Appendix

Italy's Bilateral Agreements
with Sub-Saharan Countries:
A Quantitative Exploration of Intensity,
Timing and Drivers

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Variable description

Variable name	Description	Source
Numcum	Cumulate number of agreements	ATRIO, Archivio TRattati Internazionali Online
numcomplete	Number of agreements	ATRIO
eco	Number of economic agreements	ATRIO
noneco	Number of non-economic agreements	ATRIO
lngdp	Logarithm of Gross Domestic Product (in 2015 constant US $)	World Bank World development indicators
lngdppc	Logarithm of Gross Domestic Product per capita	World Bank World development indicators
tradegdp	Percentage of trade (import+export) on GDP African partner	Formal Bilateral Influence Capacity (FBIC) dataset on IMF data
cap	State capacity	Hanson & Sigman (2020) dataset on Harvard dataverse
edi	Electoral democracy index	Varieties of democracy project
leaders	Number of leadership changes since 1960	The Africa Leadership Change (ALC) dataset
embyears	Number of years with Italian embassy since 1960	Rete Diplomatica MAECI
legacyit	Dummy Italian colonial heritage	
indyears	Number of years of independence	
lnkm	Logarithm of kilometers between Rome and the country's capital city.	
tradegdpita	Percentage of trade (import+export) on Italian GDP	FBIC dataset on IMF data
lnpop	Logarithm of population	World Bank World development indicators
lnimm	Logarithm of number of immigrants since 2002	Istat
lnfor	Logarithm of average foreign population since 2003	Istat
christian	Dummy variable equal to 1 if the plurality of the population is Christian	Johnson & Crossing – Religions by continent, 2023

Descriptive statistics

In the article we use panel data with country-year observations. Below, we report some aggregated information at the country level, with each observation averaging the corresponding variable along the whole observation period.

In the tables we report the descriptive statistics relative to the the main independent variables used throughout the article (Table A.1), and to the main dependent variables connected to the two parts of the empirical analysis – the number of agreements and the time before reaching a fixed number of pacts (Table A.2).

Table A.1 Main independent variables

	Obs	Mean	Std. Dev.	Min	Max
Ln GDP	49	22.57	1.41	19.27	26.11
Ln GDP per capita	49	7.03	0.85	5.80	9.11
Trade on GDP pct	49	1.97	1.92	0.34	10.45
Ln population	49	15.38	1.56	11.19	18.51
State capacity	47	-0.42	0.5	-1.33	0.77
Electoral democracy index	49	0.29	0.12	0.08	0.67
Number of leaders	49	7.35	4.5	1	19
Years with embassy since 1960	49	20.78	27.27	0.00	63
Years of independence since 1960	49	56.49	10.35	12	63
Ln distance from Rome in km	49	8.51	0.26	8.08	9.01

Table A.2 Main dependent variables

	Obs	Mean	Std. Dev.	Min	Max
Number of agreements	49	14.10	15.25	0	73
Economic agreements	49	0.86	1.00	0	4
Non-economic agreements	49	13.24	14.83	0	71
Cumulative number of pages	49	122.37	210.55	0	1115
Years to first agreement	49	16.11	17.04	0	63.04
Years to third agreement	49	29.04	19.46	0	63.04
Years to fifth agreement	49	38.70	18.87	0	63.04
Years to agreements on 3 topics	49	36.65	21.16	0	63.04

Robustness replications

The following table replicates Table 1 using the net annual number of agreements instead of the cumulative value.

Table A.3. Factors explaining the annual number of agreements (Panel regression - population-averaged model)

