

# Civicness drain

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# The research question

We study “civicness drain”.

- Civicness: good/honest citizen, fulfilling duties, no free-riding
- Civicness drain: civic types emigrate more than uncivic types

Why is it important?

- might leave some communities in an uncivicness trap
- could explain persistent gaps in civicness between close localities

Our conjecture:

- migration and civicness are related
- could explain persistent gaps in civicness between close localities
- throughout the world and specifically in the South of Italy

# Overview: a theory of migration and civicism

Many localities within two regions, North and South

Two types of subjects play a mandatory public good (PG) game

- Civic: always contribute because this is what one “ought to do”
- Uncivic: contribute if and only if it maximizes their payoff

Strategic complementarities in the fraction  $\bar{\pi}^r$  of contributors

- probability of being caught cheating increases in  $\bar{\pi}^r$
- cost of enforcement decreases in  $\bar{\pi}^r$
- individual payoff from PG increases in  $\bar{\pi}^r$

Regional govt. enforces contributions if benefit is larger than cost

## Overview: Multiple equilibria

In line with our findings and the literature we assume that the fraction of Civic is higher in the North

$$\bar{p}^N > \bar{p}^S$$

where  $\bar{\pi}^r \geq \bar{p}^r$

The difference is such that:

- the North is in a good equilibrium with enforcement
- multiple equilibria are possible in South,
- but evidence suggests that the bad equilibrium without enforcement prevails in the South

# Overview: introducing migration

Leave aside

- risk attitudes
- beliefs about being accepted in the North

The model predicts a civickness drain from South to North

- because of (endogenous) better enforcement in the North
- which makes migration attractive to the Civic

The civickness drain is attenuated and possibly reversed at intermediate values of local civickness because of the interaction between

- the different risk attitudes of the two types
- their beliefs about what North thinks of the civickness of a southern migrant (independently of the truth)

and given reasonable assumptions on the cost of migration

## Overview: the role of risk preferences and beliefs

We assume that the belief of a potential migrant about what North thinks of South is equal to local civicness

At intermediate levels of local civicness, uncertainty about what North thinks of South is the highest.

- some Civic stay, if they are risk averse
- some Uncivic migrate, if they are risk lovers

An Uncivicness drain is thus possible in the middle if the Uncivic are more willing to take the risk of not being considered Civic in the North

We are of course aware that migration flows out of the South were, and still are, mainly driven by economic concerns

However, at the margin, civicness may have played a role of which we want to understand the relevance

# Summary of model predictions

- ① A civiness drain is likely at high and low levels of local civiness, while an unciviness drain is certainly impossible at these levels
- ② If a civiness drain occurs at the extremes, the migration probability as a function of local civiness should be:
  - U-shaped for the Civic
  - Hump-shaped for the Uncivicbecause of the interaction between risk attitudes and beliefs
- ③ The two patterns may intersect generating an unciviness drain at intermediate values of local civiness
- ④ If the two patterns intersect, the Uncivic must be more risk-seeking than the Civic


## Overview: data and experiment to test the predictions

We collected data on Italian high-school graduates, in the North and in the South, classified as Civic if not cheating in a die-roll experiment

Local civicness is the fraction of Civic in their high-school class

Our innovation: students were (implicitly) informed that cheating would have subtracted resources from the community

We also collected

- risk attitudes
- beliefs about what North think of South (lost wallet question) 
- migration choices after graduation
- additional information to generate controls



## Overview: Three findings confirming the model assumptions

- 1 A civic behavior is more frequent in the North than in the South  
▶ NS-gap
- 2 The supports of the distributions of civicness across localities in the North and in the South overlap and the (log) variance is higher in the southern region  
▶ NS-gap
- 3 There is a positive correlation between civicness in a southern locality and the second order belief of subjects in that locality on what North thinks of southern civicness  
▶ belief

