The Theory of the Firm goes Global

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Grossmann and Hart at 25 Conference

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Why taking the theory of the firm global?

New Features of Trade

- **Fact 1:** The Rise of World Trade in Components and Input Goods
- **Fact 2:** The Rise of ‘Intra-Firm Trade’ and ‘Trade in Tasks’
- **Fact 3:** An Explosion of Foreign Direct Investment
- **Fact 4:** The Explosion of Executive Pay

Changes in the Corporation

- Break up of the conglomerate
  $\Rightarrow$ focus on 'core competencies'
- Decentralization of decision making
  $\Rightarrow$ flatter firm hierarchies
- Talent as the 'new stakeholder' in the firm
- Shifts in the boundaries of the firm
  (Offshoring and Outsourcing, Mergers)

Question:

What is the connection between these two developments?

Answer:

Requires a theory which brings firms with **organizations** into international trade.

The ‘New New Trade Theory’

opens the black-box of firms and brings firms with organizations into trade and foreign direct investment

Antras 2003, Antras and Helpman 2004

Marin and Verdier 2003, 2007, 2008

The New New Trade Theory

Two Approaches
Focus on

Firm Hierarchies	Firm Boundaries
Marin and Verdier 2003, 2004, 2007, 2008	Grossman and Helpman 2002, Mc Laren 2000
Antras, Garicano, Rossi-Hansberg 2006	Antras 2003
	Antras and Helpman 2004, 2008

Approach 1: Firm Boundaries

Introduces the **Hart-Moore Firm** into a theory of the multinational corporation to explain:

- International Organization of Production

- Global Sourcing (Offshoring and Outsourcing)

- The Pattern of Intra-Firm-Trade

Approach 2: Firm Hierarchies

Introduces the **Aghion-Tirole Firm** (**AT**) into international trade to explain how trade may lead to:

- flatter corporate hierarchies
- ‘war for talent’
- rise in CEO pay in rich countries
- organizational convergence across countries
- firm heterogeneity

Flatter Corporate Hierarchies

North-North Trade

AT meets Krugman-Melitz-Ottaviano

Marin and Verdier 2007

A one sector economy with monopolistic competition with differentiated goods

Consumers have linear demand across a continuum of varieties $\longrightarrow$ endogenous mark-ups

In each firm a principal hires an agent to monitor projects and workers to produce, AT firms

Trade and Hierarchies

With more **trade**

larger market and **tougher competition**

profits increase

P monitors more

decentralization

incentives between P and A are less aligned

P monitors more

decentralization

Insight 1: Trade into AT

Trade-off between control and initiative in AT disappears in very tough and very weak trade environments → non-monotonic relationship between trade and control

Intuition:

Tough competition → low profits → little monitoring → initiative even under formal control

Weak competition → large profits → intense monitoring → no initiative even under decentralization

Insight 2: Trade into AT

Conflict of interest (congruence) between P and A becomes endogenous and a function of the trade environment

Intuition:

More trade → tougher competition → decline in relative profits between A-firms and P-firms → it 'matters more who runs the firm' → conflict increases

