

# THE ECONOMICS OF FIRM CULTURE

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# Questions

- Is culture really something to investigate within the firm?
- Do we have a framework to do that?
- Anecdotally, what is the role of culture plays in firms?
- Does it match with the theoretical and empirical research?
- What is it missing from this paradigm to move research forward?

# Cultural economics

- First define culture:
  - Culture= “*those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation*” (Guiso, Sapienza, Zingales, 2006)
- Then measure it:
  - Trust and social capital, long term orientation, living arrangements, division of labor within the family,
- Finally, identify ...
- Now, a large literature in economics uncovering the role of culture in affecting economic outcomes.
- This literature investigates how culture affects beliefs and preferences and eventually economic outcomes
- Also, how culture persists over time and when is not.

# Culture within the firm

- What is culture within the firm?
- What purpose does it serve?
- Does it serve the same purposes as culture in society at the large?
- Do we need to rethink culture within the firm, or do we already have all the ingredients in the cultural economics literature?

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# The Siemens Bribery Trail Went Across the Globe...

Corruption alleged/settled in various projects

## VENEZUELA

Metro transit system in Valencia and Mavacaibo

\$16.7 million paid to govt officials

## ARGENTINA

National I-card Project Value: \$1 billion

\$40 million in bribes to senior govt officials

## IRAQ

Oil-for-food programme Project Value: \$80 million (42 contracts)

\$1.73 million in kickbacks to Iraqi govt

## CHINA

High-voltage transmission lines in South China Project Value: \$838 million

\$25 million in bribes paid to Chinese officials through Dubai-based consultants

## BANGLADESH

Mobile telephone services Project Value: \$40.9 million

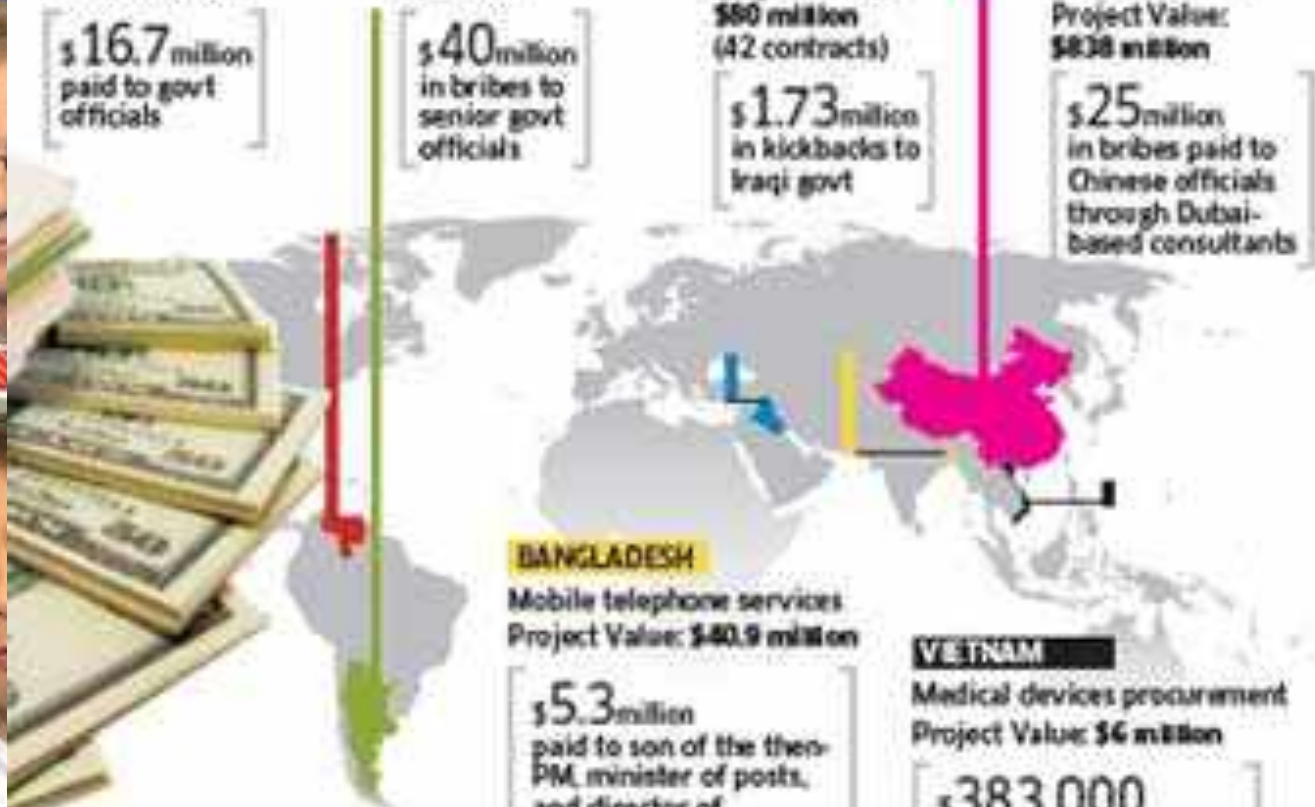
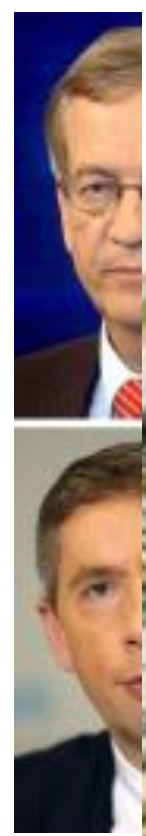
\$5.3 million paid to son of the then-PM, minister of posts, and director of Bangladesh Telephone and Telegraph Board