## Overview: two findings confirming the model predictions

### 4 At high and low local civicness

- A statistically and quantitatively significant civicness drain takes place

When local civicness is intermediate

- the Uncivic are more likely to emigrate than the Civic
- generating a statistically significant uncivicness drain

▶ main-civ

### 5 The Uncivic are significantly more risk seeking than Civic

▶ main-risk

▶ skip-theory

▶ conclusion

# The theory in detail

A country with two regions, South and North, denoted by  $r = \{S, N\}$

In each region,  $J$  localities of identical size (continuum, unit measure)

A player  $i$  living in locality  $j$  of region  $r$  belongs to one of two types

- the Civic ( $\tau = c$ ), whose fraction is  $p_j^r \in [0, 1]$ )
- the Uncivic ( $\tau = u$ ), whose fraction is  $1 - p_j^r$

$p_j^r$  is the degree of local civicness of locality  $j$  of region  $r$

$\bar{p}^r \equiv \mathbb{E}_j[p_j^r]$  is the average degree of local civicness in region  $r$

# The mandatory Public Good game

Each player is required to contribute one unit:

- total contributions are multiplied by a productivity coefficient
- and equally divided among all players in the local community

Civic always contribute, Uncivic only if convenient

There is a possible fine  $\phi$  on a subject who is caught shirking

Enforcement is costly: regional authorities decide whether to use it

$\pi_j^r$  is the actual fraction of contributors in  $j$  of  $r$  (possibly  $\pi_j^r \geq p_j^r$  )

$\bar{\pi}^r \equiv \mathbb{E}_j[\pi_j^r]$  is the average fraction of contributors in  $r$

# Strategic complementarities

## Assumption 1

*$k(\bar{\pi}^r)$  is a strictly decreasing function of  $\bar{\pi}^r$  with  $k(1) = 0$ .*

## Assumption 2

*When enforcement is implemented, the probability of getting caught for not contributing is a strictly increasing function of  $\bar{\pi}^r$ , denoted by  $g(\bar{\pi}^r) \in (0, 1)$ .*

## Assumption 3

*$\lambda'(\bar{\pi}^r) > 0$  and  $\lambda(0) > 1$*

$\lambda(\bar{\pi}^r)$  is the productivity coefficient for all localities in region  $r$

# Payoffs

The authorities implement enforcement if and only if

- the (expected) individual payoff after the deduction of its cost is
- larger than the (expected) individual payoff w/out implementation.

If there is no enforcement in  $r$ , the payoffs given  $\pi_j^r$  are:

- $\lambda(\bar{\pi}^r)\pi_j^r - 1$  for a contributor and
- $\lambda(\bar{\pi}^r)\pi_j^r$  for a non contributor,

If instead enforcement is used, the expected payoffs are

- $\lambda(\bar{\pi}^r)\pi_j^r - k(\bar{\pi}^r) - 1$  for a contributor and
- $\lambda(\bar{\pi}^r)\pi_j^r - k(\bar{\pi}^r) - g(\bar{\pi}^r)\phi$  for a non contributor.

# The share of contributors in a region is endogenous

If there is no enforcement in  $r$ ,

- the Uncivic have no incentive to contribute
- hence  $\pi_j^r = p_j^r$  for any  $j$  of  $r$

If there is enforcement  $r$ , an Uncivic will contribute if and only if

$$g(\bar{\pi}^r)\phi > 1 \quad (1)$$

This rule captures the strategic complementarity of contribution

A region may potentially be in any one of two pure strategy equilibria:

- a *good* equilibrium, where all the Uncivic types in all localities contribute
- a *bad* equilibrium, where all the Uncivic types in all localities shirk from contribution

# Equilibria in the two regions

## Assumption 4

$$\bar{p}^S < \bar{p}^N$$

## Assumption 5

$$\phi g(\bar{p}^S) < 1 < \phi g(\bar{p}^N).$$

## Corollary 1

- *if enforcement is used in the South, the region may end up in either a bad or a good equilibrium,*
- *if the North uses enforcement the only equilibrium is the good one*