Empirical Evidence

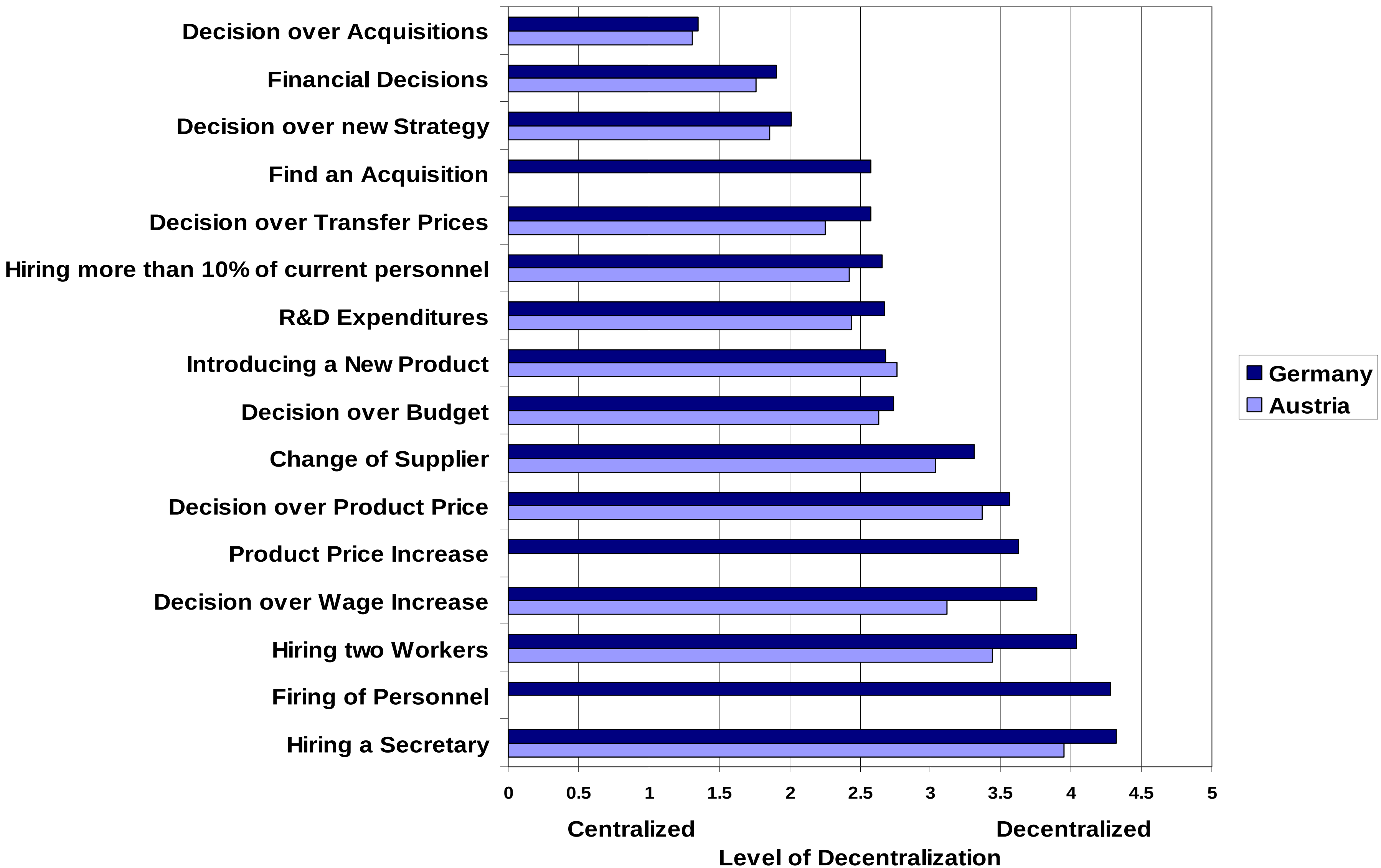
Measuring Delegation of Authority

Firm Survey among 2200 Austrian and German firms

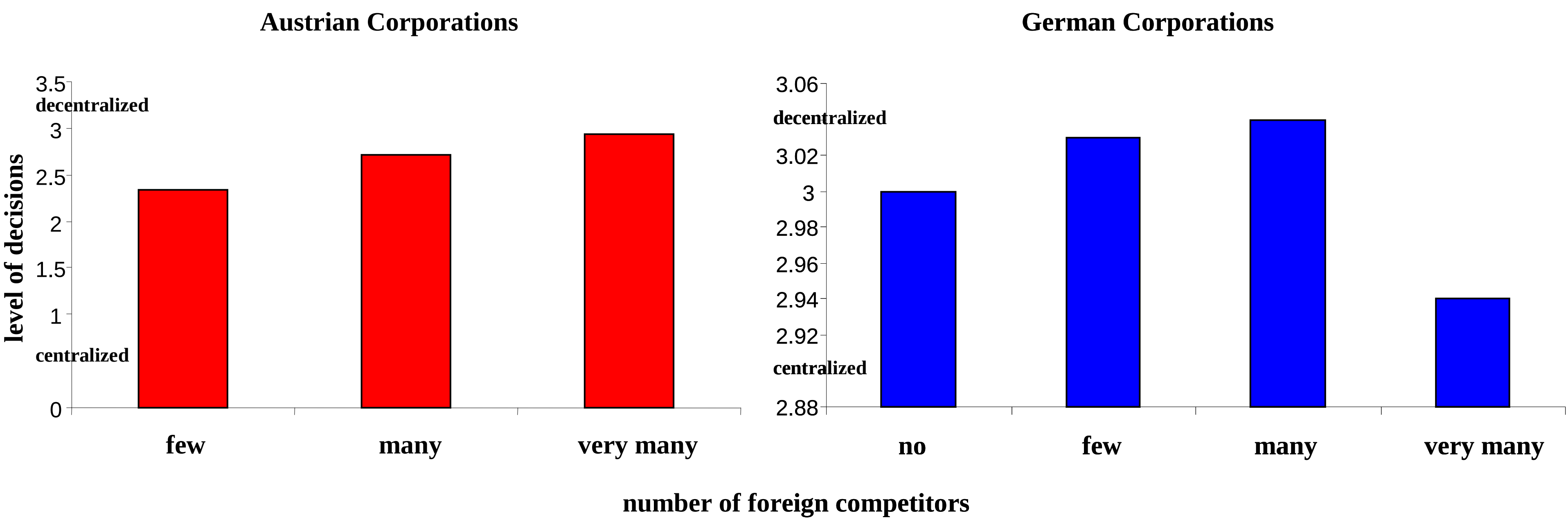
‘Who decides in your company over the following decisions…..?
please rank between 1 … 5

1 taken at headquarters (CEO)
5 taken at the divisional level (middle manager)

Corporate Decisions
Ranked by the Level of Decentralization



Decentralization and Foreign Competition



Empirical Literature

Trade and Decentralization (delegation of decision making)
Marin and Verdier (2007), Bloom, Sadun, Van Reenen (2010)

Trade and Downsizing (removal of hierarchical layers)
Guadalupe and Wulf (2010)

North-South Trade

AT meets Helpman and Krugman

2x2x2 model of trade

2 countries: human capital rich North and labour rich South

2 factors of production: human capital and labour

2 sectors: X sector: monopolistic competition, P hires skilled manager to run the firm

Y-sector: perfect competition

X-sector more skill intensive than Y-sector

Insight 3:

Firm organization becomes a function of relative **factor endowments** of countries

Countries with intermediate levels of skill ratios will decentralize and empower their skilled managers.

Mixed equilibrium: organizations become a source of comparative advantage

’War for talent’

Trade and the ‘war for talent’

With more international trade

- Talent has more opportunities outside the firm,
  $\longrightarrow$ talent becomes more mobile