## VIETNAM

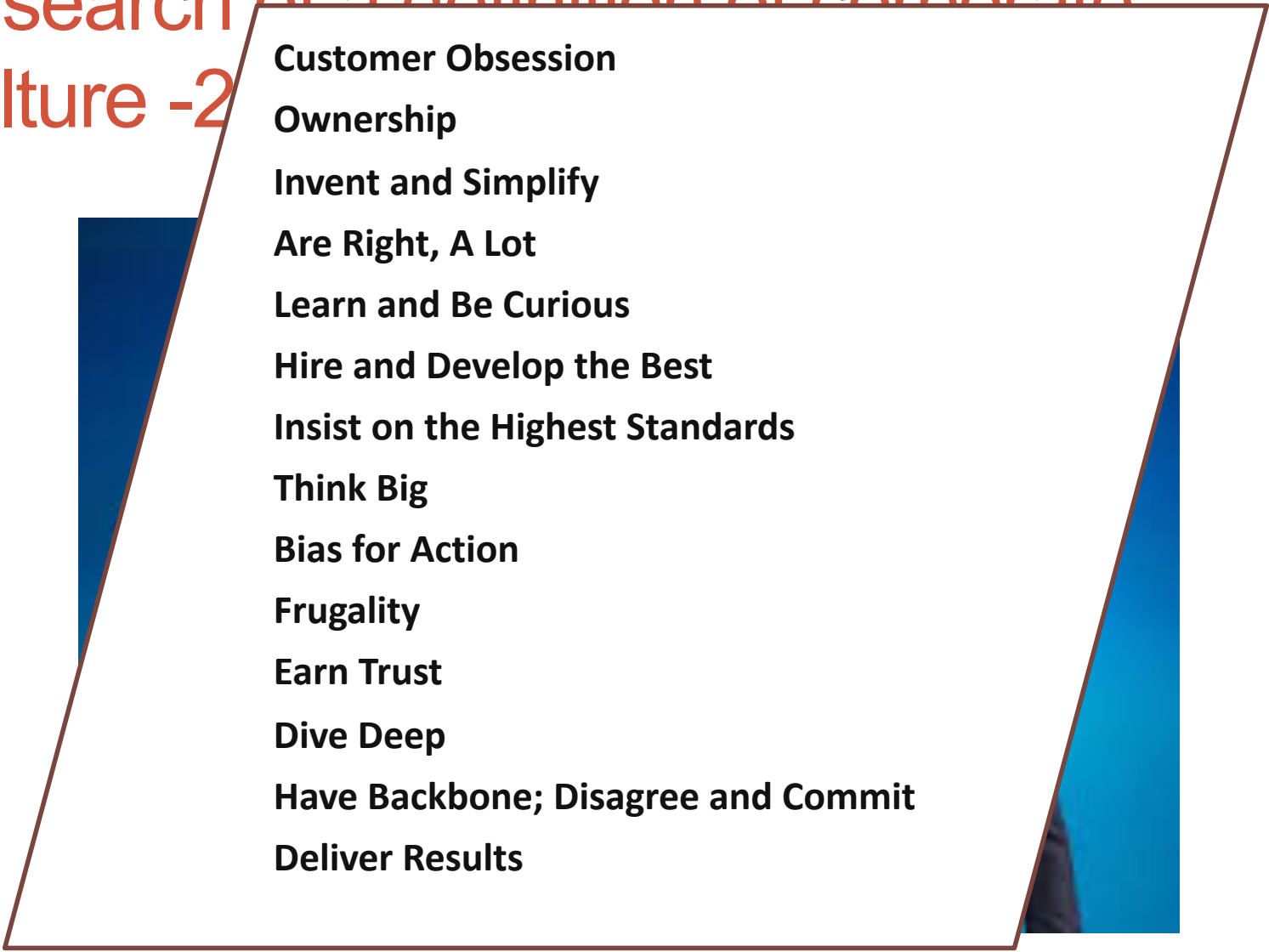
Medical devices procurement Project Value: \$6 million

\$383,000 in bribes to officials of the Ministry of Health

SOURCE: Court filings made by US Department of Justice and Securities and Exchange Commission in Washington DC