## Assumption 6

- *The South is in the bad equilibrium and does not use enforcement.*
- *The North uses enforcement and is in a good equilibrium*



# Beliefs about being accepted in the North

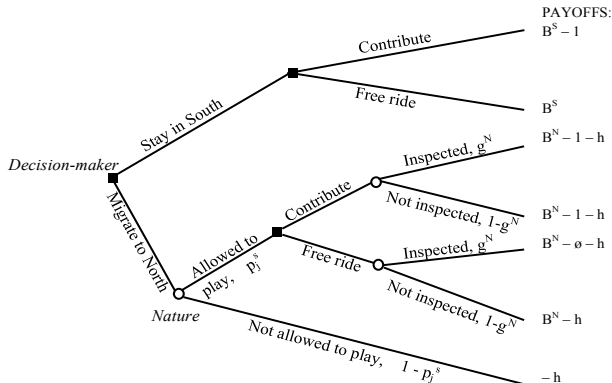
◀ over-data



## Assumption 7

*A migrant from South to North assigns probability  $p_j^S$  to the event of being allowed to play in the destination locality.*

# The decision tree of a potential migrant from South



## Risk attitudes and migration

A player migrating to North contributes there, regardless of her type.

Hence, she believes to face, in the North,

- a probability  $p_j^S$  of gaining a payoff of  $\lambda(1) - 1$
- and 0 otherwise.

Since players may differ in their attitude towards risk,  $q_i$ , we represent this stochastic payoff by  $X_{i,j}^S(\lambda(1) - 1)$ , where

$$X_{i,j}^S = \frac{p_j^S q_i}{p_j^S q_i + (1 - p_j^S)(1 - q_i)}, \quad (2)$$

- is a measure of the combined effect of the belief  $p_j^S$  and the individual's risk attitude  $q_i$ .
- $X_{i,j}^S(\lambda(1) - 1)$  captures  $i$ 's *certainty equivalence* of the gamble

## The decision to migrate

For both types, the total cost of migrating, inclusive of the opportunity cost, is  $h$  plus the payoff from remaining in the South.

$v^\tau$  is the payoff that a player of type  $\tau$  derives from the public good game played in the South,

$$\mathbb{M}_{i,j}^{S,\tau} = X_{i,j}^S (\lambda(1) - 1) - h - v^\tau. \quad (3)$$

Defining  $\bar{X}^\tau \equiv \frac{h+v^\tau}{\lambda(1)-1}$ :

$$\mathbb{M}_{i,j}^{S,\tau} > 0 \quad \Leftrightarrow \quad X_{i,j}^S > \bar{X}^\tau. \quad (4)$$

A southern player  $i$  of type  $\tau$  in locality  $j$  migrates to North if and only if her net gain from migration is positive.

# Civiness drain at high and low local civiness

## Proposition 1

Let  $\Delta\lambda \equiv \lambda(1) - \lambda(\bar{p}^S)$ . At the extremes of the distribution of local civiness:

- ① an *Unciviness drain* cannot occur.
- ② a *Civiness drain* can instead occur for a plausible range of values of the cost of migration. This range is:
  - ①  $0 < h < 1$  for a *Civiness drain* at  $P_j^S = 0$ .
  - ②  $\Delta\lambda - 1 < h < \Delta\lambda$  for a *Civiness drain* at  $P_j^S = 1$ .

