"Now She Is Martha, then She Is Mary": The Influence of Beguinages on Gender Norms

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The Beguine Movement

- Characteristics of the movement:
  - Organized, self-supporting, semi-religious communities of
  - **unmarried or widowed** women of
  - **various** socio-economic origins.
- About the beguines:
  - Followed a religious life.
  - Did **charitable work**: nurses, caring for the needies, etc.
  - Did **remunerated work**: teachers, labourers, traders.
- Geographical scope: mostly in Low Countries and neighbouring regions in France and Germany.
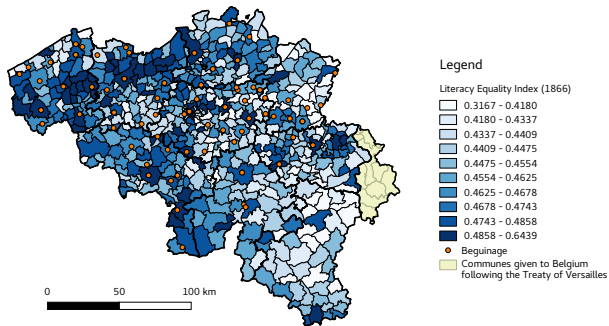- Temporal scope: beguinning of the **13th century** onwards.

The Beguine Movement

- The beguines:
  - **were independent** of any male authority.
  - **did not** take vows, allowing them to
    - **keep and accumulate** property.
    - **leave the beguinage** and wed.

- Beguinages:
  - were **not officially recognized** by any religious institution.
  - were **tolerated** by the Church and secular institutions.
  - were integrated and **part of the urban economy**.

Geographical Distribution

Beguinages in Belgium and measure of literacy equality

Legend

Literacy Equality Index (1866)

- ☐ 0.3167 - 0.4180
- ☐ 0.4180 - 0.4337
- ☐ 0.4337 - 0.4409
- ☐ 0.4409 - 0.4475
- ☐ 0.4475 - 0.4554
- ☐ 0.4554 - 0.4625
- ☐ 0.4625 - 0.4678
- ☐ 0.4678 - 0.4743
- ☐ 0.4743 - 0.4858
- ☐ 0.4858 - 0.6439
- ○ Beguinage
- ☐ Communes given to Belgium following the Treaty of Versailles

Research Question

- We investigate the **long-run persistence of gender norms.**
- We examine the legacy of the beguine movement on culture taking into consideration other confounding factors.
- We also consider the potential endogeneity of beguinage location.

Research Question

Do we observe a more gender-equal culture today in regions characterized by the presence of beguinages in the Middle Age?

Preview of the Results

- Beguinage presence contributes to reduce the wage gap in agriculture between men and women.
- In municipalities with a beguinage, literacy rate between men and women were more similar.
- Our results are strengthened when we use an instrumental variable approach correcting for the potential endogeneity of beguinage location.
- Results are in general robust to a a host of additional covariates and sub-samples.

Related Literature

- Historical literature:
  - Pye (2014),
  - Simons (2001),
  - de Moor (2013).

- Gender-norms and the long lasting effect of institutions:
  - Albanesi and Olivetti (2016),
  - Alesina et al. (2013),
  - Andersen et al. (2015),
  - Fernandez (2007),
  - Giuliano (2017),
  - Michalopoulos et al. (2016),
  - Valencia Caicedo (2015),

Data and Methods

- Exploit **cross-section** variation in beguinage location to identify their effects on gender-related outcomes.
- One country: Belgium.
- Census data:
  - Earliest possible data: censuses of 1846 and 1866.
  - **Not** individual data. Information is **aggregated** at the municipal level.
- We focus on two measures of gender equality:
  - Wage gap in agriculture.
  - Female literacy **compared** to male literacy.

Data and Methods

- $y_{i,r} = \alpha + \beta beguinage_{i,r} + X_{i,r}\gamma + \kappa_r + \epsilon_{i,r}c$
- RHS - We use three indicators to account for beguinages:
  - Dummy variable - whether a city ever had a beguinage,
  - Exposure time to beguinage presence,
  - Five-level indicator combining presence and time.
- LHS - Outcomes of interest (measured in 1846 or 1866):
  - Wage gap in agriculture: $\frac{\text{Wage of women}}{\text{Wage of men}}$
  - Literacy gap: $\frac{\text{Number of literate women}}{\text{Number of literate men}}$
  - Female literacy share: $\frac{\text{Number of literate women}}{\text{Number of literate women}+\text{Number of literate men}}$
  - Female literacy index: $\frac{\text{Share of literate women}}{\text{Share of literate men}}$

