

# « Culture, Growth and Development: What do Economists Say ? »

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(PSE, CEPR)

# A Fundamental Problem in Development Economics

- Explain the massive income gap across countries?

From:

|          |              |
|----------|--------------|
| Qatar    | 88 222 US \$ |
| US :     | 46 860 US \$ |
| Sweden:  | 38 203 US \$ |
| France : | 33 910 US \$ |
| Italy :  | 29 480 US \$ |

To:

|            |            |
|------------|------------|
| Ghana      | 2725 US \$ |
| Nigeria    | 2437 US \$ |
| Senegal    | 1825 US \$ |
| Mozambique | 1012 US \$ |
| ...        |            |
| DRC        | 329 US \$  |

(GDP per capita (PPP) ; IMF World Economic Outlook 2010)

# Economic Growth

- « **Doing more of the same thing** » : Accumulation of factors of production: Physical Capital /Human Capital :  
« Measure of our ignorance »:  $1/2$  of differences in GDP per capita
- « **Doing more things** »: Knowledge and technology (Romer, Aghion, etc...) endogenous growth theory
- « **Doing things the right way** » : Role of Institutions and Growth (Acemoglu, Robinson, Johnson, etc...)
- « **Your values and beliefs matter for doing things!** »:



**Culture**

## An « Old » Problem

- Social Sciences : « Culture and Development »
  - Historical Sociology : Weber ,..Fukuyama
  - Classical Economists: Smith, ....Marx

## Why not Economists ?

- The vagueness of « culture »: Definitions
- Pb of measurability/ identification of preferences/beliefs
- Supply side determinants of economic Development:  
Factor endowments/Technology

## « Culture » and Economists: The comeback!

- Growth Theory: « Proximate causes» .... «Fundamental causes »
- Development : Gvts to Markets to Communities :
  - State and Central Planning : « coordinate »/ trigger growth process
  - Liberalization and Private sector : Markets and individual initiatives
  - Focus on Communities : Informal arrangements/ Social Capital
- Better tools for « culture » in economic analysis :
  - Theory : models of cultural transmission/ endogenous preferences and beliefs
  - Empirics: systematic data sets on subjective values/ beliefs
  - Experimental games in different contexts

# PLAN

- How do Economists deal with «Culture » ?
- «Culture» and Growth : Conceptual approaches
- «Culture» and Growth : Empirical difficulties
- Where to go and policy implications?

# How do Economists deal with « culture » ?

- Define « culture » ?

Alfred Kroeber and Clyde Kluckhohn : 164 definitions of "culture"  
(*Culture: A Critical Review of Concepts and Definitions*)

Edward Burnett Tylor (1874 ) : Culture or civilization, taken in its wide Ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society.

Alfred Kroeber (1876–1970) : culture : the "superorganic," : a domain with ordering principles and laws that could not be explained by or reduced to biology.

«the set of shared attitudes, values, goals, and beliefs that depends upon the capacity for learning and transmitting knowledge to succeeding generations »

(Guiso, Sapienza and Zingales 2007 )



## Specificity of «Culture » For economic development ?

- Accumulation but through social transmission/  
learning
- Group- based: diversity and group boundaries
- Persistence and resilience: « slow moving » variable
- « State » variable  $\neq$  From Physical and Human capital

## How do Economists look at the question? (I)

- Economics : Preferences and Culture  
The Traditional way...

|                                   |
|-----------------------------------|
| <b>Homo Economicus</b>            |
| Fixed Preferences                 |
| Preferences individually centered |
| Rationality/ Optimization         |
| Incentives                        |
| Prices/incomes/opportunity costs  |

### 3 Domains of interactions

**The traditional way**

Preferences  
(tastes, cultural traits,...)

Possibility Sets  
(Technology, Prices)

Information Sets  
(beliefs,...)

# How do Economists look at the question? (I)

- Economics : Preferences and Culture  
The Traditional way...

## Homo Economicus

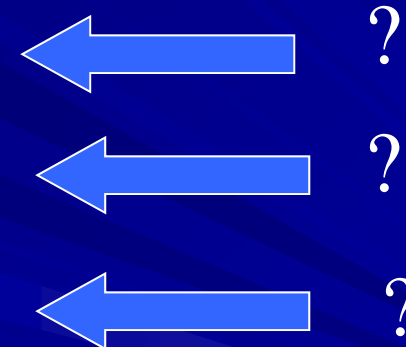
Fixed Preferences

Preferences individually centered

Rationality/ Optimization

Incentives

Prices/incomes/opportunity costs



### 3 Domains of interactions

**Culture**

Preferences  
(tastes, cultural traits,...)

Possibility Sets  
(Technology, Prices)

**Culture**

Information Sets  
(beliefs,...)

## How Economists look at the question? (II)

Values, Beliefs, Identity and love in equations?

$$\sqrt{\heartsuit} = ?$$

$$\cos \heartsuit = ?$$

$$\frac{d}{dx} \heartsuit = ?$$

$$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} \heartsuit = ?$$


$$F\{\heartsuit\} = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} f(t) e^{it\heartsuit} dt = ?$$

My normal approach  
is useless here.

(XKCD)

## How Economists look at the question? (III)

Alternative Approaches....



| <b>Homo Economicus</b>               | <b>Homo Sociologicus</b>     |
|--------------------------------------|------------------------------|
| Fixed Preferences                    | Endogenous Preferences       |
| Individually centered                | Interdependent Group-related |
| Rationality/<br>Optimization         | Internalization              |
| Incentives                           | Group influence              |
| Prices/Incomes/<br>Opportunity Costs | Social Networks              |

# Alternative Approaches....



| <b>Homo Economicus</b>               | <b>Homo Sociologicus</b>     | <b>Homo Evolutus</b>                          |
|--------------------------------------|------------------------------|---|
| Fixed Preferences                    | Endogenous Preferences       | Genes/<br>Cultural Traits                     |
| Individually centered                | Interdependent Group-related | Genetics/<br>Culture                          |
| Rationality/<br>Optimization         | Internalization              | Replication/ Mutation<br>Learning/ innovation |
| Incentives                           | Group influence              | Selection/<br>Adaptation                      |
| Prices/Incomes/<br>Opportunity Costs | Social Networks              | Environment/<br>Population structures/        |



(XKCD)

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My ~~normal~~ approach  
is ~~useless~~ here.

*Useful?*



• New Approaches combining....

## New Approaches in Economics combining....

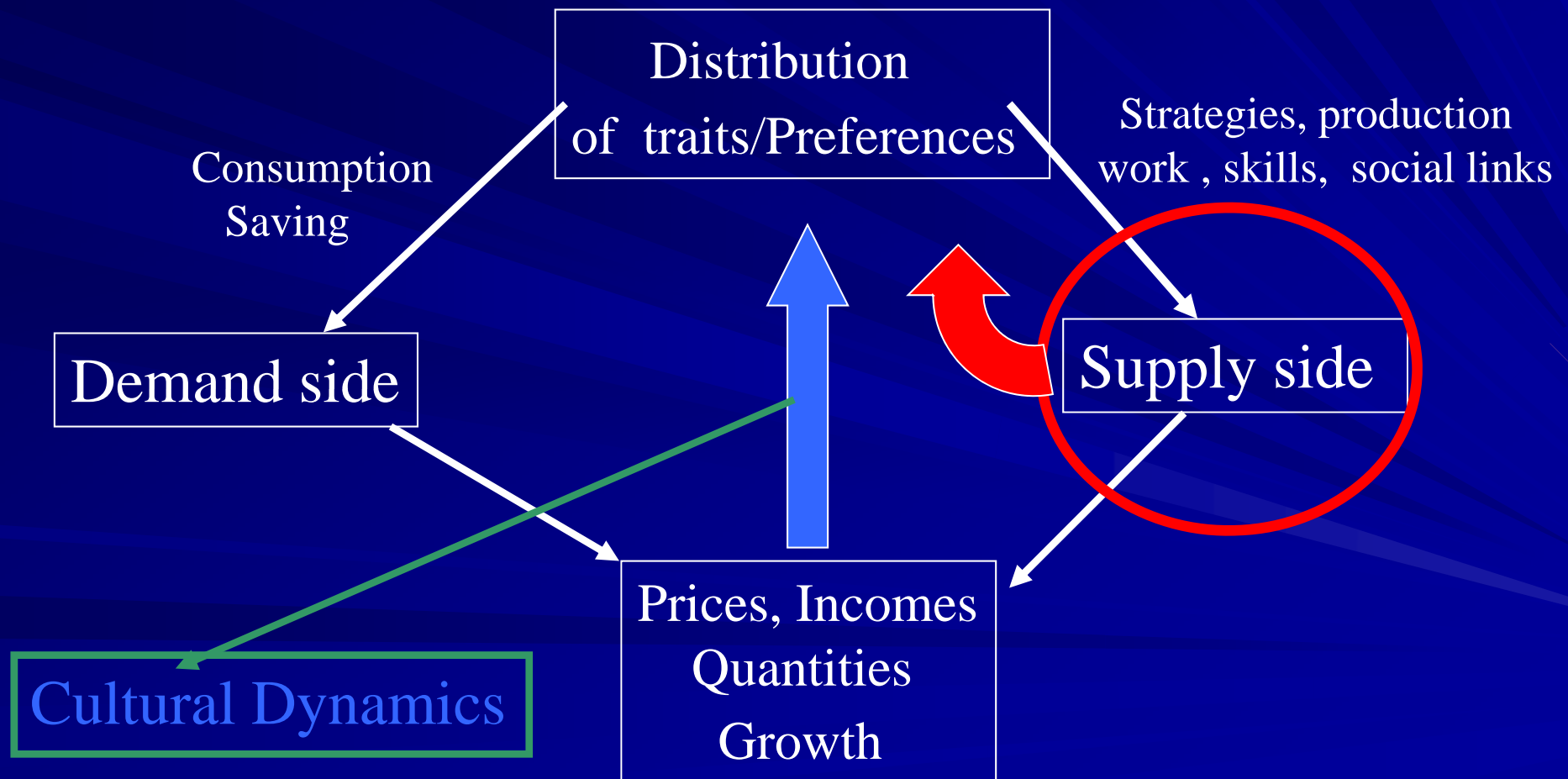
- Values/Beliefs: individual/ group related/
- Process: Rationality (limited)/  
Internalization/Learning/ Socialization  
Incentives / Imitation / Selection
- Objects: Opportunity costs / networks / Populations