## The two conditions for a civiness drain at $p_j^S \approx 0$

Migration must cost less than the loss of a Civic player from being free-rided by everyone else in her community of origin.

$$h < 1, \quad (5)$$

Migration must be costly for the Uncivic to stay.

$$h > 0. \quad (6)$$

## The two conditions for a civiness drain at $p_j^S \approx 1$

The productivity advantage in the North must be sufficiently high to make any Civic player willing to migrate even if all other players in her community of origin are Civic.

$$\Delta\lambda > h, \tag{7}$$

When all other players in the community of origin are Civic, the gain of an Uncivic from migrating (and subsequently switching from free riding to contributing) is smaller than the cost

$$\Delta\lambda - 1 < h, \tag{8}$$

## At intermediate values of local civicness

As a general tendency, in the absence of risk aversion, the Civic should migrate and the Uncivic should stay because:

- both types expect the same payoff in the North,
- but differ in the South, where the Uncivic free ride the Civic.

However not all players are risk neutral.

### Proposition 2

*Under the conditions that produce a Civicness drain at the extremes of the support of local Civicness, along the support:*

- ① *some risk averse Civic will stay*
  - *U-shaped Civic pattern of migration as a function of  $p_j^S$*
- ② *some risk-seeking Uncivic will migrate*
  - *Hump-shaped Uncivic pattern of migration as a function of  $p_j^S$*



## Unciviness drain and risk attitudes

Is it possible that the migration patterns of the two types intersect

- U-shaped for the Civic
- Hump-shaped for the Uncivic

producing an unciviness drain at intermediate values of local civiness?

Yes, if the risk attitudes of the two types differ sufficiently.

### Proposition 3

*Under the conditions that produce a Civiness drain at the extremes of the support of local Civiness:*

- ① *An Unciviness drain at intermediate values can occur only if the Civic are sufficiently more risk averse than the Uncivic.*
- ② *Otherwise, a Civiness drain occurs at all values of local civiness.*

# Summary of model predictions

- 1 A civiness drain is likely at high and low levels of local civiness, while an unciviness drain is certainly impossible at these levels
- 2 If a civiness drain occurs at the extremes, the migration probability as a function of local civiness should be:
  - U-shaped for the Civic
  - Hump-shaped for the Uncivic
- 3 The two patterns may intersect generating an unciviness drain at intermediate values of local civiness
- 4 If the two patterns intersect, the Uncivic must be more risk-seeking than the Civic

## Experimental design: locations ► ret-theory

A lab-in-the-field experiment.

11 high schools in Calabria (South)

- conducted during April-May 2015
- 671 students in their last high-school year
- 33 classes in total

12 high schools in Emilia-Romagna (North)

- conducted during April-May 2016
- 394 students in their last high-school year
- 23 classes in total

# Experimental design: why Calabria?

Calabria was chosen because:

1. its cities have among the lowest social capital in Italy
2. it is ranked 2nd on net out-migration (%) among Italian regions (Colucci & Gallo 2015)
3. student out-migration is the highest among southern regions: 36% according to ISTAT
  - In our data 33% left Calabria for the center-north (93% to study)

# Experimental design: why Emilia-Romagna?

Emilia-Romagna was chosen because:

1. its cities have among the highest social capital in Italy
2. it is ranked 1st on net in-migration (%) among Italian regions (Colucci & Gallo 2015)
3. Students rarely leave Emilia-Romagna after graduation

# Experimental design: choice of population

Reasons for choosing high school students:

1. They are at their first chance of deciding to migrate
  - hence our evidence is about how initial conditions of local civicness may shape migration decisions
2. Well-identified local community: the classroom
  - we can construct a civicness measure for this community
3. Many southern students indeed migrate, hence there are many informative observations

# Experimental design: stages

The experiment consisted of two stages.

- 1 Was run in the classrooms by RAs and contained
  - the civicness measurement task: die-roll
  - control tasks
- 2 Was run in the fall after graduation to check *actual migration*

The formal purpose of the research (as communicated to schools) was to study labor and education choices of school graduates

# Experimental design: control tasks

Control tasks: a checklist of other determinants of migration

- to replicate known results (sanity check)
- to see them as controls in our regressions

Controls include also;

- Personal: Gender, risk preferences, time preferences, ability
  - the time preference was checked in an incentivized task
  - risk prefs. and ability, elicited with a non-incentivized questionnaire
- Family: parental education, income and wealth,
- Class: type of high-school, class size, urban area, av. class ability
- Fraction of migrating peers by civicness type
- Identity of helper in class



# The measurement of civicness

How to measure civicness?