# In search of a definition of corporate culture -2



- Customer Obsession**
- Ownership**
- Invent and Simplify**
- Are Right, A Lot**
- Learn and Be Curious**
- Hire and Develop the Best**
- Insist on the Highest Standards**
- Think Big**
- Bias for Action**
- Frugality**
- Earn Trust**
- Dive Deep**
- Have Backbone; Disagree and Commit**
- Deliver Results**

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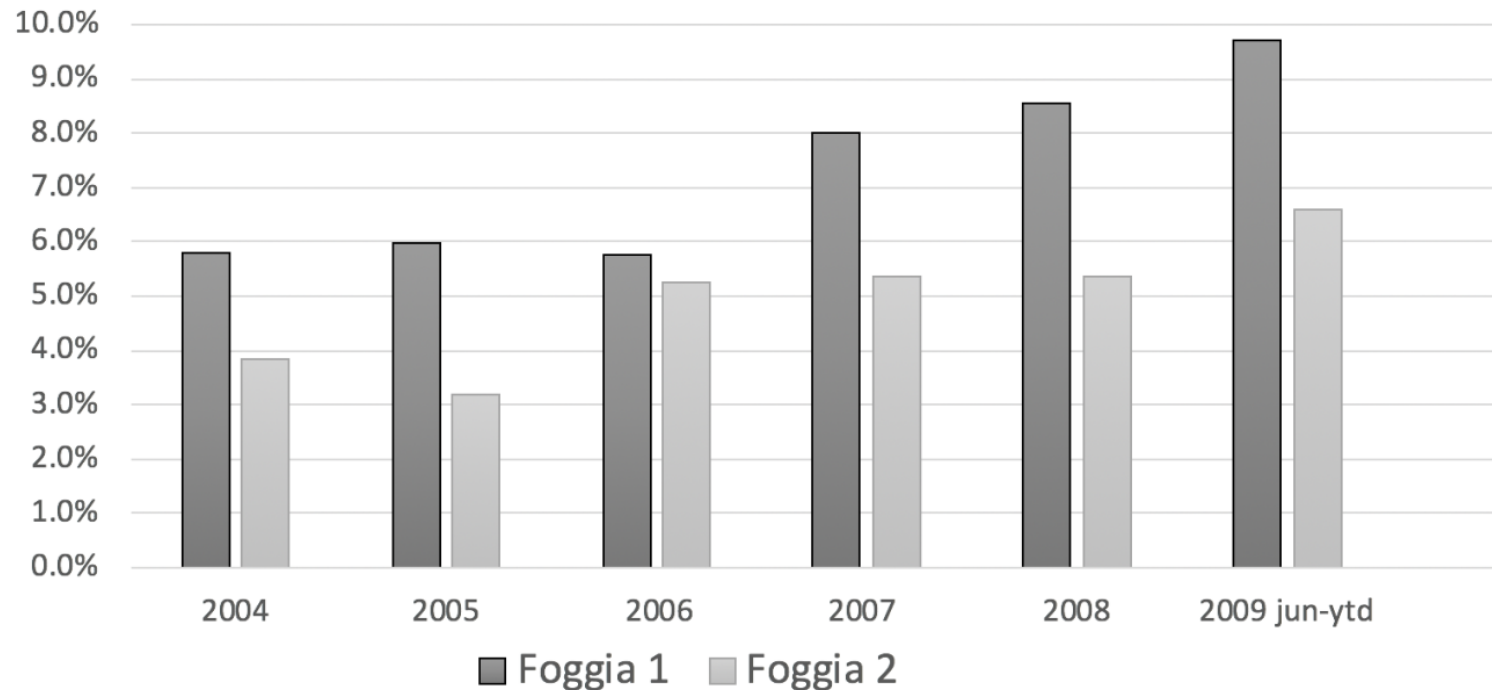
# The story of Barilla “farfalle” (bow-tie)

- 10 years ago, the Barilla pasta factory in Foggia, had reached an absentee rate around 10 percent.
- Corresponds to 40,000+ absentee hours per year
- Particularly costly for certain pasta production
- Other Barilla's factories had much lower absentee rates.
- The company told the manager in charge that they would close the factory unless he brought the absenteeism rate down.
- To save the factory, according to the manager his only option was to change the culture.