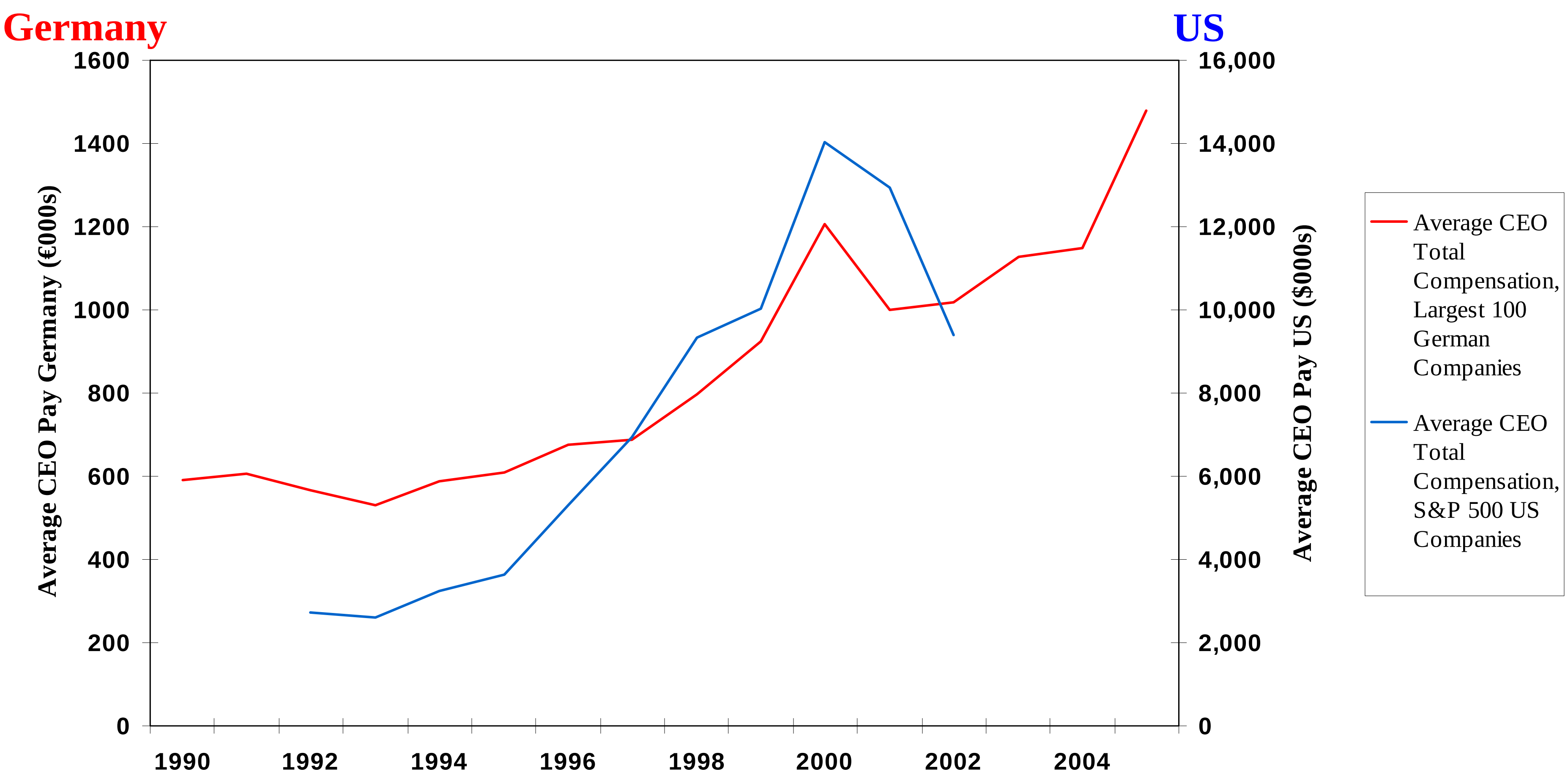
- Firms compete for talent to start new firms
  $\longrightarrow$ **‘war for talent’**

The Rise of CEO Compensation

The Rise of CEO Pay

Executive Pay in Germany and the US, 1990-2005

Average Board Compensation



Why is Trade a Candidate?

Two prominent explanations of CEO pay

Managerial power hypothesis, Bebschuk and Fried 2003, and the **efficient pay hypothesis**, Gabaix and Landier 2008

receive only weak support from US data (Frydman and Saks 2010) and no support from German data (Fabbri and Marin 2011)

A Trade View of CEO Pay

Most explanations focus on failures in the internal control mechanism of firms

but they neglect the market for executives

We examines both the incentives inside the firm as well as how these incentives interact with the trade environment of countries