Summary Statistics

Variable	Mean	Sd	Max	Min
Beg (0/1)	0.0274	0.163	1	0
Total time with a beg. (centuries)	0.142	1.097	22.44	0
No beguinage	0.973	0.163	1	0
1 beguinage, < 200 years	0.00783	0.0882	1	0
1 beguinage, > 200 years	0.0125	0.111	1	0
> 1 beguinage, > 200 years	0.00313	0.0559	1	0
> 3 beguinages, > 200 years	0.00392	0.0625	1	0
Total men, 1846 (thousands)	0.858	2.198	59.50	0.0190
Total women, 1846 (thousands)	0.862	2.361	64.37	0.0170
Total men, 1866 (thousands)	0.949	2.622	74.17	0.00900
Total women, 1866 (thousands)	0.944	2.909	83.74	0.00900
Population density, canton level	1962.0	4003.3	176825.3	245.9
Lit. equality index, 1866	0.822	0.137	1.808	0.236
Female lit. share, 1866	0.448	0.0424	0.644	0.191
Female lit. index, 1866	0.856	0.122	1.601	0.256
Wage equality index in agri., 1846	0.641	0.142	1.222	0.178
Fem. monasteries	0.0313	0.189	2	0
Masc. monasteries	0.0259	0.175	3	0
Other monasteries	0.0149	0.121	1	0
Distance to Leuven (km)	68.59	32.91	165.8	0.377
Min. distance to beguinage (km)	16.27	18.16	122.0	0
Min. distance to big town (km)	17.97	19.24	113.6	0
Potential caloric yield before 1550	2142.1	72.76	2305.8	1908.8
Potential caloric yield after 1550	8894.7	310.7	9780.8	8292.4
Distance to closest river (km)	9.082	8.757	52.40	0.00230
Steam engines per 1000 people	0.0715	0.689	12.49	0

OLS Results: Log-wage gap in agriculture, 1846

| | Logarithm female-to-male wages in agriculture, 1846 | | | | | |
	(1)		(2)		(3)	
Beg (0/1)	0.0413**	(2.17)				
No beg.			Ref.			
1 beg., < 200 years			0.0310	(1.10)		
1 beg., > 200 years			0.0440	(1.58)		
> 1 beg., > 200 years			0.0310	(0.65)		
> 3 beg., > 200 years			0.110**	(2.02)		
Total time with a beg. (centuries)					0.00889**	(2.10)
Big town	-0.00401	(-0.39)	-0.00337	(-0.32)	-0.00233	(-0.23)
Potential caloric yield, pre-1550	0.000564*	(1.92)	0.000566*	(1.92)	0.000570*	(1.94)
Potential caloric yield, post-1550	-0.0000165	(-0.28)	-0.0000167	(-0.28)	-0.0000181	(-0.31)
Distance to big municipality (km)	0.00225**	(2.59)	0.00226**	(2.60)	0.00224**	(2.58)
Distance to river (km)	0.00417***	(3.80)	0.00419***	(3.82)	0.00419***	(3.82)
Population density, canton level	0.386	(0.14)	0.441	(0.17)	0.519	(0.20)
Steam engines per 1000 people	0.00584	(1.04)	0.00557	(1.00)	0.00581	(1.05)
Arrondissement FE	Yes		Yes		Yes	
Migration and Demography	Yes		Yes		Yes	
Use of land	Yes		Yes		Yes	
Observations	2507		2507		2507	

t statistics in parentheses. Standard errors clustered at the canton level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Demography: total men and women, literacy rate by gender and female nuptiality rate.