Cultural traits

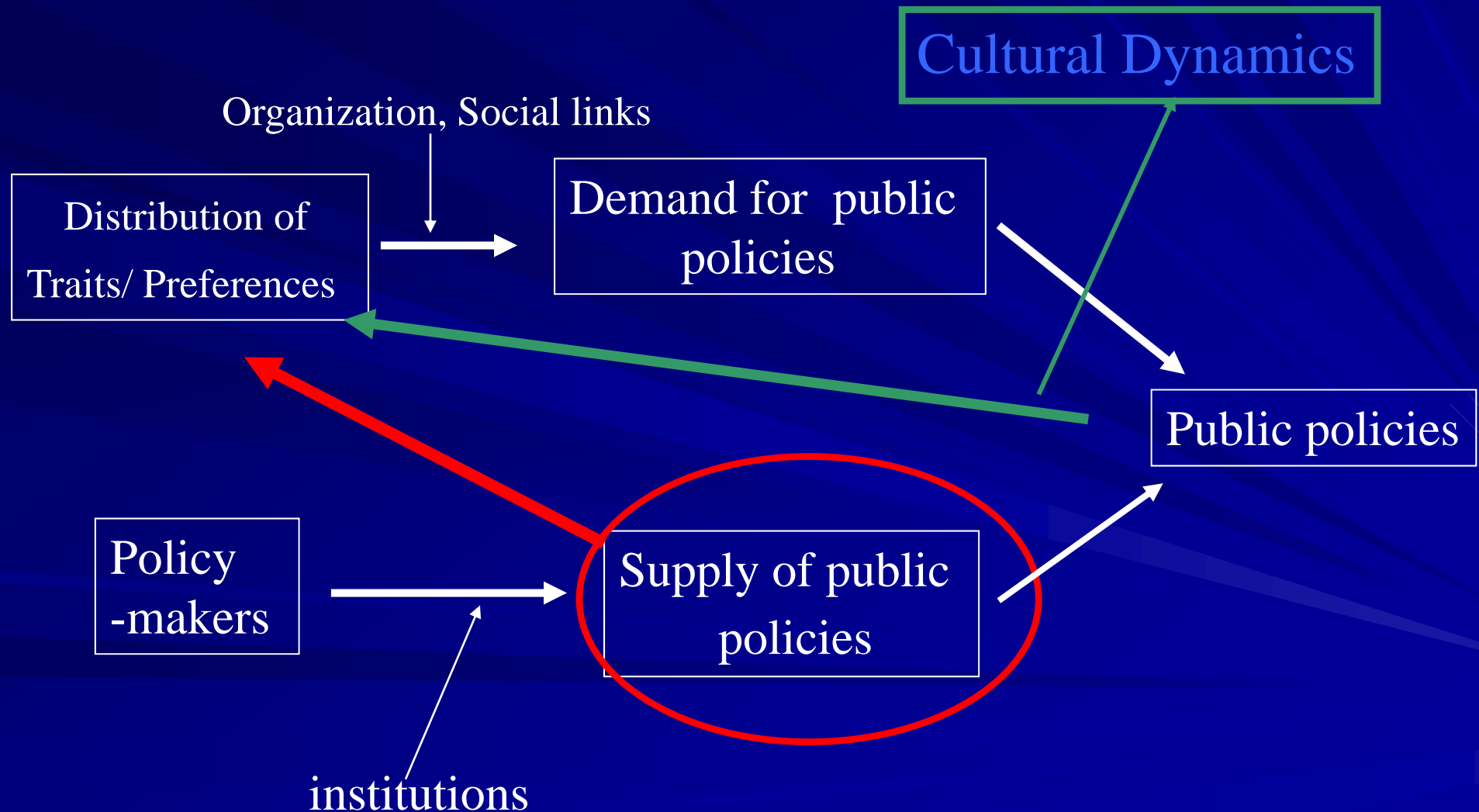


Social outcomes

# Culture and Markets: « Reinforcing links and Complementarities »



# Culture, Policies and Institutions: « Reinforcing links and Complementarities »



# Towards an Economic Framework of Cultural Transmission

- A model of socialization / cultural transmission  
(Bisin and Verdier 2001)
- Transmission of values :
  - Parents and Society
  - Economic Interactions
  - Evolutionary Dynamics of cultural change

—————→ Evolutionary Anthropology and Economics  
(Cavalli Sforza-Feldman  
Boyd and Richerson)

## Cultural transmission (Bisin and Verdier 2001)

- Transmission of values :
    - **cost** of socialization : monetary /non monetary
    - **motivation** for transmission: altruism / « wise » paternalism
    - **influence** of parents and society (oblique or horizontal transmission horizontale)
    - **Cultural dynamics**: cultural traits more « **adapted** » to economic environment have better chances to be transmitted but also **resilience /persistence** of cultural traits
- Allows for role for economic interactions/ institutions/ growth

## Cultural traits that matter for growth ?

Economic Preferences  
and beliefs :

- Patience /Thrift
- Leisure/ work ethic
- risk aversion
- sense of control

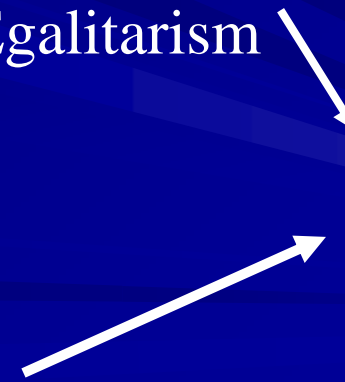
Savings  
Labor supply/effort  
Innovation  
Entrepreneurship

Social Preferences  
and beliefs :

- Family values (Gender/authority)
- Social/civic capital
- Inequality aversion / Egalitarianism
- Meritocracy / fairness
- prestige/ status

Productive/  
exchange  
distributive  
interactions

- Diversity of cultural traits (group boundaries)



## Economic Preferences : Thrift/ Work ethic

« Spirit of Capitalism » revisited: Doepke and Zilibotti (2008)

- British Industrial Revolution: decline of aristocracy /  
rise of industrial capitalists emerging  
from middle classes.
- Altruistic parents shape children's preferences to fit best with future  
material circumstances

Choices of specific  
occupation

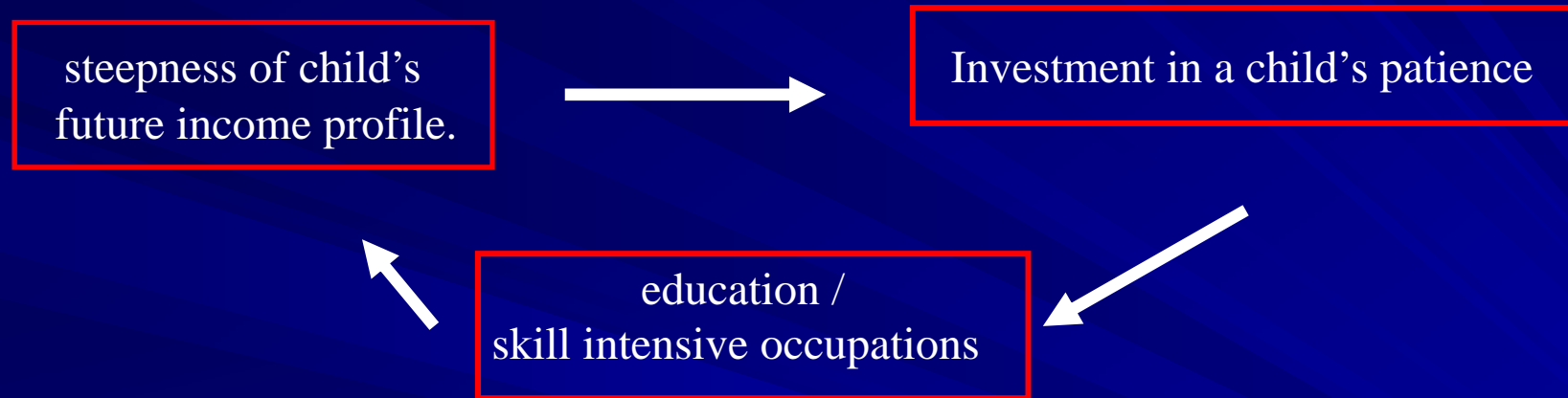


Preferences transmitted  
by parents

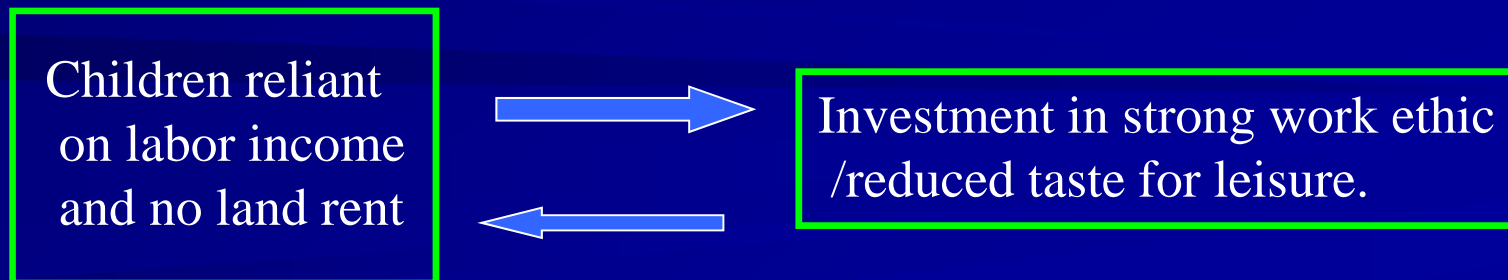


## Economic Preferences : Thrift/ Work ethic

- « Reinforcing link » between patience and steep income profiles:




- « Reinforcing link » between labor income and taste for leisure



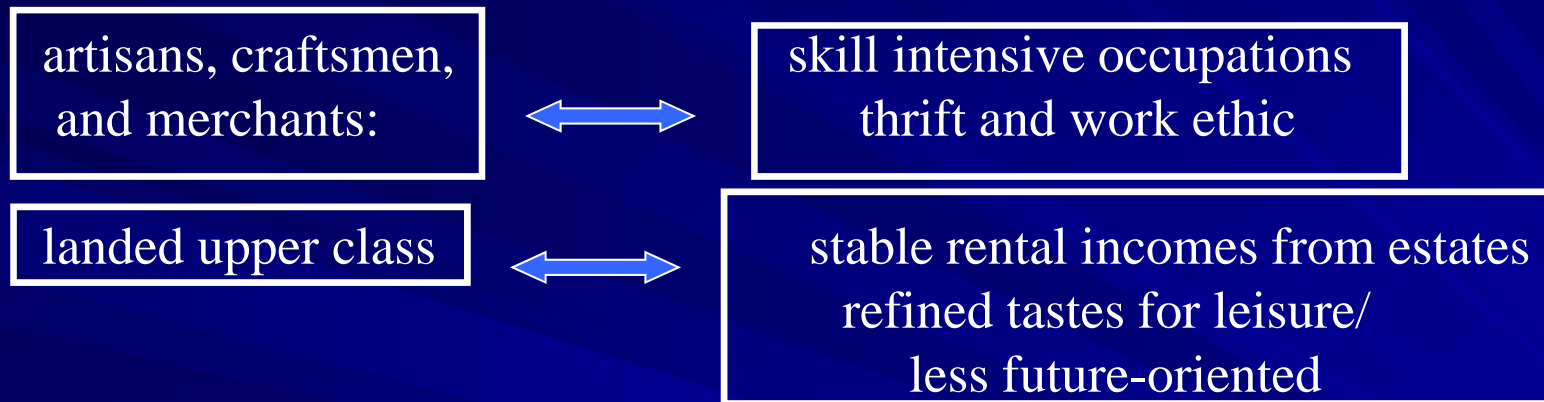
## Economic Preferences : Thrift/ Work ethic

- Preferences gradually diverge across members of different occupations.
- Endogenous stratification (occupations and associated preferences)

 Theory can account for reversal in economic fortunes of different social classes at the time of the Industrial Revolution.

## Economic Preferences : Thrift/ Work ethic

- Pre- industrial middle Ages: Stationary world

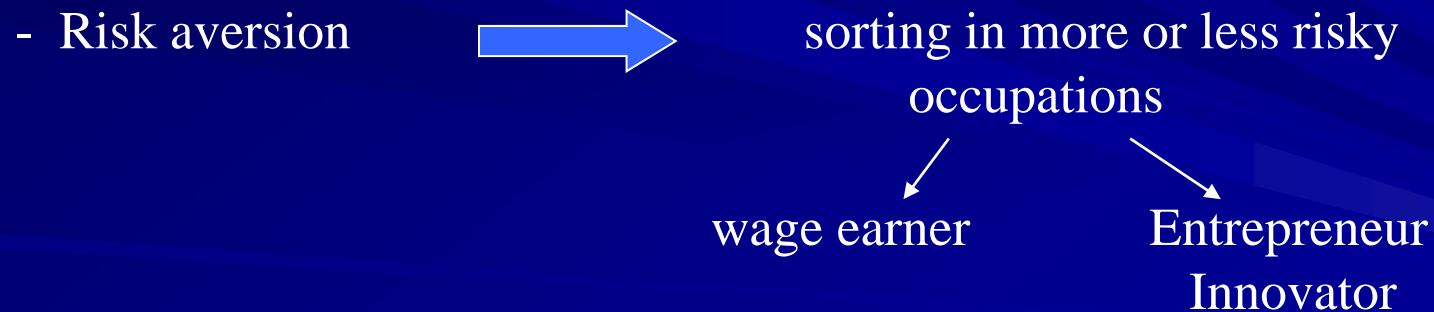


- Industrial Revolution: increase return to skill intensive occupations  
patience and work ethic became key assets
- Rise and fall of work ethic/ : gentrification/capitalization

## Economic Preferences : Risk aversion

- Risk aversion → entrepreneurial spirit → innovation

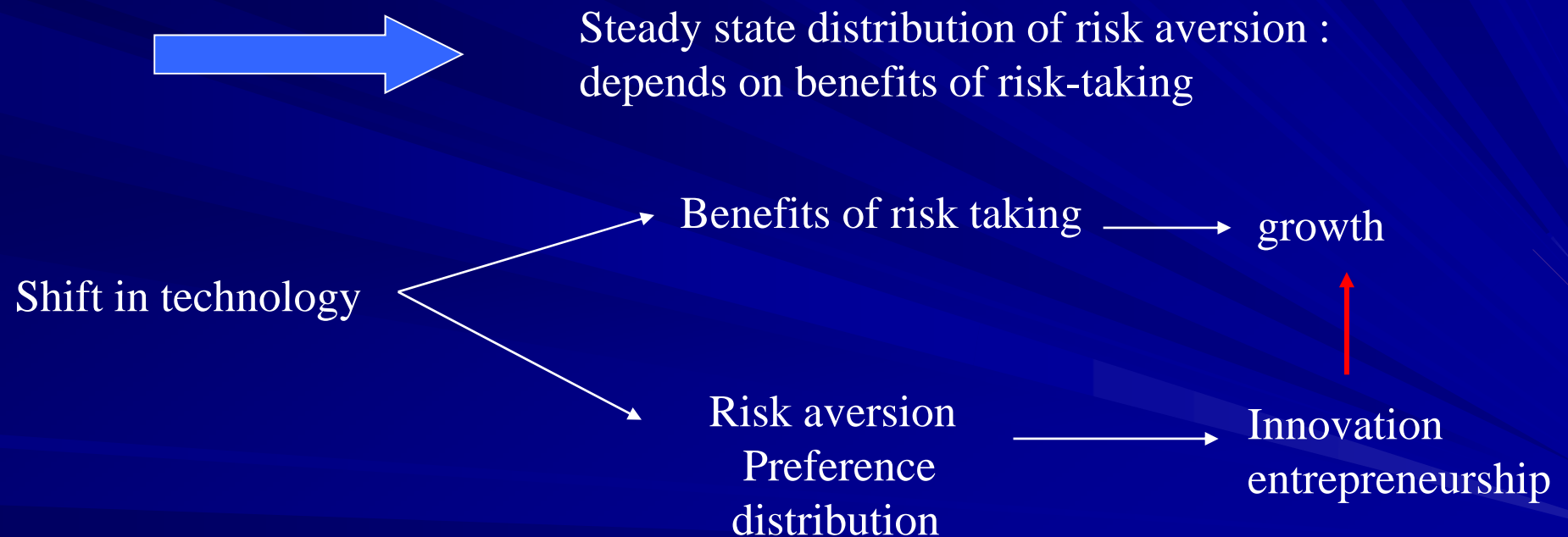
- Occupational Choice and Risk Aversion  
Chakraborty and Yehoue (2010), Klasing (2011)



- Cultural Transmission of risk aversion (Bisin/Verdier)

# Economic Preferences : Risk aversion

## 2) Occupational Choice and Risk Aversion Chakraborty and Yehoue (2010), Klasing (2011)



## Social preferences : Social Capital and Trust

- Economic interactions / exchange : scope for opportunism
- Value of trustworthiness for investment/ cooperation

### 1) Social Capital and Technology (François and Zabojnik (2005))

- Interaction firm/workers: Choice of technology « vulnerable » or not  
to shirking/cooperation  
More vulnerable technology : more productive
- Cultural transmission of trustworthiness

- Complementarity: Choice of technology  $\longleftrightarrow$  extent of trustworthiness  
(fast moving) (slow moving)

 Pb of speed of introduction of new technology

## Social preferences: Generalized / limited Morality

- Tabellini (2008) : Banfield's concept of « amoral familism »
- Cooperation with your « brother », your « neighbour » or .... a « stranger »
- Limited vs Generalized morality: range of transactions where individual values sustain cooperation
- Cultural transmission of limited vs generalized morality

- Complementarities:

Generalized morality ↔ Incentives to cooperate  
over a large range of situations

Individual values ↔ Politics  
Public policies/institutions

mutually reinforcing effects

## Social Beliefs : Trust in others?

Guiso, Sapienza, Zingales 2007 :

- Cultural transmission of prior beliefs
- Experience of Social interactions / learning/ revisions of beliefs
- Parents internalize more costs of mistakes than children



Parent transmit conservative priors : not enough social learning  
by children

Complementarity: low trust beliefs  $\longleftrightarrow$  no exchange/interactions

Low benefits of cooperation : Mistrust equilibrium. trap  
No social learning

Positive shock to benefits of cooperation (even temporary) :  
Permanent shift to better cooperative equilibrium



# Individualism and Collectivism

- Greif (1994): Maghrebis vs Genoans traders : static vs dynamic gains
- Gorodnichenko and Roland (2010):
  - Individualism promotes personal freedom / achievement  
social status for personal accomplishments, innovations  
collective action more difficult / no internalization of collective interests
  - Collectivism makes collective action easier  
encourages conformity and discourages individuals from standing out

Collectivist culture      →      higher static productivity gain

Individualism      →      innovation/ growth

# Witchcraft, Religion and Superstition

Platteau (2000): Egalitarian norms  
witchcraft as deterrent to wealth accumulation