Civicness (e.g. paying taxes) is about rules prescribing that

- 1) one should not free-ride
- 2) one should not cheat and/or lie

Which experimental task one could use to measure civicness?

# Two options to measure civickness

## Option 1: Die-roll task

- Pro: established link between dishonesty in this task and prevalence of rule violations like tax evasion or free-riding on public transports.
- Cons: does not capture the free-riding aspect (no social dimension)

## Option 2: Public Goods Game

- Pro: an established measure of willingness to contribute to society
- Cons:
  - does not capture (dis)honesty
  - sensitive to context – one may be willing to contribute a lot to one's corrupt friends (Mafia) but not to the state

# Our (innovative) version of the die-roll task

We mix the die-roll task with features of a public good game

- Subjects were asked to participate in the die-roll task
- but were told that payoffs for the task would be deducted from the common pool
  - printer paper to the school

# Individual and local civicness in our die-roll task

The die-roll task was binary

- Reporting 6 yielded 10 euros
- Reporting any other number yielded no payoff

Enables us to classify students as either Civic or Uncivic

- Somebody reporting a number between 1 and 5 is surely civic
- Somebody reporting 6 is potentially uncivic

Allows us to measure also local civicness:

- the fraction of students in class not reporting a 6

# General conditions of the experimental setting

Anonymity was maintained

- We used partitions
- The die was rolled inside a cup
- They rolled it 7 times, of which the last one is the one to report
- Payment in sealed envelopes to ID numbers – no name identification

Decreased peer effects

- Students were seated randomly
- Students were not allowed to talk to each other during the experiment

They were paid by petrol gift cards

## Follow-up stage

Implemented in the fall after graduation (December 2015 and 2016, respectively for Calabria and Emilia-Romagna)

Students were contacted by e-mail or by phone and asked about

- their current location
- whether they were studying
- where they were seeing themselves living in 10 years

We also elicited their beliefs about civicness in both regions

This follow-up took 5-10 minutes of their time

If they could not be reached their parents were contacted

## Observation of migration decisions

We present data for 648 southern and 353 northern subjects with non-missing migration status post high-school

- 23 students from Calabria (3.4%) and 41 from Emilia-Romagna (10.4%) could not be reached (nor could their parents)
- there is no correlation between missing migration data and civicness

This is the migration outcome that we can measure precisely and that we thus want to relate to individual and local civicness

- but we have information on other measures of migration
- we plan (and hope) to come back in five years to do a follow-up

# Migration measures for Calabria

Indicator of emigration	% of students answering yes	Correlation with observed real emigration to North	Observations
<b>Went to North in the fall after graduation</b>	0.33	<b>1</b>	648
Intend to go to North in the fall after graduation	0.46	<b>0.53</b>	648
Calabria is not the ideal place where to live	0.83	<b>0.17</b>	648
Unlikely that in 10 years I live in Calabria	0.59	<b>0.23</b>	596



# Migration measures for Emilia Romagna

Measure of migration	Share of students	Correlation with observed migration out of region	Observations
<b>Left the region in the fall after graduation</b>	16%	<b>1</b>	353
Intend to leave the region the fall after graduation	17%	<b>0.44</b>	353
Emilia-Romagna is not the ideal place where to live	51%	<b>0.19</b>	353
Unlikely that in 10 years I live in Emilia-Romagna	35%	<b>0.25</b>	348

# The North–South civicness gap

## Finding 1

*The Civic are more frequent in the North than in the South.*

## Finding 2

- *The supports of the distributions of civicness across localities in Calabria and in Emilia Romagna overlap*
- *the (log) variance of local civicness is higher in the southern region.*