OLS Results: Female literacy

			Literacy Equality Index, 1866			
	(1)		(2)		(3)	
Beg (0/1)	0.0789***	(4.68)				
No beg.			Ref.			
1 beg., < 200 years			0.0458**	(2.14)		
1 beg., > 200 years			0.112***	(4.50)		
> 1 beg., > 200 years			4 0.102***	(2.84)		
> 3 beg., > 200 years			-0.121	(-1.54)		
Total time with a beg. (centuries)					0.00784**	(2.50)
Big town	0.0462***	(7.18)	0.0458***	(7.39)	0.0486***	(7.39)
Population density, canton level	-0.00000157	(-1.22)	-0.00000161	(-1.26)	-0.00000174	(-1.36)
Steam engines per 1000 people	0.00406	(1.02)	0.00519	(1.28)	0.00408	(1.02)
Wage equality index in agri., 1846	-0.0534**	(-2.34)	-0.0536**	(-2.33)	-0.0540**	(-2.36)
Fem. monas.	0.0342**	(2.13)	0.0455***	(2.62)	0.0402**	(2.37)
Masc. monas.	-0.0143	(-0.94)	-0.0113	(-0.77)	-0.0141	(-0.91)
Other monas.	-0.0161	(-0.83)	-0.0217	(-1.15)	-0.0130	(-0.66)
Schools per 10000 people, 1851	0.00904*	(1.94)	0.00907*	(1.95)	0.00914*	(1.97)
Distance to Leuven (km)	0.000552***	(2.90)	0.000557***	(2.94)	0.000554***	(2.92)
Regional FE	Yes		Yes		Yes	
Migration and Demography	Yes		Yes		Yes	
Other controls	Yes		Yes		Yes	
Observations	2507		2507		2507	

t statistics in parentheses. Standard errors clustered at the canton level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Demography: total men and women, literacy rate by gender and female nuptiality rate.

Other controls: share of electors as % of the population. % of professors, % farmers and % industrialists among voters (provincial level).

OLS Results: Female literacy

	(1)		Female Literacy Share, 1866 (2)		(3)	
Beg (0/1)	0.0220***	(5.25)				
No beg.			Ref.			
1 beg., < 200 years			0.0148**	(2.38)		
1 beg., > 200 years			0.0300***	(5.61)		
> 1 beg., > 200 years			0.0275***	(2.86)		
> 3 beg., > 200 years			-0.0325	(-1.51)		
Total time with a beg. (centuries)					0.00213**	(2.53)
Big town	0.0143***	(7.64)	0.0142***	(7.80)	0.0150***	(7.87)
Pop. density (×1000), canton level	-0.000528	(-1.35)	-0.000543	(-1.39)	-0.000578	(-1.47)
Steam engines per 1000 people	0.000991	(0.89)	0.00130	(1.16)	0.000999	(0.89)
Wage equality index in agri., 1846	-0.0162**	(-2.26)	-0.0162**	(-2.25)	-0.0163**	(-2.28)
Fem. monas.	0.00834**	(2.09)	0.0114***	(2.70)	0.0100**	(2.41)
Masc. monas.	-0.00278	(-0.64)	-0.00195	(-0.47)	-0.00271	(-0.61)
Other monas.	-0.00396	(-0.69)	-0.00542	(-0.96)	-0.00307	(-0.53)
Schools per 10000 people, 1851	0.00304**	(1.98)	0.00304**	(1.98)	0.00306**	(2.00)
Distance to Leuven (km)	0.000169***	(2.85)	0.000171***	(2.88)	0.000170***	(2.87)
Regional FE	Yes		Yes		Yes	
Migration and Demography	Yes		Yes		Yes	
Other controls	Yes		Yes		Yes	
Observations	2507		2507		2507	

t statistics in parentheses. Standard errors clustered at the canton level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Demography: total men and women, literacy rate by gender and female nuptiality rate.

Other controls: share of electors as % of the population. % of professors, % farmers and % industrialists among voters (provincial level).

OLS Results: Female literacy

			Female Literacy Index, 1866				
	(1)		(2)			(3)	
Beg (0/1)	0.0266**	(2.20)					
No beg.			Ref.				
1 beg., < 200 years			0.0141	(0.88)			
1 beg., > 200 years			0.0378**	(2.21)			
> 1 beg., > 200 years			0.0405	(1.25)			
> 3 beg., > 200 years			-0.0417	(-1.26)			
Total time with a beg. (centuries)						0.00360	(1.46)
Big town	0.0185***	(3.25)	0.0184***	(3.26)		0.0193***	(3.43)
Population density, canton level	-0.00000132	(-0.92)	-0.00000134	(-0.93)		-0.00000134	(-0.93)
Steam engines per 1000 people	-0.00245	(-0.76)	-0.00205	(-0.64)		-0.00245	(-0.76)
Wage equality index in agri., 1846	-0.0176	(-0.79)	-0.0177	(-0.79)		-0.0179	(-0.80)
Fem. monas.	0.0312**	(2.20)	0.0348**	(2.32)		0.0322**	(2.23)
Masc. monas.	-0.0149	(-1.47)	-0.0137	(-1.39)		-0.0149	(-1.47)
Other monas.	-0.00381	(-0.24)	-0.00579	(-0.36)		-0.00321	(-0.20)
Schools per 10000 people, 1851	0.00512	(1.12)	0.00513	(1.13)		0.00515	(1.13)
Distance to Leuven (km)	0.000397**	(2.10)	0.000399**	(2.12)		0.000398**	(2.11)
Regional FE	Yes		Yes			Yes	
Migration and Demography	Yes		Yes			Yes	
Other controls	Yes		Yes			Yes	
Observations	2507		2507			2507	