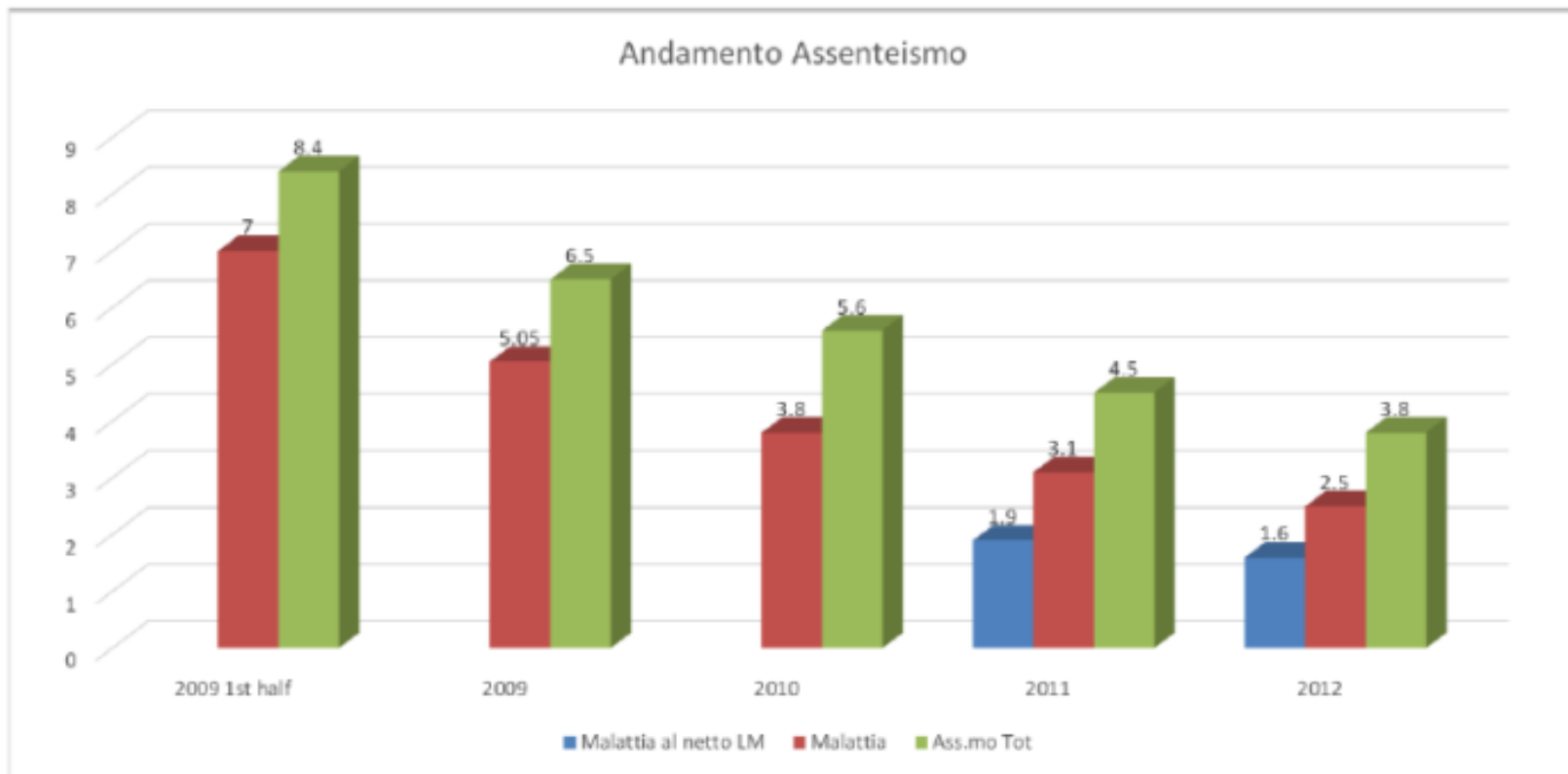
# Internally generated culture at Barilla

Foggia Complex Absenteeism 2004 – 2009



Average absenteeism at Barilla's other plants was 4.5%

# Versus managerial driven culture



# So what is corporate culture? -1

- Stock of knowledge, norms, conventions shared by members of the firm (Kreps, 1990; Cremer, 1993)
  - *At Siemens it was commonly accepted that corruption was sanctioned by top management: In fact, the trial exposed the fact that the company kept a well organized paper trail where for each bribe there was a position paper which stated the ordering country, the project, the project value, and so on. These papers were signed by the country managers. “The two managers in charge of arranging the ‘discreet payments were ...one responsible for Europe and Nigeria and one for all the other countries. The payments however were made only on the authorization of the unit’s CFO...*
  - *“When bribery became a criminal offense, the CFO was increasingly reluctant to be involved in the payment arrangements and finally delegated the slush fund management to a long term employee” (Eckardt, 2011).*

# So what is corporate culture? -2

- Stock of knowledge, norms, conventions shared by members of the firm.
  - *Amazon leadership principles are shared widely “They aren’t posters hanging in hallways, with five people rowing crew,” ...“We hire around them, we promote around them, we think about them in how we plan the business.” (Dave Limp, Senior Vice President of Devices and Services at Amazon)*
  - *Barilla: in Foggia’s according to management, plant absenteeism was a normal phenomenon in line with expectations of workers (Gallani, Gino, Sadun, 2019)*

# How is corporate culture formed? -1

- Unclear where it comes from (Kreps, 1990)
- Managers select workers based on their own value and beliefs (Lazear, 1995; Van den Steen, 2010; Henderson and Van den Steen, 2015)
- Emerges naturally from common experience & similar background (Cremer, 1993):
  - local/national culture may play a role
- Training by managers, modified/shaped by leadership, leading by example (Gorton, 2019)

# How is corporate culture formed? -2

- Siemens: In the German corporate code for many years bribes were tax deductible, i.e. local culture encouraged it
- Amazon: Bezos on “high standards:” “are high standards intrinsic or teachable? .... Do we first and foremost need to select for “high standards” people? If so, this letter would need to be mostly about hiring practices, but I don’t think so. I believe high standards are teachable. In fact, people are pretty good at learning high standards simply through exposure.”
- Barilla: Foggia is located in the South, where other researchers have pointed out absenteeism is a widespread phenomenon (Ichino and Maggi, 2000), but manager was able to change the culture with interventions, modifying expectations.