Low technology and low control over natural risks

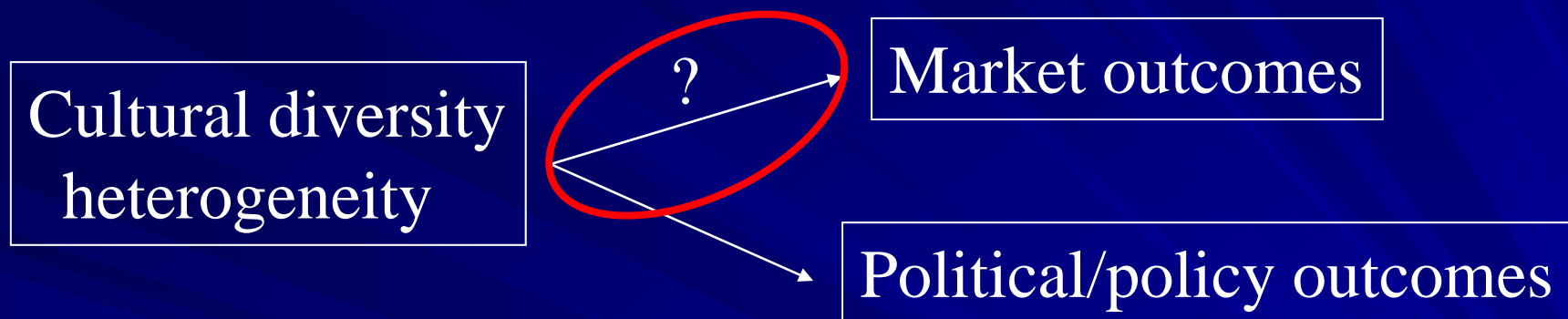
Reciprocity / personalized informal risk sharing arrangement  
Non rational magical explanations of natural phenomena

Witchcraft: enforcement mechanism keeping egalitarian situations of scarcity

- Levy and Razin (2010): Religious organizations and individual beliefs  
about causality between actions in social contexts  
and personal utility shocks.

mechanisms sustaining cooperation among  
individuals sharing same beliefs

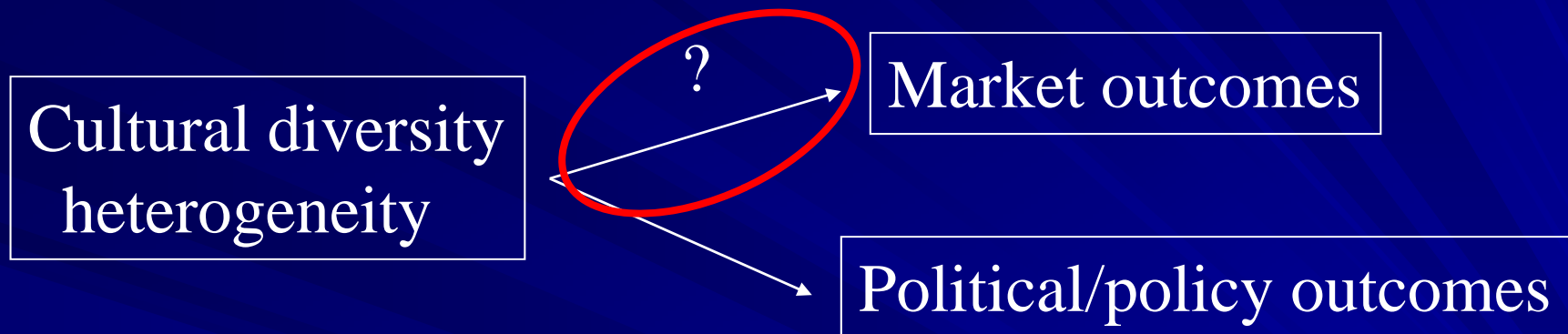
## Diversity of cultural traits (group boundaries)



Alesina and La Ferrara (2004):

- Préférences : social identity / intra-group vs inter-group  
(Tajfel, Billig, Bundy and Flament (1971))
- group related strategies: cooperation/ reputation  
(Greif 1993, La Ferrara 2003)
- Production function: creativity/ innovation vs communication costs  
(Lazear (1999), Ottaviano and Peri (2003))

## Diversity of cultural traits (group boundaries)



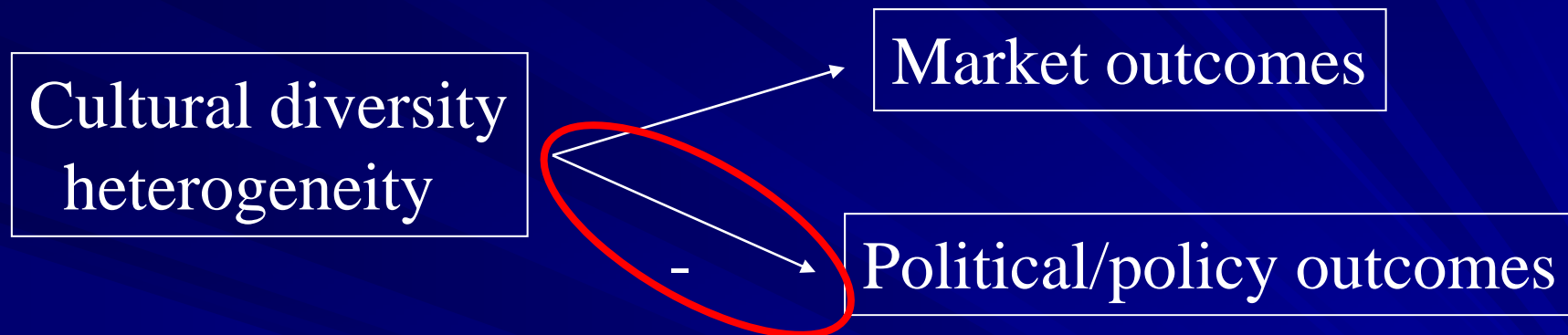
Fafchamps (2004), Fisman (2003) : Credit markets and ethnic diversity

Mutual insurance, lower transaction costs intragroup: +

Bas against some other specific groups: -

«African descent entrepreneurs discriminated» in Keyna /Zimbabwe

## Diversity of cultural traits (group boundaries)



Ethnic fragmentation/polarization and Conflicts and Wars/ Gvt quality

Huge political science / economics literature: cross country evidence  
regional/district/ municipality (US)

Politics and Cultural diversity (Bandiera and Levy 2010):  
Democracy and ethnic diversity : Elite capture on policies

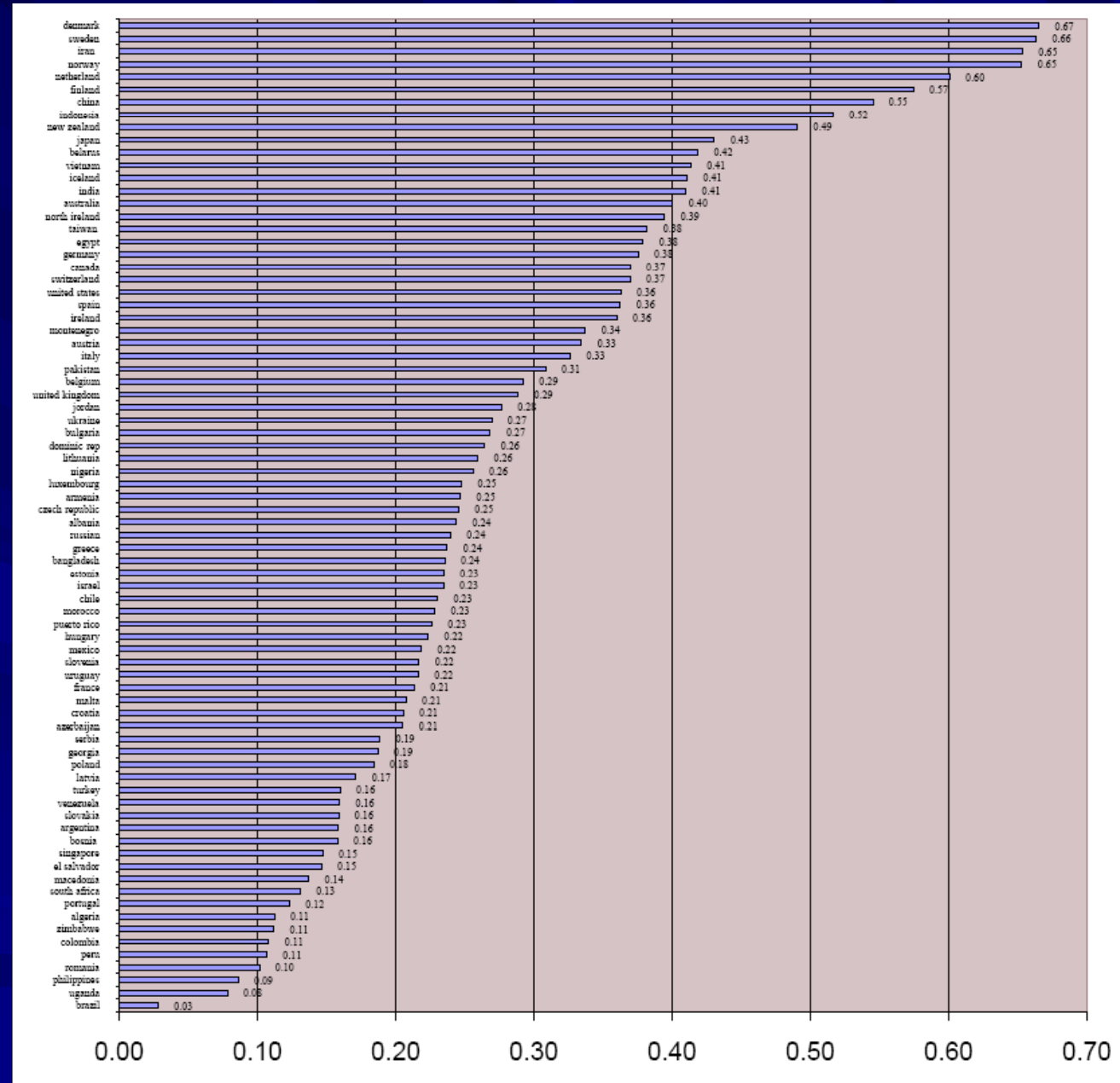
## How to measure culture ?