	(1) Economic	(2) Economic Institutional	(3) Economic Institutional Political	(4) Full model
Ln GDP (2015 US$)	0.38***	0.30***	0.40***	0.42***
	(0.11)	(0.11)	(0.11)	(0.12)
Ln GDP pc	-0.58***	-0.66***	-0.78***	-0.75***
	(0.20)	(0.23)	(0.23)	(0.27)
Trade on GDP pct	0.04**	0.04**	0.05**	0.05**
	(0.02)	(0.02)	(0.02)	(0.03)
State capacity		0.44**	0.36*	0.35*
		(0.22)	(0.21)	(0.20)
Electoral democracy		0.16	0.61	0.99*
		(0.46)	(0.54)	(0.52)
Number of leaders			-0.09*	-0.06
			(0.05)	(0.05)
Years with embassy			0.00	0.00
			(0.01)	(0.01)
Italian legacy				0.81***
				(0.23)
Years of independence				-0.01
				(0.01)
Ln Km distance from Rome				-0.27
				(0.67)
Constant	-6.05***	-3.63	-5.15***	-3.58
	(2.10)	(2.27)	(1.81)	(5.69)
Obs./countries	2408/49	2336/47	2281/47	2281/47

*Robust standard errors in parentheses; *** $p<0.01$, ** $p<0.05$, * $p<0.10$*
Note: Time-varying independent variables are lagged one year.

In Table A.4 we propose a series of models checking the robustness of the economic variables presented in Table 1. More specifically, the regression models first substitutes the size of the population to the size of the economy; and then adds the former variable to the latter.

Table A.4 Some robustness tests with additional control variables

	(1) Substituting Population to GDP	(2) Adding Population to GDP
Ln GDP (2015 US$)		1.96***
		(0.42)
Ln GDP pc	-0.23***	-2.19***
	(0.07)	(0.41)
Trade on GDP	-0.01	-0.01
	(0.02)	(0.02)
State capacity	0.09	0.09
	(0.09)	(0.09)
Electoral democracy	0.36**	0.35**
	(0.15)	(0.15)
Number of leaders	-0.06***	-0.06***
	(0.02)	(0.02)
Years with embassy	0.00	0.00
	(0.00)	(0.00)
Italian legacy	-0.02	-0.01
	(0.40)	(0.40)
Years of independence	0.04***	0.04***
	(0.01)	(0.01)
Ln Km	-2.15	-2.11
	(1.38)	(1.39)
Ln Population	0.43**	-1.54***
	(0.19)	(0.52)
Trade on GDP Italy		
Constant	14.24	14.03
	(11.87)	(11.93)
Obs./countries	2281/47	2281/47

*Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10*
Note: Time-varying independent variables are lagged one year

Table A.5 Replicating the full model distinguishing for the type of agreement

	(1) Economic	(2) Non-Economic	(3) Economic	(4) Non-Economic
Ln GDP (2015 US$)	0.27*	0.51***		
	(0.16)	(0.19)		
Ln GDP pc	-0.38**	-0.73***	-0.11	-0.23***
	(0.16)	(0.20)	(0.09)	(0.07)
Trade on GDP	0.01	-0.01	0.01	-0.01
	(0.01)	(0.02)	(0.01)	(0.02)
State capacity	0.32***	0.04	0.33***	0.05
	(0.11)	(0.10)	(0.11)	(0.10)
Electoral democracy	-0.14	0.45***	-0.13	0.45***
	(0.20)	(0.16)	(0.21)	(0.16)
Number of leaders	-0.05**	-0.05**	-0.05*	-0.05**
	(0.03)	(0.02)	(0.03)	(0.02)
Years with embassy	0.01***	0.01	0.01***	0.01
	(0.00)	(0.00)	(0.00)	(0.00)
Italian legacy	0.42	-0.16	0.42	-0.15
	(0.71)	(0.44)	(0.70)	(0.44)
Years of independence	0.02***	0.03***	0.03***	0.03***
	(0.00)	(0.01)	(0.00)	(0.01)
Ln Km	1.11	-2.45*	1.08	-2.45*
	(0.77)	(1.45)	(0.77)	(1.44)
Ln Population			0.25	0.50***
			(0.16)	(0.20)
Constant	-13.58*	15.52	-13.12*	15.55
	(7.23)	(12.74)	(7.23)	(12.68)
Obs./countries	2281/47	2281/47	2281/47	2281/47

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10
Note: Time-varying independent variables are lagged one year

Models in Table A.5 offer a different perspective by limiting the analysis to economic agreements (Models 1 and 3) and non-economic agreements (Models 2 and 4), respectively. Interestingly, when replicating the full model presented in Table 1, the results of the economic factors commented in the article hold for both economic and non-economic agreements: the size of the economy remains positively and systematically associated with the intensity of the diplomatic activity, while the coefficient for GDP per capita is consistently negative and Trade is non significantly associated. In one model for economic agreements and another for non-economic agreements, this coefficient is also statistically significant. These findings confirm that economic variables remain relevant regardless of the type of agreement.