## Individual and local civiness in Calabria and Emilia-Romagna

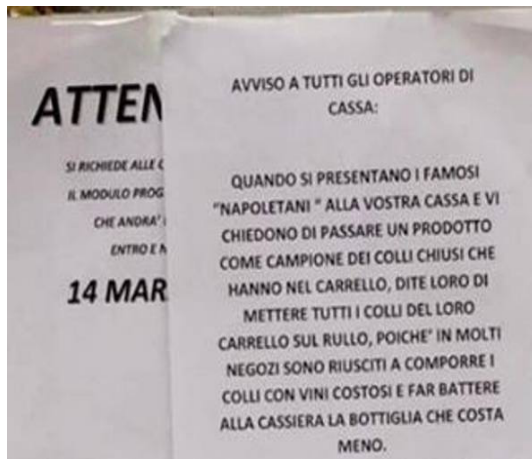
Participants from →	Calabria	Emilia-Romagna
Fraction of Civic students	0.49	0.71
Distribution of local civiness		
Minimum	0.06	0.52
5 <sup>th</sup> percentile	0.30	0.54
Mean	0.50	0.73
Median	0.48	0.70
95 <sup>th</sup> percentile	0.75	0.92
Maximum	0.82	0.93
Coef. of Var. between classes	0.32	0.17
Log variance between classes	0.21	0.03
Students	671	394
Classes	33	23
Schools	11	12

# Beliefs about relative honesty

We elicited beliefs about the relative honesty of people in Calabria and Emilia-Romagna using two variants of the “lost wallet question”

- **1st order belief:** students were asked to imagine
  - they had lost their wallet and
  - to guess if the probability that their wallet would be returned in a city of Calabria was lower, equal or higher than in a city of Emilia-Romagna
- **2nd order belief:**
  - participants from Calabria were asked what they thought would be the answer to the same question of a person born in Emilia-Romagna and
  - participants from Emilia-Romagna had to guess what a person from Calabria would have answered

# Beliefs about being accepted in the North



## Assumption 7

*A migrant from South to North assigns probability  $p_j^S$  to the event of being allowed to play in the destination locality.*

# Belief about being accepted in the North

## Finding 3

*There is a positive correlation between civicness in a southern locality and the second order belief of subjects in that locality on what North thinks of southern civicness.*

## Beliefs about the relative civicness of North versus South ← r-NS

Likelihood wallet is returned	Question 1: First order belief of students from:		Question 2: Second order belief of students from:	
	Emilia-Romagna	Calabria	Emilia-Romagna	Calabria
Much less in Calabria	15 (9%)	20 (9%)	5 (3%)	73 (31%)
Less in Calabria	32 (19%)	50 (21%)	33 (19%)	82 (35%)
Similar in the two places	116 (68%)	134 (57%)	91 (53%)	48 (21%)
More in Calabria	4 (2%)	20 (9%)	28 (16%)	20 (9%)
Much more in Calabria	3 (2%)	10 (4%)	13 (8%)	11 (5%)
Total	170 (100%)	234 (100%)	170 (100%)	234 (100%)

## Relation between second order belief and local civicness ◀ ret-NS

	2 <sup>nd</sup> order belief of a student	2 <sup>nd</sup> order belief of a Civic student	2 <sup>nd</sup> order belief of an Uncivic student
Local civicness with controls	0.976* (0.538)	1.074* (0.574)	0.858 (0.986)
Observations	234	124	110



# Civicness and uncivicness drain from South to North

## Finding 4

- *A statistically and quantitatively significant civicness drain takes place at high and low local civicness, while*
- *when local civicness is intermediate the Uncivic are more likely to emigrate than the Civic, generating a statistically significant uncivicness drain.*

## Odds ratios of migration to North for Civic vs. Uncivic

[◀ main-res](#)