t statistics in parentheses. Standard errors clustered at the canton level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Demography: total men and women, literacy rate by gender and female nuptiality rate.

Other controls: share of electors as % of the population. % of professors, % farmers and % industrialists among voters (provincial level).

Endogeneity

- Potential endogeneity of beguinage location.
- Selection of towns that were more favourable to women.
- Instrumental variable approach:
  - Binary variable indicating whether a town obtained a "municipal charter" before the 13th century.

Municipal Charters

- Municipal charters typically:
  - decentralized decision-making, grating municipal authorities power,
  - conveyed benefits for citizens: partial exemption from war and a municipal judicial system,
  - allowed towns to organize a market and establish gilds, and
  - signal prosperous towns: lords required a town to pay a large sum of money before obtaining the charter.

- Considering the secular occupations of beguines (education, spinning, trade), towns with a municipal charter are likely to attract them as they can be more economically dynamic (e.g. presence of a market).

Endogeneity

- Exclusion restriction:
  - Historical evidence suggests that the acquisition of a charter was not introducing any institution promoting gender equality.
  - Towns granted a municipal charter could have grown larger and, thus, education would have been a more productive investment.
    - We compute the growth rate of towns between 1437 and 1866 (only for a subsample).
    - We cannot reject equal growth rate for those with and without a municipal charter.

  - Our outcome of interest is **not literacy per se** but the comparison between male and female outcomes.

Endogeneity

- We also compare literacy outcomes among municipalities with and without a municipal charter for the subsample of municipalities with a beguinage

	Lit. equality index, 1866		Lit. share, 1866		Lit. index, 1866	
Charter granted before 13th century	-0.0113	(-0.33)	-0.00142	(-0.17)	-0.00617	(-0.27)
Big town	0.0218	(0.34)	0.00910	(0.57)	-0.0116	(-0.24)
Total men, 1866 (thousands)	-0.0203	(-0.66)	-0.00749	(-0.99)	0.0283	(1.45)
Total women, 1866 (thousands)	0.0199	(0.72)	0.00714	(1.05)	-0.0251	(-1.43)
Wage equality index in agri., 1846	-0.00408	(-0.03)	0.00634	(0.19)	0.0426	(0.42)
Fem. monas.	0.0384*	(1.95)	0.00871*	(1.87)	0.0216	(1.56)
Masc. monas.	-0.0542**	(-2.29)	-0.0119**	(-2.09)	-0.0427***	(-3.07)
Other monas.	-0.0174	(-0.32)	-0.00258	(-0.19)	-0.00387	(-0.10)
Schools per 10000 people, 1851	-0.0121	(-1.00)	-0.00193	(-0.63)	-0.000530	(-0.06)
Distance to Leuven (Km)	0.000555	(0.91)	0.0000812	(0.62)	-0.0000867	(-0.20)
Regional FE	Yes		Yes		Yes	
Observations	68		68		68	

t statistics in parentheses. $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Regression results for all three indexes of relative female literacy rates.
Regressions only consider municipalities that ever had a beguinage. Our main variable of interest it whether the same municipality also enjoyed a municipal charter before the 13th century. Standard errors are **not** clustered.