Table A.6 reports the results of a negative binomial regression in which the dependent count variable is the annual cumulative number of pages of the agreements, as a proxy for its extension and complexity. The results are substantially similar to those presented in the article, if not for the variable capturing the Italian legacy, that is positive and significant as initially expected. Italy signs broader and more complex agreements with its former colonies.

Table A.6 Factors explaining the cumulative number of pages of the agreements

	(1) Economic	(2) Economic Institutional	(3) Economic Institutional Political	(4) Full model
Ln GDP (2015 US$)	1.22***	1.31***	0.89***	0.24*
	(0.10)	(0.08)	(0.14)	(0.14)
Ln GDP pc	-0.88***	-1.54***	-1.05***	-0.55***
	(0.34)	(0.19)	(0.18)	(0.20)
Trade on GDP pct	0.05***	0.01	0.01	-0.00
	(0.02)	(0.01)	(0.01)	(0.01)
State capacity		0.41***	0.16	0.23*
		(0.10)	(0.11)	(0.14)
Electoral democracy		1.10***	0.65***	0.26
		(0.26)	(0.21)	(0.25)
Number of leaders			0.13***	-0.03
			(0.02)	(0.03)
Years with embassy			0.02***	0.00
			(0.00)	(0.01)
Italian legacy				0.73**
				(0.31)
Years of independence				0.05***
				(0.01)
Ln Km distance from Rome				0.00
				(0.64)
Constant	-16.76***	-14.56***	-9.40***	0.47
	(1.40)	(1.80)	(2.75)	(6.20)
Obs./countries	2408/49	2336/47	2281/47	2281/47

*Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10*
Note: Time-varying independent variables are lagged one year.

Cross-country analyses

In Table A.7 we replicate the same regression model of Table 1 in the article, but using cross-country regressions instead of a time-series cross-section (TSCS) approach. The results perfectly mirror those commented in the article.

Table A.7 Negative binomial regressions on the total count of agreements using with average country values for the independent variables

	(1) Economic	(2) Economic Institutional	(3) Economic Institutional Political	(4) Full model
Ln GDP (2015 US$)	0.52***	0.52***	0.24**	0.22**
	(0.07)	(0.08)	(0.10)	(0.10)
Ln GDP pc	-0.49***	-0.56***	-0.48***	-0.44**
	(0.17)	(0.20)	(0.15)	(0.18)
Trade on GDP	0.19	0.19	0.15	0.14
	(0.12)	(0.11)	(0.10)	(0.12)
State capacity		0.23	0.12	0.19
		(0.36)	(0.36)	(0.33)
Electoral democracy		0.25	0.07	-0.27
		(1.45)	(1.27)	(1.30)
Number of leaders			-0.00	-0.02
			(0.03)	(0.03)
Years with embassy			0.02***	0.02***
			(0.01)	(0.01)
Italian legacy				0.07
				(0.47)
Years of independence				0.02
				(0.02)
Ln Km distance from Rome				-0.31
				(0.47)
Constant	-6.28***	-5.68***	-0.38	1.71
	(1.65)	(2.17)	(2.10)	(4.09)
Observations	49	47	47	47

*Robust Standard errors are in parentheses; *** p<0.01, ** p<0.05, * p<0.10*

We further performed a series of controls with variables that were not suited for a TSCS analysis by adding to the previous full cross-country model:

1) the sum of migrants since 2002

2) the average of foreign population since 2003

3) a dummy taking the value of 1 if the plurality of the population is Christian.