- Value Surveys : (WVS , GSS, ESS, ISSP,  
Euro-barometer/ Afro-barometer./ GSOEP,...)  
Trust beliefs /Morality Values
- Cross cultural Psychology : G. Hofstede  
components
  - Individualism/collectivism
  - Power distance
  - Uncertainty Avoidance
  - Masculinity/Femininity
  - Long term orientation
- Experiments across groups : Decision making/ Games  
Trust games, public provision games

# The diversity and persistence of «Culture»

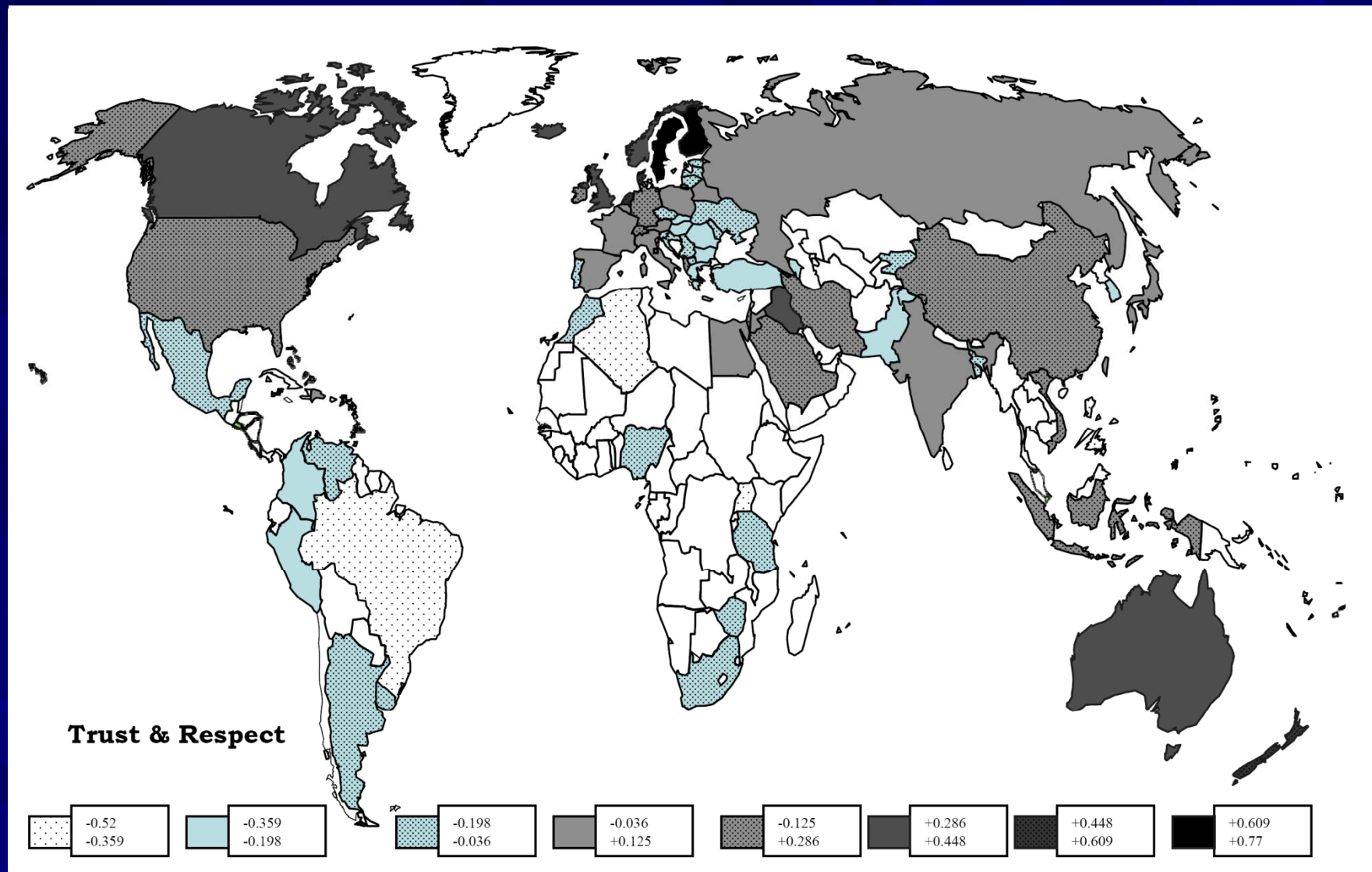
- The diversity and resilience of « cultural traits » over the world

**“Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”**

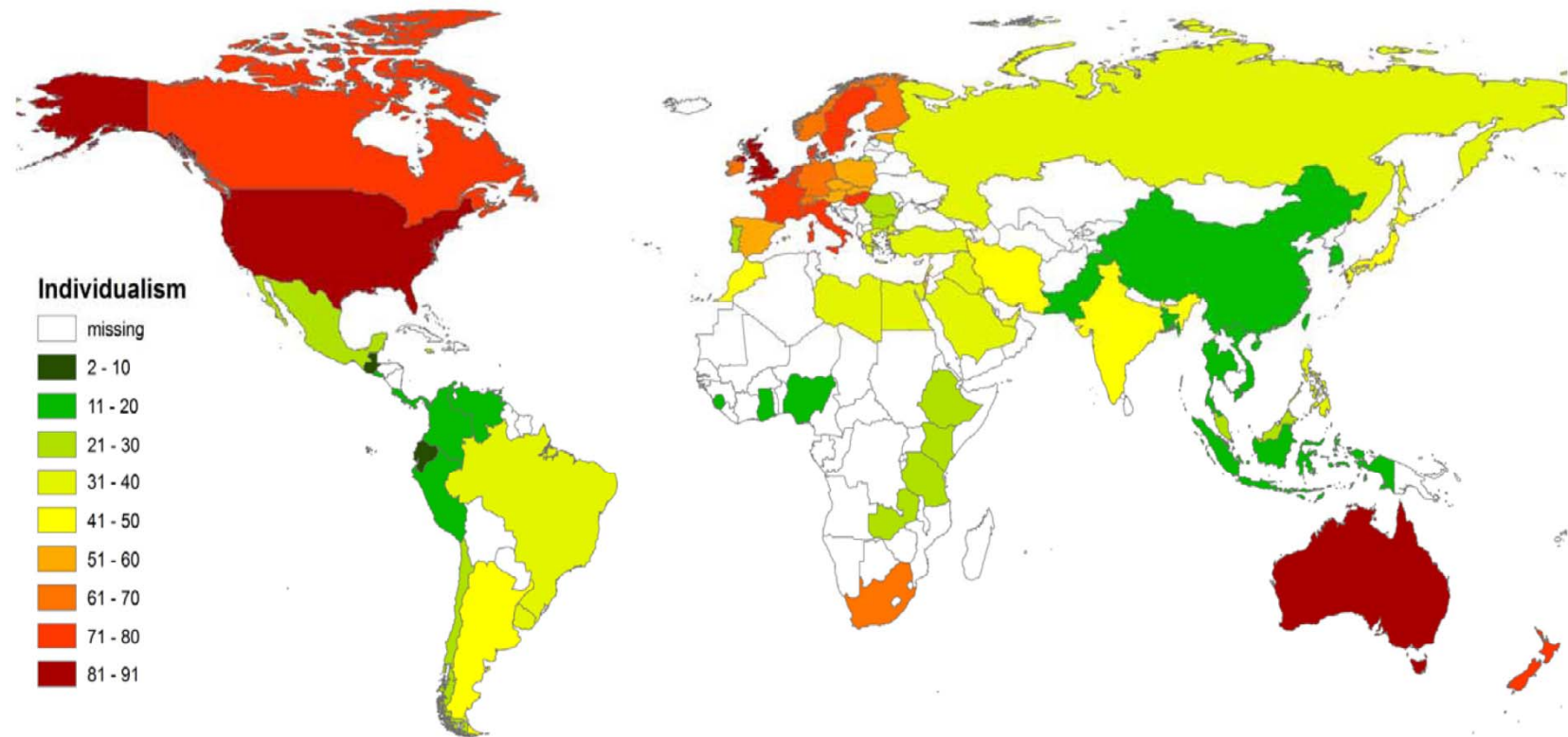


**Trust beliefs across countries ( GSZ 2010)**





Trust and respect index (Tabellini 2008)



Hofstede's individualism scores  
( Gorodnichenko - Roland 2010)