	ALL classes	Low local civicness $p_j^S \leq 0.4$	Medium local civicness $0.4 < p_j^S \leq 0.58$	High local civicness $0.58 < p_j^S$
Odds ratio	0.99	1.16	0.70	1.17
Observations	648	223	220	205

$$O^S = \frac{\frac{\mathbb{P}(M_{i,j}^{S,c} = 1)}{1 - \mathbb{P}(M_{i,j}^{S,c} = 1)}}{\frac{\mathbb{P}(M_{i,j}^{S,u} = 1)}{1 - \mathbb{P}(M_{i,j}^{S,u} = 1)}}$$

## Logit model of the probability of migration

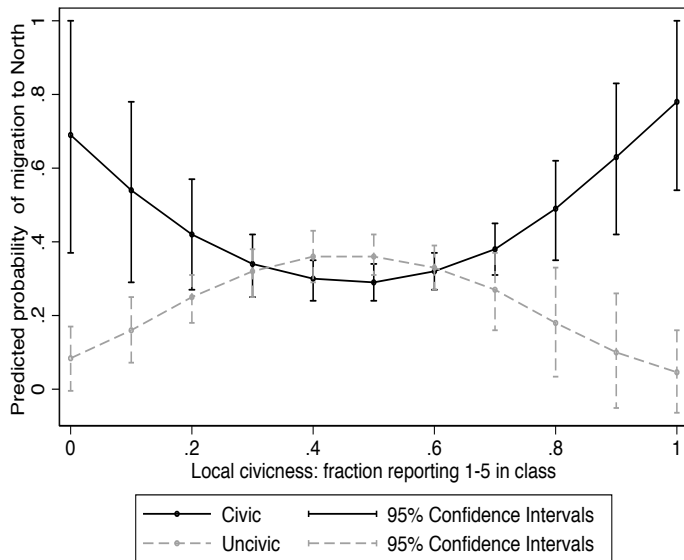
[← main-res](#)

$$\mathbb{P}(M_{i,j}^{S,\tau} = 1) = \Lambda(\alpha + \beta\psi(p_j^S) + \gamma Z_{i,j}) = \frac{e^{\alpha + \beta\psi(p_j^S) + \gamma Z_{i,j}}}{1 + e^{\alpha + \beta\psi(p_j^S) + \gamma Z_{i,j}}}$$

$\psi(p_j^S)$  is a quadratic polynomial in local civicness

$Z_{i,j}$  is a set of control variables

## Migration patterns of the Civic and the Uncivic



# One sided tests for a civickness or an uncivickness drain

[← main-res](#)

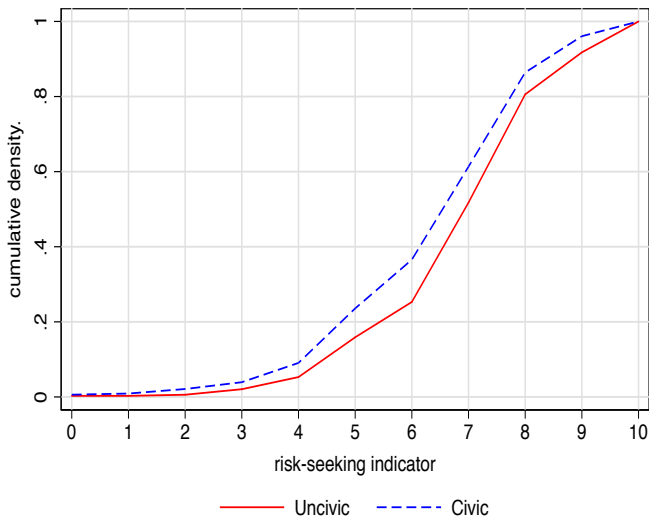
Local civickness	p-value for $H_0 : O^S \leq 1$	Odds ratio $O^S$	p-value for $H_0 : O^S \geq 1$
0	<b>0.0002</b>	<b>24.27</b>	0.9998
0.1	<b>0.0021</b>	<b>6.16</b>	0.9979
0.2	<b>0.0209</b>	<b>2.17</b>	0.9791
0.3	0.3584	1.09	0.6416
0.4	0.9272	0.76	0.0728
0.5	0.9747	<b>0.73</b>	<b>0.0253</b>
0.6	0.6547	0.96	0.3453
0.7	0.0434	1.66	0.9566
0.8	<b>0.0015</b>	<b>4.38</b>	0.9985
0.9	<b>0.0000</b>	<b>15.32</b>	1.0000
1	<b>0.0000</b>	<b>73.53</b>	1.0000
Observations	648		

