

## Online Appendix

to

# ORGANIZED CRIME AND BUSINESS SUBSIDIES: WHERE DOES THE MONEY GO?

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### Additional Evidence and Results

In this Appendix, we provide additional evidence in support of our estimation strategy, as well as some additional results.

#### 1. Rainfall in the 19<sup>th</sup> century

This section provides further evidence of the role of rainfall shocks in the 19<sup>th</sup> century in affecting mafia presence today. The variable *Rainfall* presented in the paper is measured as the rainfall deviation from the long run mean in the period preceding Italian Unification (1850-1861). Table A1 provides evidence that using different time periods yields similar results. Columns 1 and 2 of Table A1 reports the estimation results when the variable *Rainfall* is measured as the rainfall deviation from the long run mean in the period 1841-1860. Current mafia presence affects both the probability of obtaining public funds and the amount of public funds at the 1% significance level and the magnitude of the effect is similar to the one presented in the paper (Table 5). Changing the time span to the period 1846-1860 (columns 3 and 4) or to the period 1856-1860 (columns 5 and 6) yields consistent results.

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**Table A1: Rainfall shocks in the 19<sup>th</sup> century**

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Second Stage</b>						
	<i>Public funds dummy</i>	<i>Amount - Public funds</i>	<i>Public funds dummy</i>	<i>Amount - Public funds</i>	<i>Public funds dummy</i>	<i>Amount - Public funds</i>
	1841-1860		1846-1860		1856-1860	
Mafia	0.636*** (0.034)	1.554*** (0.543)	0.638*** (0.033)	1.596*** (0.545)	0.641*** (0.032)	1.523*** (0.409)
Employment Rate	2.325*** (0.719)	4.800*** (1.773)	2.316*** (0.714)	4.848*** (1.790)	2.299*** (0.734)	4.763*** (1.645)
Industry Share	0.900*** (0.286)	2.522*** (0.901)	0.887*** (0.285)	2.516*** (0.907)	0.862*** (0.300)	2.527*** (0.891)
Pop. Density	0.015 (0.022)	-0.285*** (0.0771)	0.013 (0.022)	-0.287*** (0.0775)	0.008 (0.024)	-0.283*** (0.0692)
Social Capital	0.872 (0.759)	-2.089 (1.637)	0.863 (0.755)	-2.099 (1.646)	0.886 (0.766)	-2.081 (1.607)
Entrepreneurship	0.371 (0.547)	0.828 (1.422)	0.362 (0.543)	0.815 (1.428)	0.273 (0.561)	0.838 (1.466)
Human capital	0.797* (0.474)	1.097 (0.821)	0.779* (0.471)	1.077 (0.826)	0.758* (0.452)	1.112 (0.833)
<b>First stage</b>						
<i>Mafia</i>						
Rainfalls	2.614*** (0.651)	2.700*** (0.858)	3.299*** (0.782)	3.332*** (1.068)	3.318 (2.932)	0.824 (3.605)
Slope	-0.003*** (0.001)	-0.002** (0.001)	-0.003*** (0.001)	-0.002** (0.001)	-0.002*** (0.001)	-0.002** (0.001)
Altitude	-0.257*** (0.052)	-0.307*** (0.056)	-0.255*** (0.052)	-0.308*** (0.056)	-0.245*** (0.069)	-0.329*** (0.048)
Overid P-value	0.2473	0.5065	0.2507	0.5203	0.0965	0.3026
First stage <i>F</i>	-	27.22	-	25.71	-	16.25
Time span	1841-1860		1846-1860		1856-1860	
Observations	389	389	389	389	389	389

Standard errors are clustered at rainfall cell level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 2. Do funding applications depend on altitude?

In this section, we question whether altitude might have a direct role in determining the number of applications submitted in each municipality. We may envisage a scenario in which differences in altitude across municipalities may have shaped firms' profitability over the centuries and therefore might affect the demand for subsidies today. Were this mechanism in place, altitude would not be a valid instrument. In order to test for this scenario, we construct the indicator variable *Mountain*, which takes the value 1 if the municipality is classified as mountainous by Istat, and zero otherwise. Out of the 390 municipalities, 97 are classified as mountainous. Table A2 presents the correlation between the number of applications per firm at municipality level, measured on the basis of the Ministry of Industry database, and altitude. We regress the number of applications per firm on the dummy *Mountain* (column 1) and a set of controls (columns 2 and 3). The coefficient on the dummy *Mountain* is never statistically significant, thus supporting the validity of altitude as an instrument.

**Table A2: Do funding applications depend on altitude?**

	(1)	(2)	(3)
	<i>Number of applications per firm</i>		
Mountain - dummy	-0.000726 (0.00273)	0.000244 (0.00275)	-0.00187 (0.00281)
Employment rate		0.0433* (0.0252)	0.0633** (0.0301)
Industry share		0.0415*** (0.0132)	0.0372*** (0.0132)
Population density			-0.00623*** (0.00206)
Social capital			-0.0800** (0.0386)
Entrepreneurship			0.0364 (0.0246)
Human Capital			0.0107 (0.0226)
Observations	390	390	389
R-squared	0.000	0.036	0.073

Standard errors are clustered at rainfall cell level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### **3. Normalising funds to the number of firms**

So far, we have measured the extensive margin as the amount of funds per employee at municipality level. This section provides evidence that similar results hold when the dependent variable is normalised to the number of firms instead. We collect information on the number of firms and average size at municipality level from Istat. Table A3 presents the results of a specification similar to the one of equation 2, where the dependent variable is the amount of public funding normalised to the number of firms. Again, the mafia has a positive and statistically significant impact on the amount of funding (column 1), also when controlling for the average firm size (column 2). We conclude that the results are robust, even when controlling for heterogeneity in the entrepreneurial environment across municipalities.

**Table A3: Normalising funds to the number of firms**

	(1)	(2)
	<b>Second Stage</b>	
	<i>Amount of funds per firm</i>	
Mafia	4.900*** (1.738)	3.831** (1.906)
Employment rate	12.98*** (4.642)	12.28** (5.231)
Industry share	15.18*** (5.758)	10.68*** (3.345)
Population density	-0.908*** (0.229)	-0.787*** (0.226)
Social capital	-6.296 (5.042)	-8.763* (5.122)
Entrepreneurship	-3.913 (5.963)	1.708 (3.841)
Human Capital	5.283** (2.482)	1.108 (3.547)
Firm size		1.139* (0.634)
	<b>First stage</b>	
	<i>Mafia</i>	
Rainfalls	4.582*** (1.482)	4.526*** (1.508)
Slope	-0.002** (0.001)	-0.002** (0.001)
Altitude	-0.283*** (0.062)	-0.271*** (0.058)
Overid P-value	0.5762	0.4610
First stage <i>F</i>	24.342	26.400
Observations	389	389

Standard errors are clustered at rainfall cell level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1