Semitic  
-Hamitic

Western  
Bbantoid

Central  
Bantoid

Mande

Guinean

Eastern  
Bantoid

Khoisan

Indo-european

Kanuri

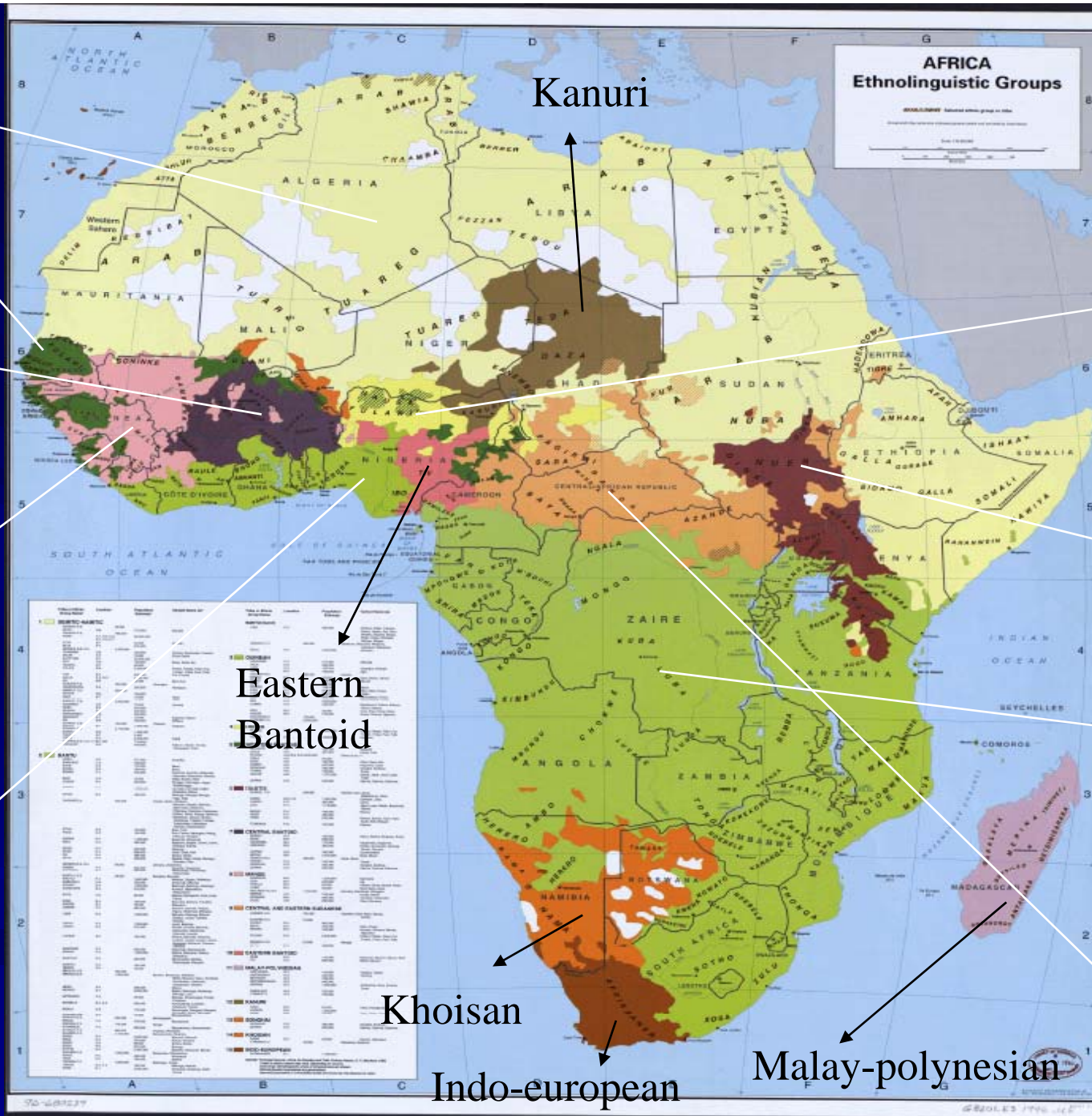
Malay-polynesian

Hausa

Nilotic

Bantu

Central/  
Eastern  
sudanese

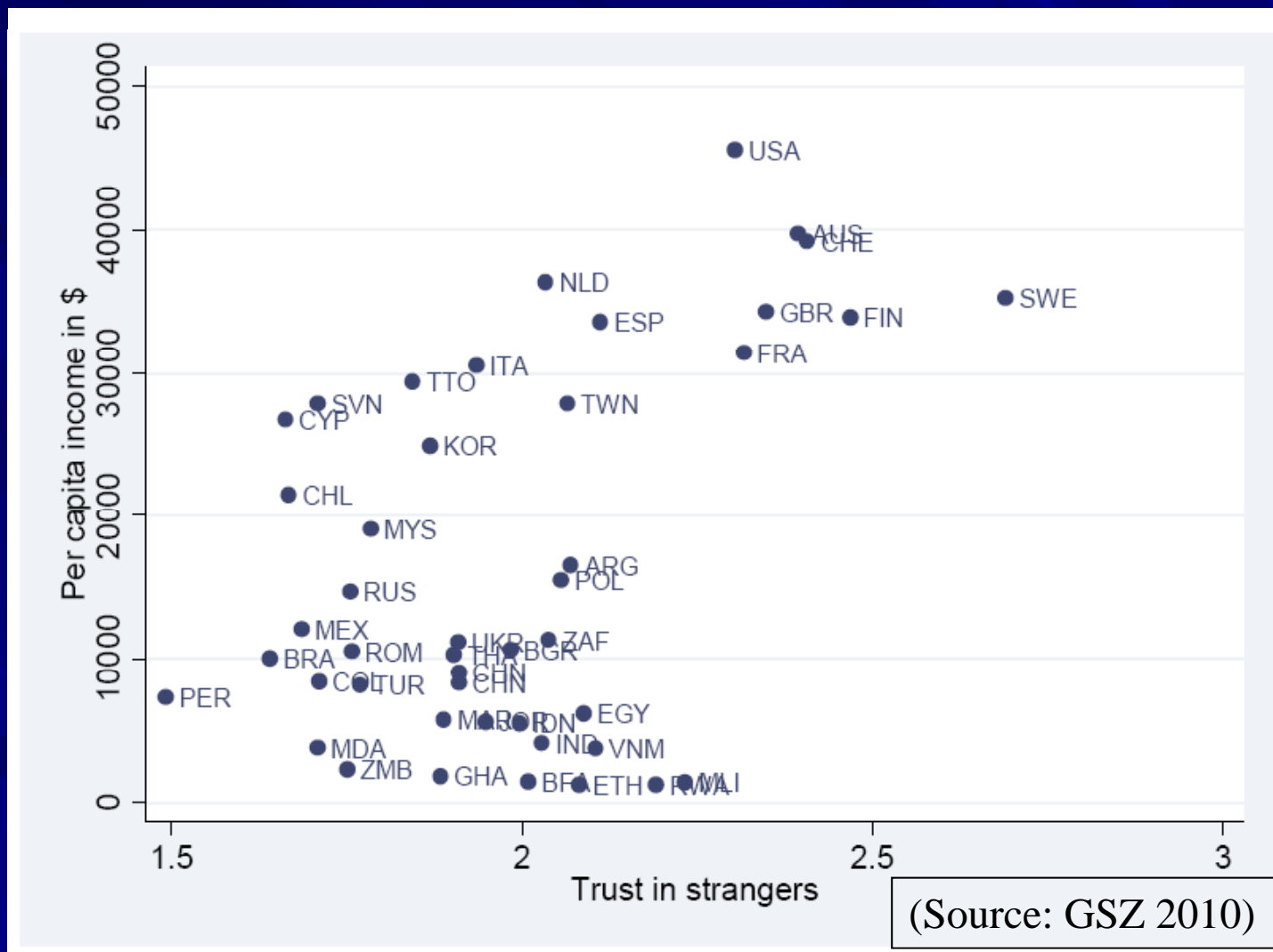


# **The Link between Culture and Economic Development**

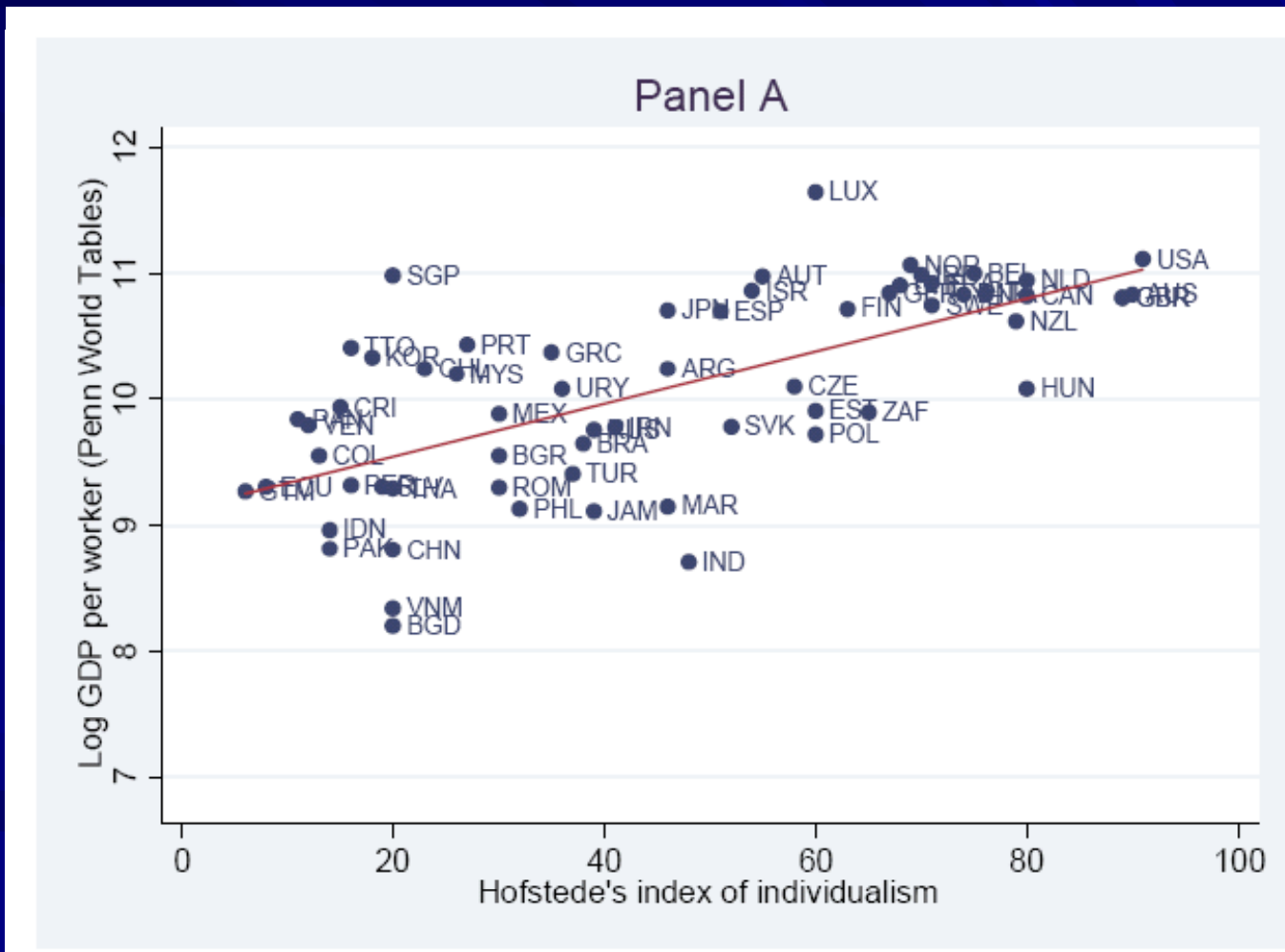


## «Trust » and Development:

- « motivating » correlations: ? —————> whole literature



## «Individualism» and Development:

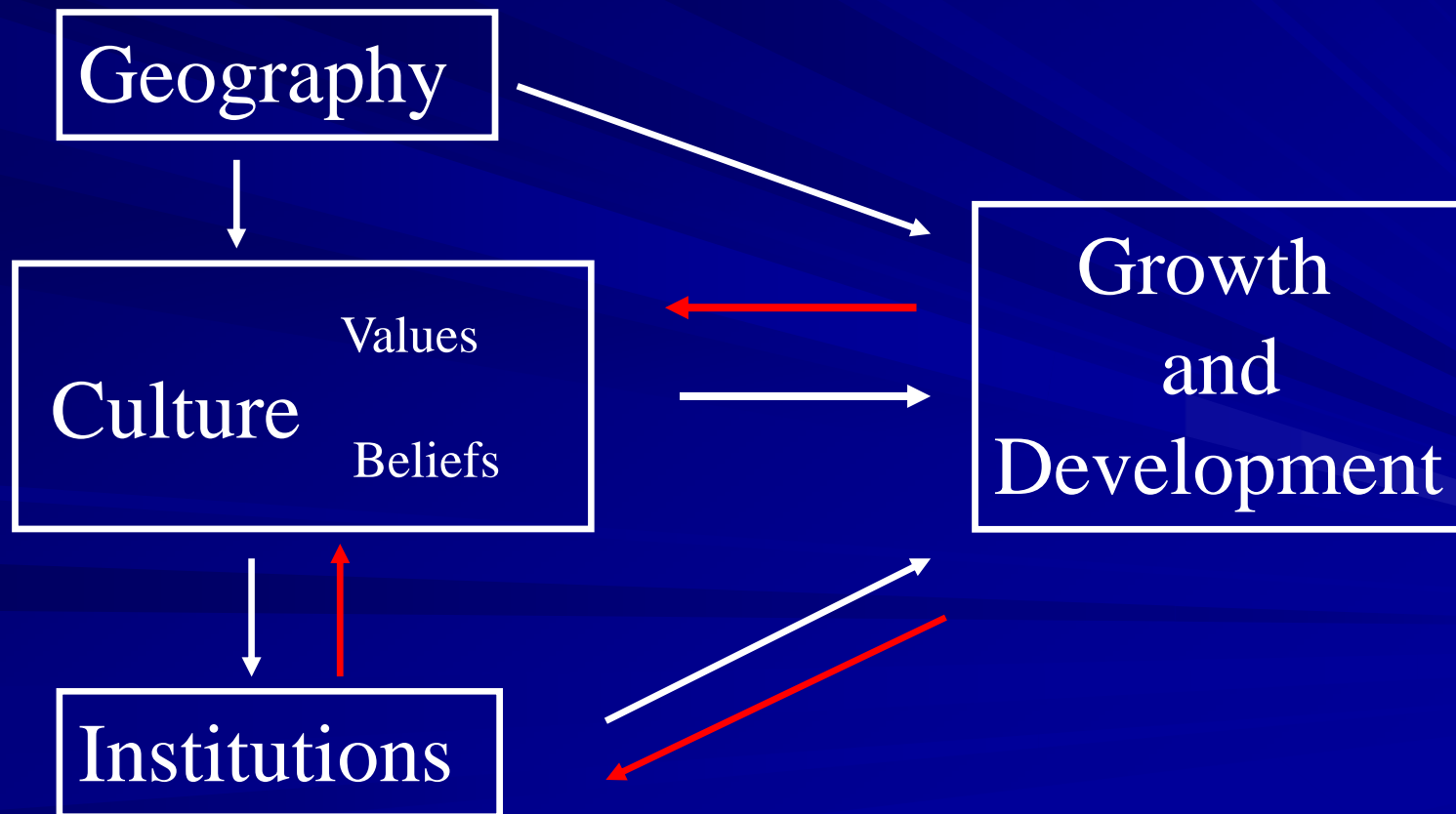


Source: Gorodnichenko and Roland (2010)

# «Culture» and Growth : separating the variables

Slow moving variable: Long term effects

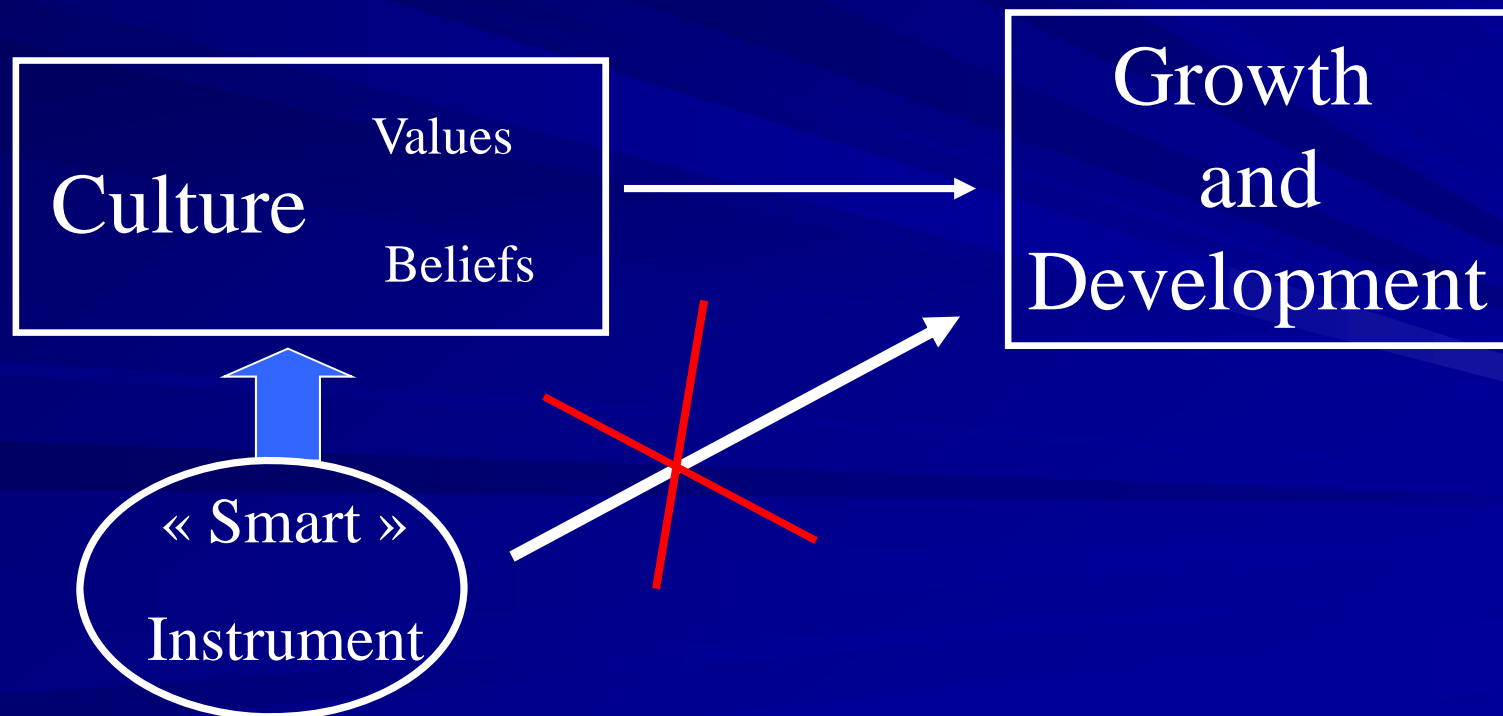
The difficult problem of causality / identification



## «Culture» and Growth : resolving the causality?

The difficult problem of causality / identification:

Finding an exogenous source of variation





- **How to identify the exogenous part of culture ?**

« Smart » instrumental variables :  
based on the « nature » of cultural transmission

- Long past historical events
- Linguistics and genetics
- The virus of culture : Epidemiological view

# How to identify the exogenous part of culture ?

## Long past historical events

Guiso Sapienza Zingales (2008):

Civic Capital and average per capita income  
for towns in Northern Italy.

Past history of communal independence (seat of bishop place/ etruscan city)

Tabellini (2009) :

Generalized morality values on development (european regions)

Literacy rates at the end of the XIXth century

Political institutions in the period 1600-1850.