# Risk attitudes of Civic and Uncivic

## Finding 5

*The Uncivic are significantly more risk seeking than Civic.*

## Uncivic risk-seeking stochastically dominates (p-v. = 0.0142)



## Summary of results

Civiness drain from South at low and high values of local civiness.

We know from the model that

- if a civiness drain occurs at the extremes of local civiness and
- if subjects are not all risk neutral,
- the Civic should be less likely to emigrate in the middle
- the opposite should hold for the Uncivic

We find evidence of these patterns for the two types of students

The two profiles of migration probability intersect generating a significant unciviness drain in the middle.

Such result implies, according to the model, that the Uncivic should be more risk seeking than the Civic and this is indeed our final finding.



## Conclusions

[◀ main-res](#)

Throughout the world, substantial heterogeneity of local civicness across nearby areas

Specifically true in the South of Italy

Our findings are a first step towards the construction of a novel explanation of this heterogeneity

Initial conditions of local civicness affect migration in a way that may have generated a civicness drain in some places and not in others

Current heterogeneity may be the outcome of the heterogeneous mix of Civic and Uncivic migrants previously leaving each area

## Control variables: Calabria

[← ret-controls](#)

Variable	Obs.	Mean	St. Dev.	Min	Max
<i>Calabria</i>					
Female	671	.57	.49	0	1
Intellectual ability	671	4.7	1.7	0	9
Risk Aversion	671	3.0	1.7	0	10
Discount rate	671	15.6	8.23	0	30
Trust for other	671	.08	.27	0	1
High family income	671	.24	.43	0	1
Low family income	671	.09	.29	0	1
Years of average parental education	671	13.47	3.1	5	18
Urban area	671	.46	.50	0	1
Classical high school	671	.22	.42	0	1
Class size	671	21.18	4.0	11	28
Average class ability	671	4.8	.39	4.1	5.5
Missing real migration information	671	.03	.18	0	1

## Control variables: Emilia-Romagna

[◀ ret-controls](#)

Variable	Obs.	Mean	St. Dev.	Min	Max
<i>Emilia-Romagna</i>					
Female	394	.56	.50	0	1
Intellectual ability	394	6.00	1.77	0	9
Risk aversion	394	3.25	1.75	0	9
Discount rate	394	11.2	7.20	0	30
Trust for others	394	.21	.40	0	1
High family income	394	.29	.45	0	1
Low family income	394	.11	.31	0	1
Years of average parental education	394	13.8	2.88	5	18
Urban area	394	.38	.49	0	1
Class Size	394	18.2	3.85	7	23
Attend liceo classico	394	.26	.44	0	1
Average class ability	394	6.00	.66	3.77	7.09
Missing real migration information	394	.10	.31	0	1

## How controls affect the migration decision (648 students)

Variable	Coefficient	Standard Error
Female	-.007	.039
Ability	-.011	.011
Risk aversion	-.011	.011
Discount rate	-.004	.002
Trust for other	.090	.066
High family income	.182	.045
Low family income	.021	.063
Years of parental education	.021	.007
Urban area	-.245	.045
Class size	-.002	.005
Classical high school	.087	.057
Average class ability	.14	.047
Peer civic migrant	.208	.093
Peer uncivic migrant	.481	.122
Research assistant 1	.019	.047
Research assistant 2	-.046	.047