Trade and the Rise of CEO Pay

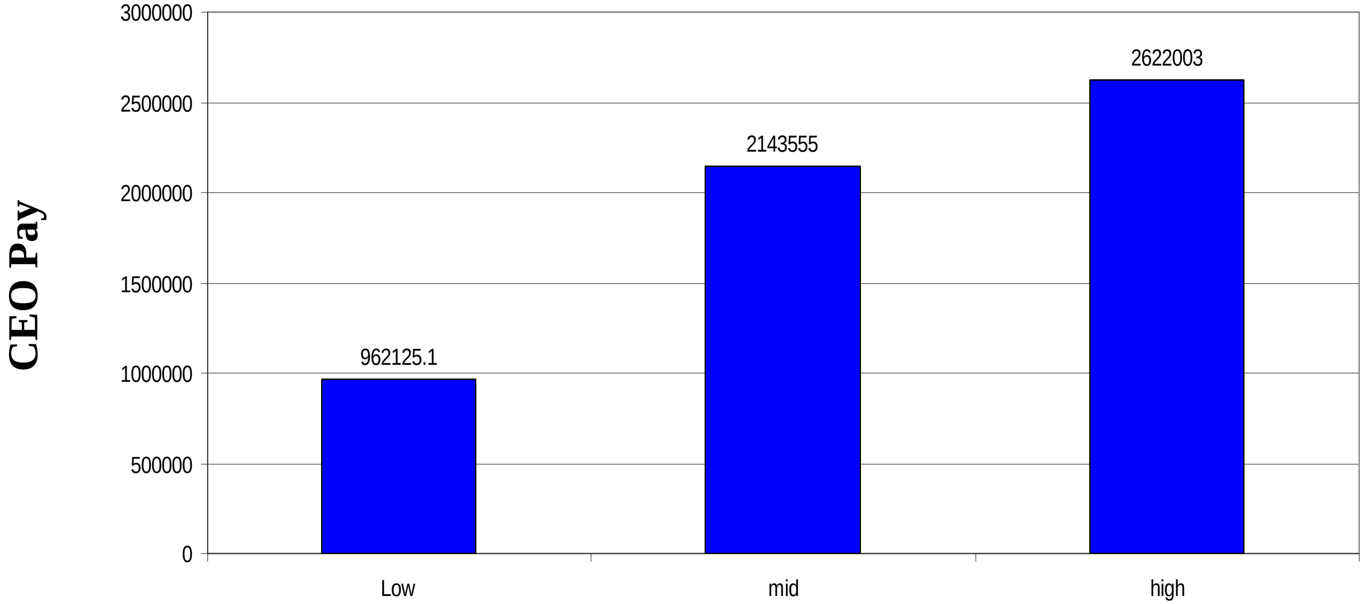
With more competition and trade

- Firms shift to more incentive based pay (Cunat and Guadalupe 2005, 2009 for US and British firms)

- Firms compete for manager talent
  $\longrightarrow$ ‘war for talent’ $\longrightarrow$ rise in CEO pay

The ‘war for talent’ and CEO Pay

Germany & Austria



intensity of talent search*

*participation in talent fairs

Organizational Convergence across Countries

Organizational Convergence

North-North Trade:
Multiple equilibria, identical countries have different organizations under autarky;

North-South Trade:
The more countries differ in terms of relative **factor endowments**, the more they will trade and the more likely is convergence to decentralization.

Explaining Firm Heterogeneity

The distinction between **formal** and **real power** in the firm explains the **organizational mix** of firms

Formal P-firm equilibrium with a fraction of **real A-firms** depending on information collection

Formal A-firm equilibrium with a fraction of **real P-firm**

Toughness of competition becomes a function of the organizational mix in the sector

Novel
Adjustments to Trade Liberalization

External Margin: a reallocation to more productive firms $\longrightarrow$ aggregate productivity $\uparrow$ (Melitz 2003)

Monitoring Margin: more firms monitor $\longrightarrow$ aggregate productivity $\uparrow$ (Marin & Verdier 2008)

Organizational Margin: Firms delegate power to middle managers $\longrightarrow$ aggregate productivity $\downarrow$ (Marin & Verdier 2008)