# How to identify the exogenous part of culture ?

## Long past historical events

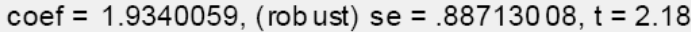
« Cisterian » monasteries and development in pre-industrial England  
(Barnebeck Andersen, Bentsen, Dalgaard, Sharp 2011)

- Work ethic and thrift of the Cisterian order (12th-14th)
- Return to literal interpretation of Rule of St Benedict: Prayer/Work/Study,
- Values of practicality, simplicity, moderation:  
Earlier « Protestant ethic » (Baumol 1990)
- Economic Innovation : « grange » system, irrigation system, water power factories
- Cultural diffusion: system of kinship and convert (lay brothers and illiterate peasants) for agricultural labor in monasteries, secular workers

Density of monasteries  
at county level



Population growth (15th-17th)



# How to identify the exogenous part of culture ?

## Linguistics and genetics

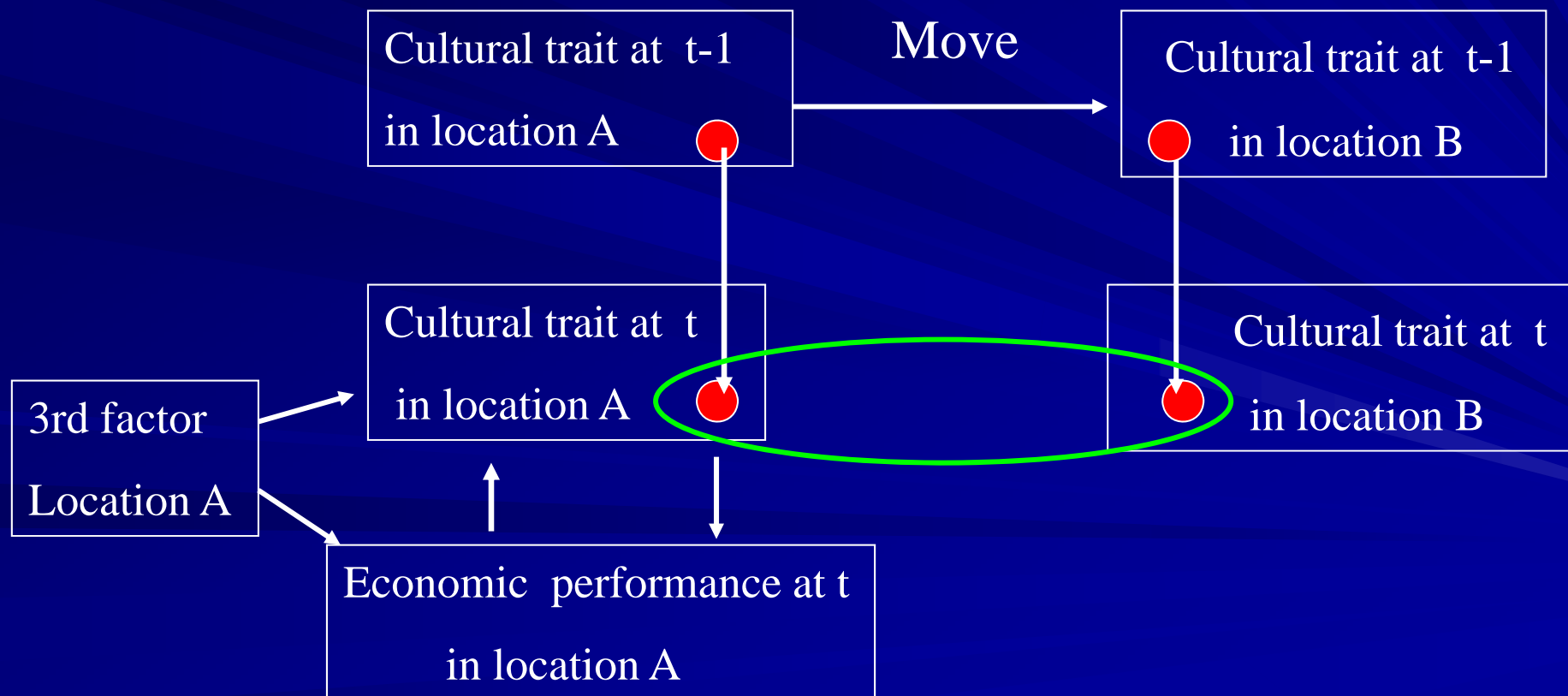
- Tabellini (2008) :
  - languages with « No pronoun drop » / respect of individualism (Kashima and Kashima (1998))
  - with « T-V distinction » : more attention to hierarchy correlated with current « Trust-respect » variables
- Gorodnichenko/Roland (2010): Genetics

Genetic distance : frequency of blood types compared to the US (Cavalli-Sforza et al.)

- same locus as cultural transmission
- neutral genetic marker not related to fitness
- correlates with Hofstede's individualism score

# How to identify the exogenous part of culture ?

## The virus of culture : Epidemiological view

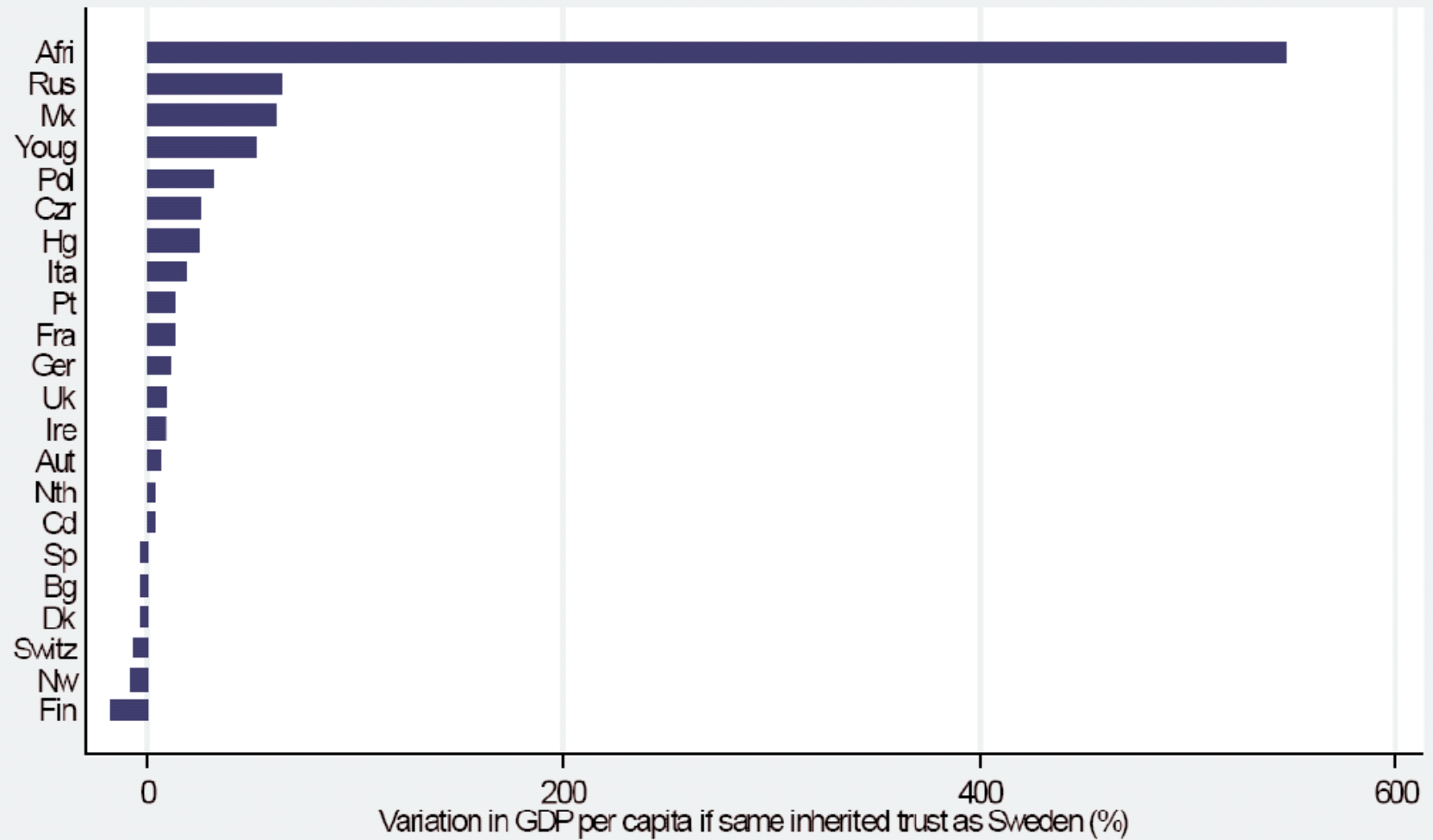


## The virus of culture : Epidemiological view

- Algan and Cahuc (2010) : « Inherited » trust /Economic Development
  - Second/third/fourth generation Immigrants in US (location B): trust question GSS to estimate « inherited » trust of current generation in country of origin
  - time varying : 2 points of time 1935-38 and 2000-2003: control for any persistent difference across countries

Civic capital  $\xrightarrow{+}$  on GDP per capita

Sizable effects !!??!!



Predicted variations in GDP per capita over the period 2000-2003  
In given country if it had the same level of inherited social attitudes as Sweden,  
(Algan and Cahuc (2010))



## Culture and Development : Any Policy Implications?

- Difficulty of normative statements :
  - Cultural diversity: the pb of aggregation of preferences
  - Endogenous values: which perspective to take?

## Any policy implications?

- Culture and Development : Not useful?

Slow moving variable /resilience : Move Swedes to Africa?

A New Cultural revolution ? (ineffectiveness of policy)

- Culture and Development: Useful?

- Resilience :
  - «de facto» institutions/ policy reforms  
≠ « de jure » institutions
  - which kind of institutional reform more adapted?
- Malleability: - things can be changed in the long run.

## Any policy implications?

- Culture and Development : May be useful?
  - Resilience along the transition of the development process
    - Assignment of tasks/ new organizational forms
    - adjustment of group related attitudes/values to moving spheres
    - importance of timing/ speed of change of policy change
- ex: nepotism/ corruption    vs    reciprocity/mutual assistance  
(Fafchamps 2011)

## Still a lot to be learned

- Causality/measurement: Be modest
- Micro-studies: Experimental games/ Randomized experiments?  
Preferences / context/ outcomes/ mechanisms
- Still how to aggregate ?
- The long term mechanisms between culture and growth?
- The missing link for understanding development?