	Logarithm of female-to-male wages in agriculture, 1846			
	(1)		(2)	
Beg. (0/1)	0.0736***	(2.65)		
Total time with a beg. (centuries)			0.0130*	(1.74)
Total men, 1846 (thousands)	0.0190	(0.82)	0.0248	(1.05)
Total women, 1846 (thousands)	-0.0181	(-0.84)	-0.0271	(-1.18)
Big town	-0.00406	(-0.40)	-0.00219	(-0.22)
Share of literate men in 1866	-0.101	(-1.11)	-0.104	(-1.15)
Share of literate women in 1866	0.0608	(0.77)	0.0610	(0.78)
Share of women ever married, 1846	0.0449	(0.29)	0.0431	(0.28)
Potential caloric yield pre-1550	0.000567*	(1.95)	0.000575**	(1.98)
Potential caloric yield post-1550	-0.0000161	(-0.28)	-0.0000188	(-0.32)
Distance to closest big municipality (km)	0.00226***	(2.63)	0.00225***	(2.63)
Distance to closest river (km)	0.00418***	(3.86)	0.00423***	(3.90)
Population density, canton level	0.000000474	(0.18)	0.000000695	(0.27)
Steam engines per 1000 people	0.00596	(1.08)	0.00585	(1.07)
Arrondissement FE	Yes		Yes	
Migration	Yes		Yes	
Use of land	Yes		Yes	
Observations	2507		2507	

t statistics in parentheses. Standard errors clustered at the canton level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In Column 1, Probit first-stage including controls measured during the 13th-16th centuries. Column 2, standard 2SLS.

IV Results: Female Literacy

	Literacy equality, 1866		Literacy share, 1866		Literacy index, 1866	
Beg. (0/1)	0.0841***		0.0242***		0.0293	
	(3.56)		(2.97)		(1.17)	
Total time with a beg. (centuries)		0.0199***		0.00579***		0.00813
		(2.95)		(3.05)		(1.60)
Big town	0.0462***	0.0483***	0.0143***	0.0149***	0.0185***	0.0192***
	(7.21)	(7.26)	(7.67)	(7.77)	(3.27)	(3.41)
Steam engines per 1000 people	0.00406	0.00394	0.000994	0.000956	-0.00244	-0.00250
	(1.02)	(1.02)	(0.89)	(0.88)	(-0.76)	(-0.79)
Wage equality index in agri., 1846	-0.0535**	-0.0547**	-0.0162**	-0.0165**	-0.0177	-0.0182
	(-2.35)	(-2.39)	(-2.27)	(-2.31)	(-0.79)	(-0.81)
Fem. monas.	0.0331*	0.0277	0.00784	0.00624	0.0306*	0.0275*
	(1.81)	(1.34)	(1.64)	(1.20)	(1.87)	(1.67)
Masc. monas.	-0.0146	-0.0158	-0.00291	-0.00322	-0.0150	-0.0156
	(-0.97)	(-1.05)	(-0.68)	(-0.76)	(-1.49)	(-1.55)
Other monas.	-0.0166	-0.0186	-0.00420	-0.00478	-0.00410	-0.00534
	(-0.86)	(-0.94)	(-0.73)	(-0.82)	(-0.25)	(-0.33)
Schools per 10000 people, 1851	0.00904*	0.00907**	0.00304**	0.00304**	0.00512	0.00512
	(1.95)	(1.96)	(1.99)	(2.00)	(1.13)	(1.13)
Distance to Leuven (km)	0.000552***	0.000564***	0.000169***	0.000173***	0.000397**	0.000402**
	(2.91)	(2.97)	(2.86)	(2.93)	(2.11)	(2.14)
Region FE	Yes		Yes		Yes	
Migration and Demography	Yes		Yes		Yes	
Other	Yes		Yes		Yes	
Observations	2507		2507		2507	

t statistics in parentheses. Robust standard errors clustered at the canton level. $* \ p < 0.1$, $** \ p < 0.05$, $*** \ p < 0.01$

Other controls: % electors. % of professors, % farmers and % industriaists among voters (provincial level). Population density (canton level)

Concluding Remarks

- We provide new evidence on the long-lasting effects institutions have on gender-related outcomes.
- We find that towns that held a beguine community, were more favourable towards women:
  - wage differentials across genders were smaller, and
  - literacy rates were more similar.
- We can derive a causal effect between the presence of beguine communities and improved female outcomes.
- Next steps:
  - Expand our data-set to cover the Netherlands and France, which also witnessed beguine communities.
  - Relate beguine presence with attitudes towards women in present time.

APPENDIX

Evolution of Beguinages
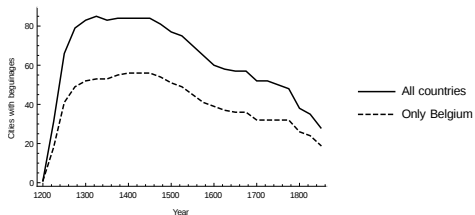
Total number of cities with at least one beguinage.
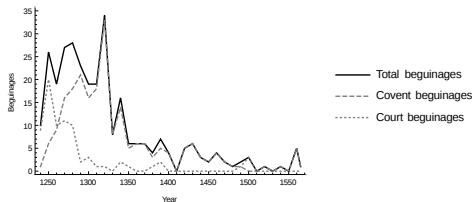
Number of new beguinages created per decade.