# How does corporate culture operate?

- A coordination device:
  - Affects beliefs and actions but not preferences (Kreps, 1990; Van den Steen, 2010)
  - provides the members of the organization with a guide to the decisions they must make (Schein, 1984)
- It changes preferences:
  - It changes identity and motivates workers (Akerlof and Kranton, 2005)
  - Internalizes norms and changes workers preferences (Cremer, 1993)
- Provides intrinsic motivation (Benabou and Tirole, 2003) and gives employees purpose (Henderson and Van den Steen, 2015)

# What ultimate purpose does culture serve?

- It prevents coordination failures in a repeated game setting (Kreps 1990) by establishing conventions on “appropriate behavior”
- Reduces costs (reducing the need of providing extrinsic incentives) by providing intrinsic motivation (Benabou and Tirole, 2003); similarly, employees exert more effort or work at lower wages in return for the managers’ commitment to the firm’s purpose (Henderson and Van den Steen, 2015)
- Gorton and Zentefis (2019) corporate culture contributes to the evolution of societal norms



# Empirical corporate culture -1

- Evidence 1: local culture is relevant for corporate culture.
  - Hofstede (2001) was the first one to measure “country” culture by measuring IBM culture over countries.
  - Liu (2016) corruption in the firm is correlated with insiders’ country of ancestry
  - Bloom, Sadun, and Van Reenan (2012): firms headquartered in high-trust regions are more likely to decentralize and delegate.
    - Cons: unclear this is really about culture
    - Pros: this is about the firm – this dimension affect the organization of the firm and the boundary of the firm
- => Akerlof and Kranton (2005) model seems appropriate

# Empirical corporate culture -2

- Fact 2: firms advertised values have no resemblance with what employees believe and does not correlate with measures of performance (Guiso et al. )



=> empirical work cannot be based on stated values

# Empirical corporate culture - 3

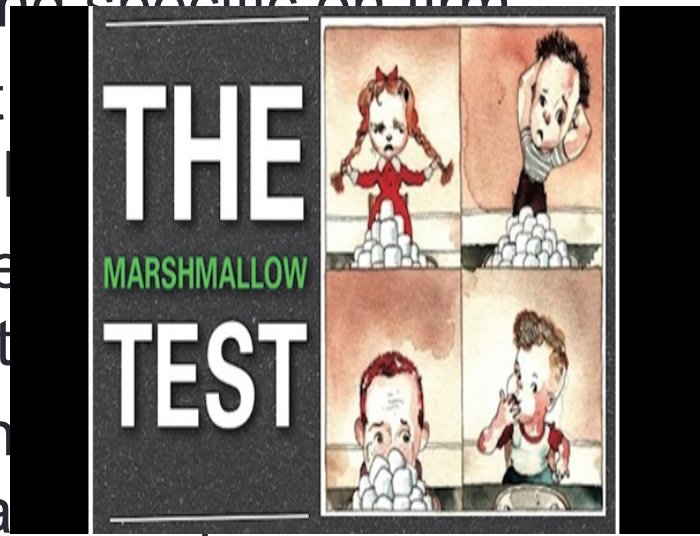
- Attempts to define “positive/negative” cultures and correlate to “outcomes”
    - Integrity (Guiso et al, 2015; )
    - Performance- oriented (Monitz 2015)
    - Results-orientation, customer-focus, and collaboration (Popadak, 2014)
  - Literature plagued with endogeneity, shows how hard is to define corporate culture.
- => Very descriptive work
- Fails to underscore the mechanism
  - Ignore equilibrium considerations

# What is specific about firms in this definition of culture?

- A number of agents come together in an organization to perform a certain task
- They bring with them their own cultural identity, norms, and values
- They interact
- There is a figure of authority (manager)
- There are tools to enforce behavior, through punishing
- Is this a firm?