Table A.8 Some robustness tests with additional control variables

	(1) With number of migrants	(1) With foreign population	(3) With religion
Ln GDP (2015 US$)	0.16	0.11	0.25***
	(0.12)	(0.13)	(0.09)
Ln GDP pc	-0.39**	-0.37**	-0.44***
	(0.18)	(0.17)	(0.17)
Trade on GDP	0.12	0.10	0.12
	(0.11)	(0.11)	(0.09)
State capacity	0.27	0.33	0.28
	(0.31)	(0.30)	(0.31)
Electoral democracy	-1.10	-1.76	-1.05
	(1.56)	(1.64)	(1.33)
Number of leaders	-0.02	-0.01	-0.02
	(0.03)	(0.03)	(0.03)
Years with embassy	0.02***	0.02***	0.02***
	(0.01)	(0.00)	(0.01)
Italian legacy	-0.07	-0.15	0.08
	(0.48)	(0.47)	(0.42)
Years of independence	0.02	0.02	0.02
	(0.02)	(0.02)	(0.02)
Ln Km	-0.01	0.15	0.08
	(0.61)	(0.63)	(0.48)
Ln immigrants	0.09		
	(0.09)		
Ln foreign population		0.13	
		(0.09)	
Christian plurality			-0.49*
			(0.25)
Constant	-0.10	-0.73	-1.64
	(4.82)	(4.76)	(4.21)
Observations	47	47	47

Robust Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10

All the new control variables turn out to be either statistically non insignificant or with the wrong sign.

Finally, figure A.1 reports the survival estimates for the specific colonial legacy connected to the four models presented in Table 2.
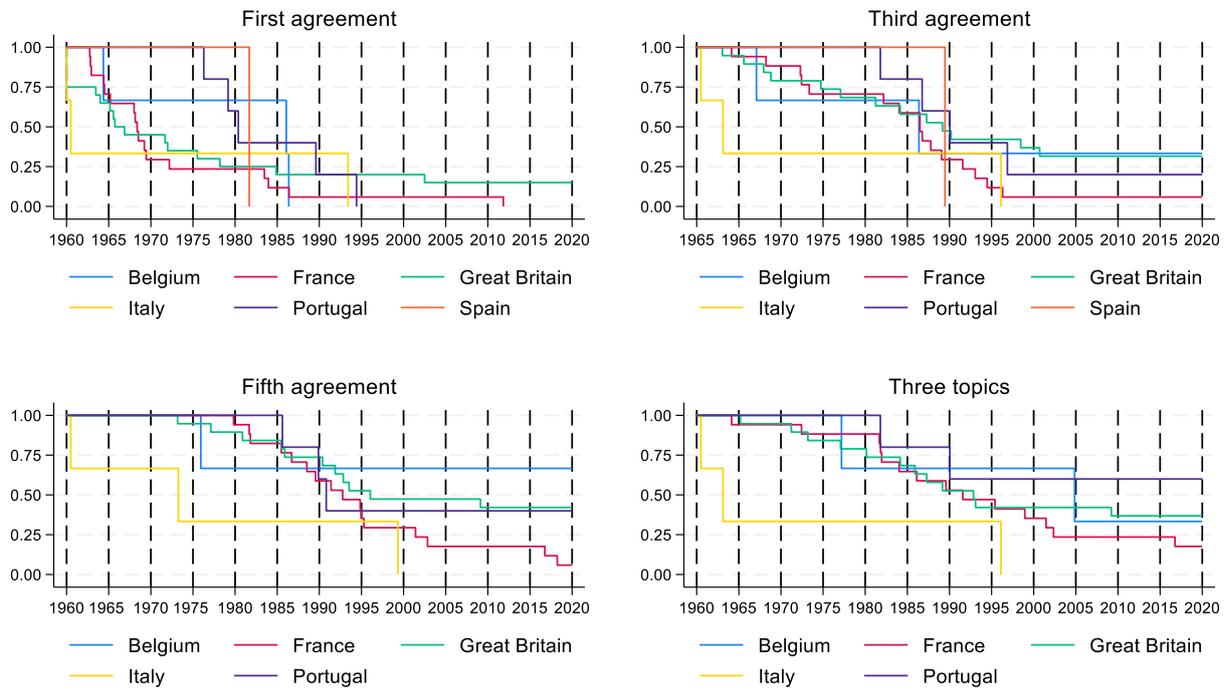

Figure A.1 Kaplan-Meier survival estimates according to past-colonial legacy