Source: *Simons (2010), p. 256*

Size of the Effects

Variable	Mean	Sd
Wage gap in agriculture, 1846	0.6411	0.1417
Beguinage (0/1), OLS	0.0413	
Beguinage (0/1), IV	0.0736	
Total time with beguinage (centuries), OLS	0.00889	
Total time with beguinage (centuries), IV	0.0130	
Literacy eq. index, 1866	0.8220	0.1365
Beguinage (0/1), OLS	0.0789	
Beguinage (0/1), IV	0.0841	
Total time with beguinage (centuries), OLS	0.00784	
Total time with beguinage (centuries), IV	0.0199	
Lit. women / total lit. pop	0.4489	0.042
Beguinage (0/1), OLS	0.0220	
Beguinage (0/1), IV	0.0242	
Total time with beguinage (centuries), OLS	0.00213	
Total time with beguinage (centuries), IV	0.00579	
Share lit. women / share lit. men	0.8559	0.1222
Beguinage (0/1), OLS	0.0266	
Beguinage (0/1), IV	0.0293	
Total time with beguinage (centuries), OLS	0.00360	
Total time with beguinage (centuries), IV	0.00813	

Robustness

- Sub-sample regressions:
    - Only towns 5Km, 10Km and 20Km away from a beguinage.
    - Removing municipalities with a population below 3000 from the sample.
    - Removing municipalities with an on-going beguinage at census time.
- Regressors:
    - Treat towns less than 5Km from a beguinage as if these had one. True beguinages (and large municipalities) dropped from regressions.
    - % of soil types (clayey, silty, sandy) around towns as regressor.

Robustness: Buffers around beguinages (1)

	Logarithm of female-to-male wage in agriculture, 1846					
	(1)		(2)		(3)	
Beg. (0/1)	0.0669***	(3.12)	0.0273	(1.42)	0.0353*	(1.89)
No beg.	Ref.		Ref.		Ref.	
1 beg., < 200 years	0.0565*	(1.74)	0.0259	(0.96)	0.0313	(1.15)
1 beg., > 200 years	0.0653**	(2.17)	0.0255	(0.87)	0.0357	(1.30)
> 1 beg., > 200 years	0.112**	(2.14)	0.0173	(0.36)	0.0196	(0.41)
> 3 beg., > 200 years	0.146***	(3.07)	0.0947*	(1.94)	0.0942**	(2.02)
Total time with a beg. (centuries)	1.320***	(3.30)	0.599	(1.54)	0.730*	
Observations	365		1097		2033	

t statistics in parentheses. Standard errors clustered at the canton level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Regressions include all previous controls

		(1)		(2)		(3)	
Fem. Eq. Index	Beg. (0/1)	0.0830***	(3.44)	0.0870***	(4.70)	0.0798***	(4.77)
	No beg.	Ref.		Ref.		Ref.	
	1 beg., <200 years	0.0678**	(2.33)	0.0578**	(2.21)	0.0554**	(2.33)
	1 beg., > 200 years	0.0947***	(3.05)	0.108***	(4.30)	0.102***	(4.24)
	> 1 beg., > 200 years	0.102	(1.62)	0.132***	(3.11)	0.112***	(2.90)
	> 3 beg., > 200 years	-0.0177	(-0.29)	-0.0758	(-1.14)	-0.0843	(-1.22)
	Total time with a beg. (centuries)	0.0113**	(2.48)	0.0126***	(3.68)	0.00947***	(3.02)
Fem. Lit. Share	Beg. (0/1)	0.0231***	(3.51)	0.0249***	(5.17)	0.0223***	(5.17)
	No beg.	Ref.		Ref.		Ref.	
	1 beg., < 200 years	0.0206**	(2.49)	0.0188**	(2.45)	0.0176**	(2.52)
	1 beg., > 200 years	0.0249***	(2.95)	0.0291***	(4.82)	0.0271***	(4.85)
	> 1 beg., > 200 years	0.0293*	(1.84)	0.0385***	(3.51)	0.0306***	(3.01)
	> 3 beg., > 200 years	-0.000617	(-0.04)	-0.0181	(-1.04)	-0.0215	(-1.17)
	Total time with a beg. (centuries)	0.00321***	(2.67)	0.00364***	(4.09)	0.00263***	(3.14)
Fem. Lit. Index	Beg. (0/1)	0.0198	(1.01)	0.0288**	(2.20)	0.0263**	(2.26)
	No beg.	Ref.		Ref.		Ref.	
	1 beg., ¡200 years	0.0303	(1.22)	0.0282	(1.36)	0.0260	(1.43)
	1 beg., > 200 years	0.0142	(0.59)	0.0293	(1.65)	0.0273	(1.62)
	> 1 beg., > 200 years	0.0266	(0.45)	0.0588	(1.46)	0.0462	(1.27)
	> 3 beg., > 200 years	-0.0368	(-0.82)	-0.0624	(-1.43)	-0.0326	(-0.96)
	Total time with a beg. (centuries)	0.00241	(0.59)	0.00445	(1.57)	0.00365	(1.47)
	Observations	365		1097		2033	