# How are corporations different from schools?

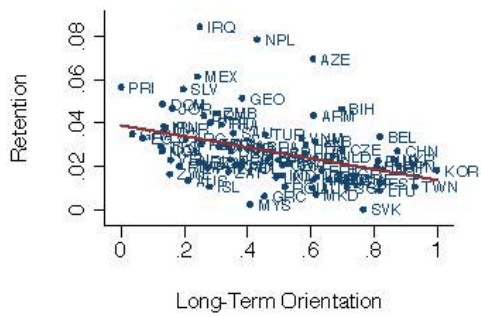
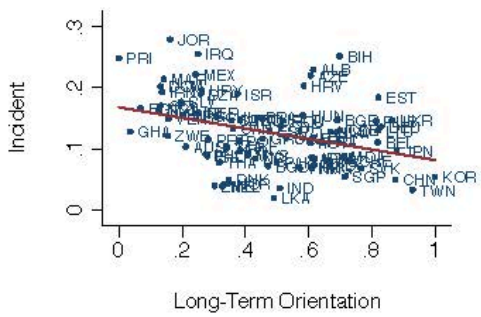
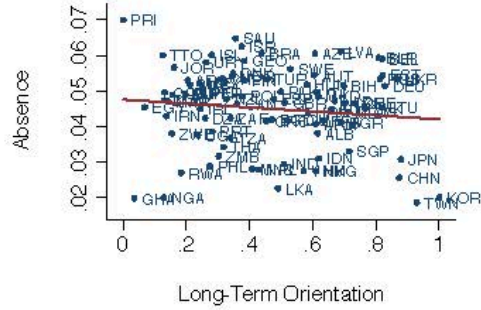
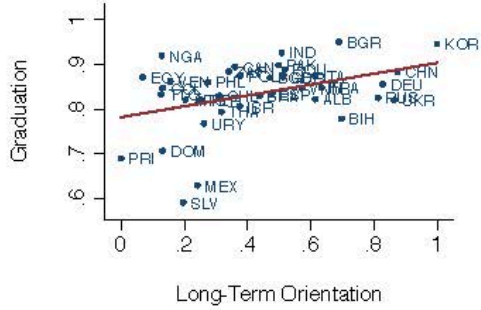
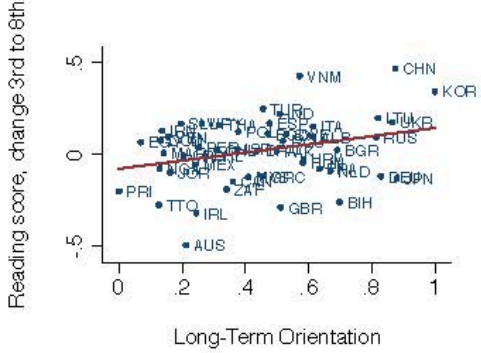
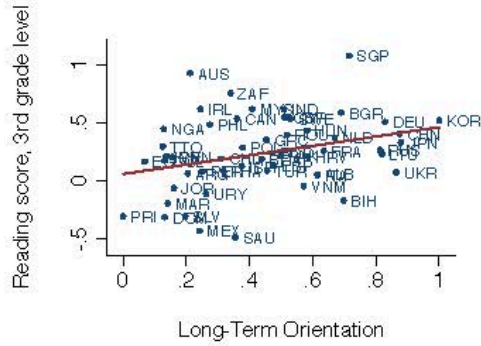
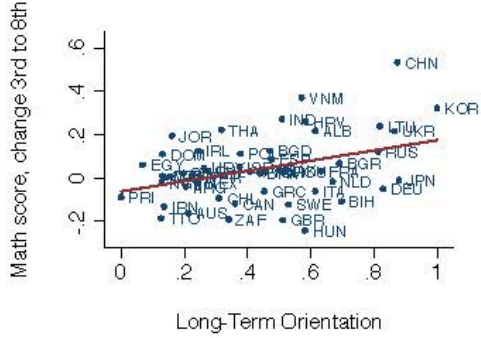
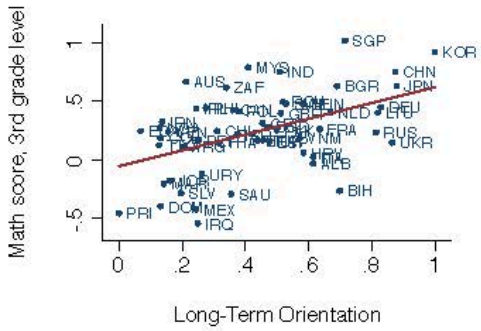
- The theoretical literature on corporate culture does not have anything specific on firm
- We can test how a firm's culture is created and how it generates success
- For example, what values are created within them? What are they enforced?
- Parents transfer human capital, income, wealth but also values (Bisin and Verdier, 2001) → long term orientation is one of these values



