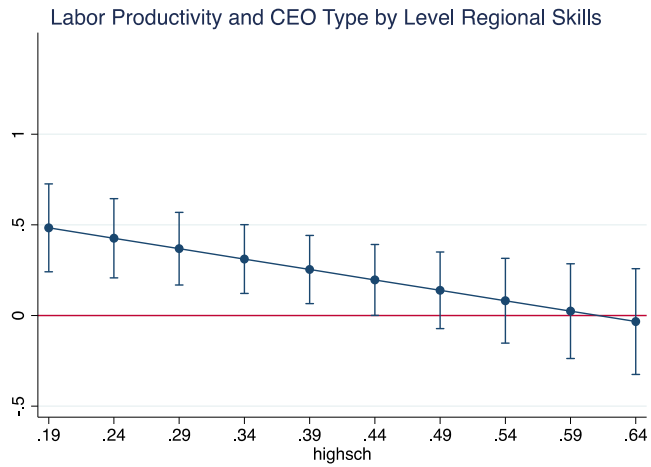



**Table 7: CEO-Firm match by region**

| Dependent Variable | CEO type | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| firm size | 0.045*** | -0.112 | -0.007 | 0.033* |
| | (0.011) | (0.075) | (0.036) | (0.018) |
| firm size * high income country | 0.029* | | | |
| | (0.015) | | | |
| firm size * region gdp | | 0.018** | | |
| | | (0.008) | | |
| firm size * region skill | | | 0.034** | 0.088** |
| | | | (0.017) | (0.042) |
| Region GDP | | -0.022 | | |
| | | (0.064) | | |
| Region skill | | | -0.023 | 0.008 |
| | | | (0.134) | (0.383) |
| R-squared | 0.252 | 0.260 | 0.257 | 0.255 |
| N | 1055 | 1055 | 1055 | 1055 |
| Skill measure | | | log(years of education) | % pop with high school degree |
| Controls: | | | | |
| CEO (mba & age) | y | y | y | y |
| Industry | y | y | y | y |
| Country | y | y | y | y |
| Noise | y | y | y | y |
| Cluster | Firm | Region | Region | Region |

# Conclusions

- CEO behavior helps explain firm performance
  - coordinator beats micromanager
- Effect occurs 2/3 years after CEO is hired
- Consistent with mismatch between CEO supply and CEO demand

# Connection with Leadership Studies

- Benefits of having a coordinator in more complex organizations?
- Bolton et al (2009): two types of leaders. The good type – resolute – is a better coordinator
  - Kaplan et al (2012) traits of successful CEOs
- Mintzberg: Strategy as a process that requires structured communication
- Kotter (1999): Leadership = aligning people
  - Trying to get people to comprehend a vision of an alternative future is also a communications challenge of a completely different magnitude from organizing them to fulfill a short-term plan