Female-to-male literacy, 1866

t statistics in parentheses, clustered at the canton level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Regressions include all previous controls.

Robustness: including male literacy rate

		Benchmark			Including male literacy rate		
		(1)	(2)	(3)	(4)	(5)	(6)
OLS	Beg (0/1)	0.0742***	0.0206***	0.0257*	0.0653***	0.0176***	0.0169
	No beg.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
	1 beg., < 200 years	0.0321*	0.0108**	0.00871	0.0298*	0.00998**	0.00647
	1 beg., > 200 years	0.114***	0.0305***	0.0400*	0.102***	0.0266***	0.0288
	> 1 beg., > 200 years	0.0964***	0.0254***	0.0409	0.0767**	0.0187**	0.0288
	> 3 beg., > 200 years	-0.123	-0.0339*	-0.0460	-0.136*	-0.0386**	-0.0595*
	Total time with a beg. (centuries)	0.00759*	0.00203*	0.00363	0.00541	0.00129	0.00150
IV	Beg (0/1)	0.0862***	0.0254***	0.0303	0.0740***	0.0211***	0.0177
	Total time with a beg. (centuries)	0.0199***	0.00582***	0.00818*	0.0181**	0.00521**	0.00640
Observations		2507	2507	2507	2507	2507	2507

1 and 4: Literacy equality index in 1866; 2 and 5: Literate women over total literate population; 3 and 6: Share lit. women / share lit. men

All regressions include regional fixed effects and control for relative size of the municipality, total population, distinguishing between men and women, the composition at the town level in terms of migrants, agricultural wage index, presence of monasteries, the number of schools per 10000 people and distance to Leuven.

IV: etregress for the endogenous binary variable "Beg (0/1)"; ivregress for the endogenous continuous variable "Total time with a beg".

Robustness: only big municipalities

		Full Sample			Only big municipalities		
		(1)	(2)	(3)	(4)	(5)	(6)
OLS	Beg (0/1)	0.0789***	0.0220***	0.0266**	0.0427**	0.0127***	-0.00766
	No beg.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
	1 beg., < 200 years	0.0458**	0.0148**	0.0141	0.0235	0.00718	-0.0134
	1 beg., > 200 years	0.112***	0.0300***	0.0378**	0.0486**	0.0142***	-0.00702
	> 1 beg., > 200 years	0.102***	0.0275***	0.0405	0.0700***	0.0198**	0.006
	> 3 beg., > 200 years	-0.121	-0.0325	-0.0417	0.00196	0.00527	-0.0194
	Total time with a beg. (centuries)	0.00784**	0.00213**	0.00360	0.00464	0.00141*	-0.000766
IV	Beg (0/1)	0.0841***	0.0242***	0.0293	0.0405	0.0120*	-0.0221
	Total time with a beg. (centuries)	0.0199***	0.00579***	0.00813	0.00921	0.00266	-0.00305
Observations		2507	2507	2507	311	311	311

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$
1 and 4: Lit. eq. index in 1866; 2 and 5: Literate women over total literate population; 3 and 6: Share lit. women / share lit. men
The criteria to consider a municipality a big town is based on total population in 1866 (approximately the 90th percentile).
All regressions include the same controls as our baseline specification.
Columns 1, 2 and 3: clustered standard errors at the canton level; Columns 4, 5 and 6: not clustered standard errors.