# What happens when children from different cultural background congregate?

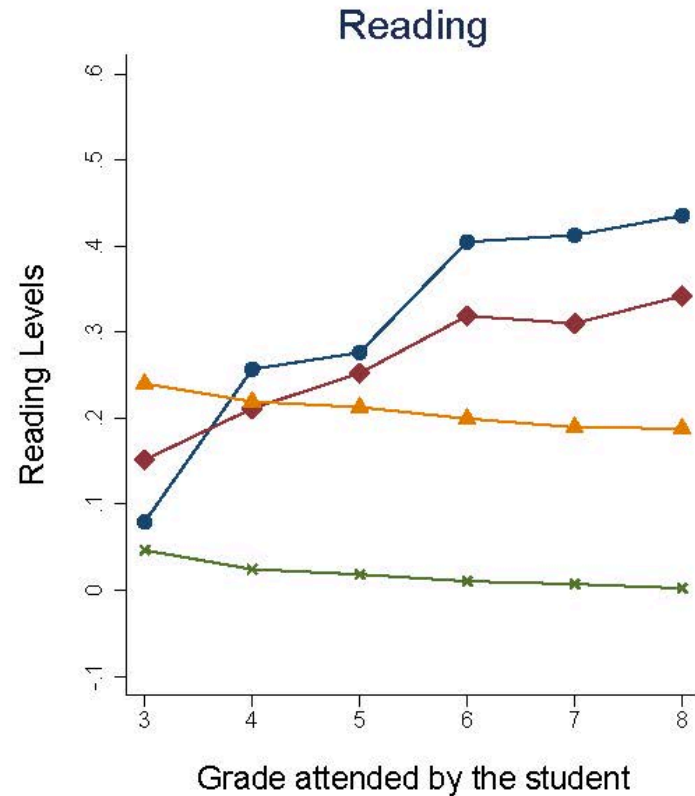
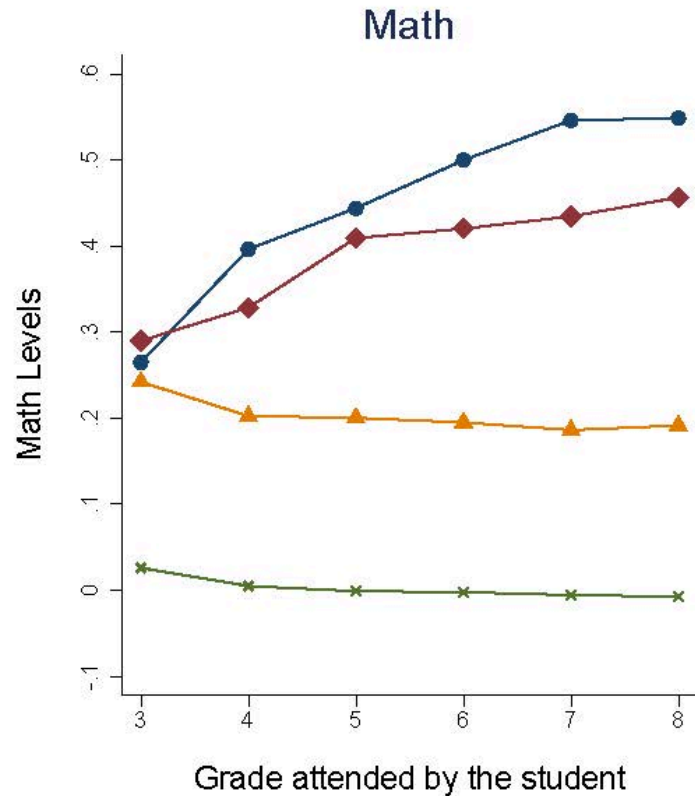
- They continue to act based on the culture they have learned when their identity was defined (Akerlof and Kranton).
- Hofstede et al. (2010): Long-Term Orientation is the cultural value that “stands for the fostering of virtues oriented toward future rewards”
- We can study how the behavior of children in the same institution (school fixed effect) is affected by their identity.

# Raw data: first generation immigrants



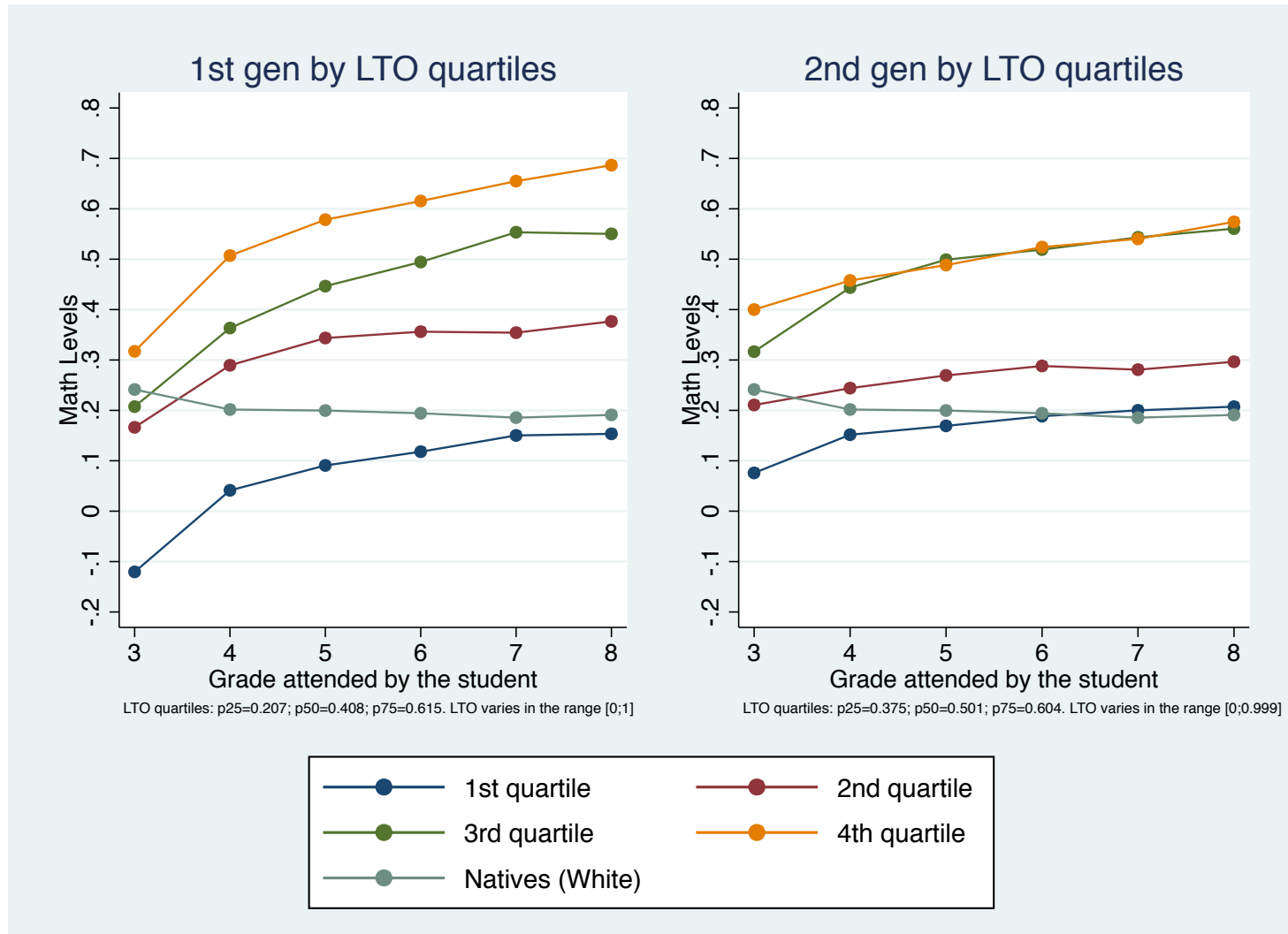
# Comparisons with natives

1st generation vs. 2nd generation vs. Natives and Natives (White)





# Comparison with natives (white), by LTO quantiles: mathematics



## Next question, what consequences strong culture have on others in the institution?

- How do native children “react” to a new influx of culture.
- Complicate question (reflection problem), but with good data and identification one can compare siblings from the same family exposed to different fraction of immigrants
  - Outcomes improve, especially for the less performing students
  - less disruption and fewer absences: immigrants behave better, natives behave better in classes with more immigrants (social cost of deviating), positive relationship with academic outcomes.

# Toward a better theory of corporate culture

Essential elements of corporate culture separate from culture of organizations:

- Entrepreneurs/managers
- Workers
  - They have their own social identity a la Akerlof and Kranton (2005)
  - Agent gains utility from acting in a way that conforms to the norms associated with his identity, but there is a cost of deviating from the group.
- They congregate in the firm which has a production function and budget constraints.
  - Entrepreneur can organize firms (boundary) depending on optimal culture to execute production
  - Output of the firm critically depends on the cultural norms followed by the employees

## Example – work in progress

- Consider an entrepreneur who is planning to employ two workers to perform two activities that share complementarity depending upon the distance  $d$  between the location of two production activities. Total production

$$Y = y^a + y^b + (1 - d)y^a y^b - w_1 - w_2$$

- Think that each activity will benefit from certain norms.
- E.g. activity a benefits from creativity and lack of precision (advertising)
- E.g. activity b benefits from precision  $p$  (e.g. accounting)
- Activities benefits from an opposite culture:

$$y^{a'}(p) > 0 \quad \text{and} \quad y^{b'}(p) < 0$$

## Example – work in progress -2

- Start with workers not having their own social identity but they have a cost from deviating from “the norm”
- In this simple model, in spite of technological complementarities, entrepreneur may keep activities separate. Trade-off between the technological complementarity and the social conformity of the workers
- If activities share complementarities through social conformity, even without technological complementarities they may be organized together.
- Bottom line: culture may help define the boundaries of the firm and organizational structure in an optimal way.
- When workers social identity, local culture is incorporated into the model, richer results.
- Corporate governance may play a role as well.

# Conclusions

- Corporate culture is important. No doubt in practice
- Economists have shown interest traditionally in incorporating culture in their models (more for corporate culture than culture)
- But these models about culture do not capture the essential interaction between firms and culture
- They capture important role of culture in institutions, but these institutions do not need to be firms
- We need a new paradigm