

# The Legacy of the Brethren of the Common Life

**Groningen Growth and Development Centre  
25<sup>th</sup> Anniversary Conference**

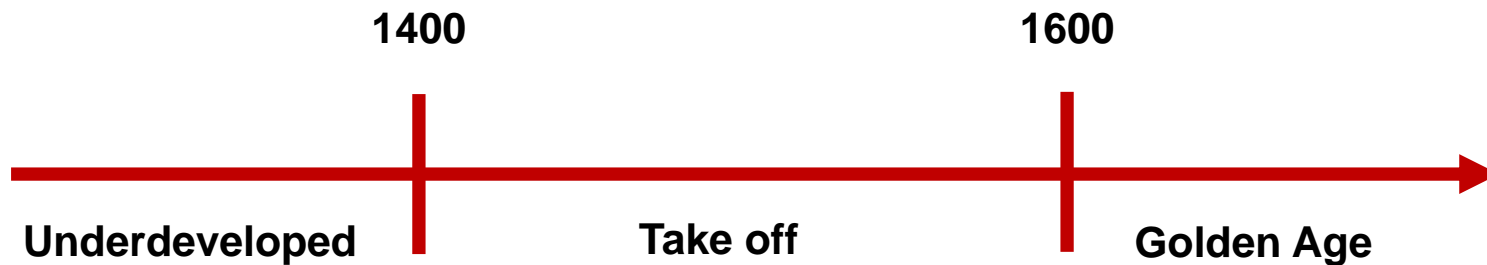
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## Early History of the Low Countries



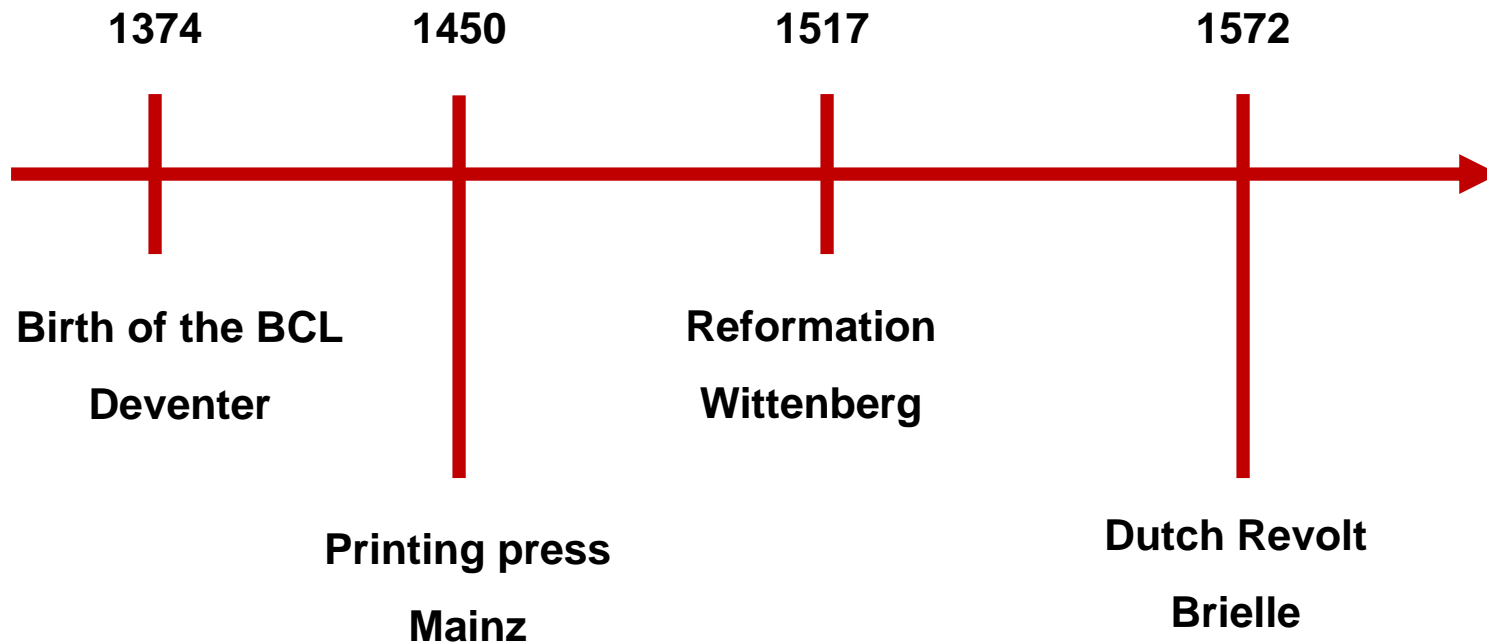
**Main question in this research:**

**What determined the take off that eventually led to the Golden Age?**

## Defining the Area of Interest



## The Late Medieval Period



## Background of the BCL

- Established by Geert Groote (1340-1384) in Deventer
- Motivation
  - Moral decline in the Roman Catholic Church
  - Useful application of family capital
- BCL is the first sign of Modern Devotion in Europe
  - Movement within Roman Catholic Church
  - Aim is to establish personal relationship with God
  - Religious character



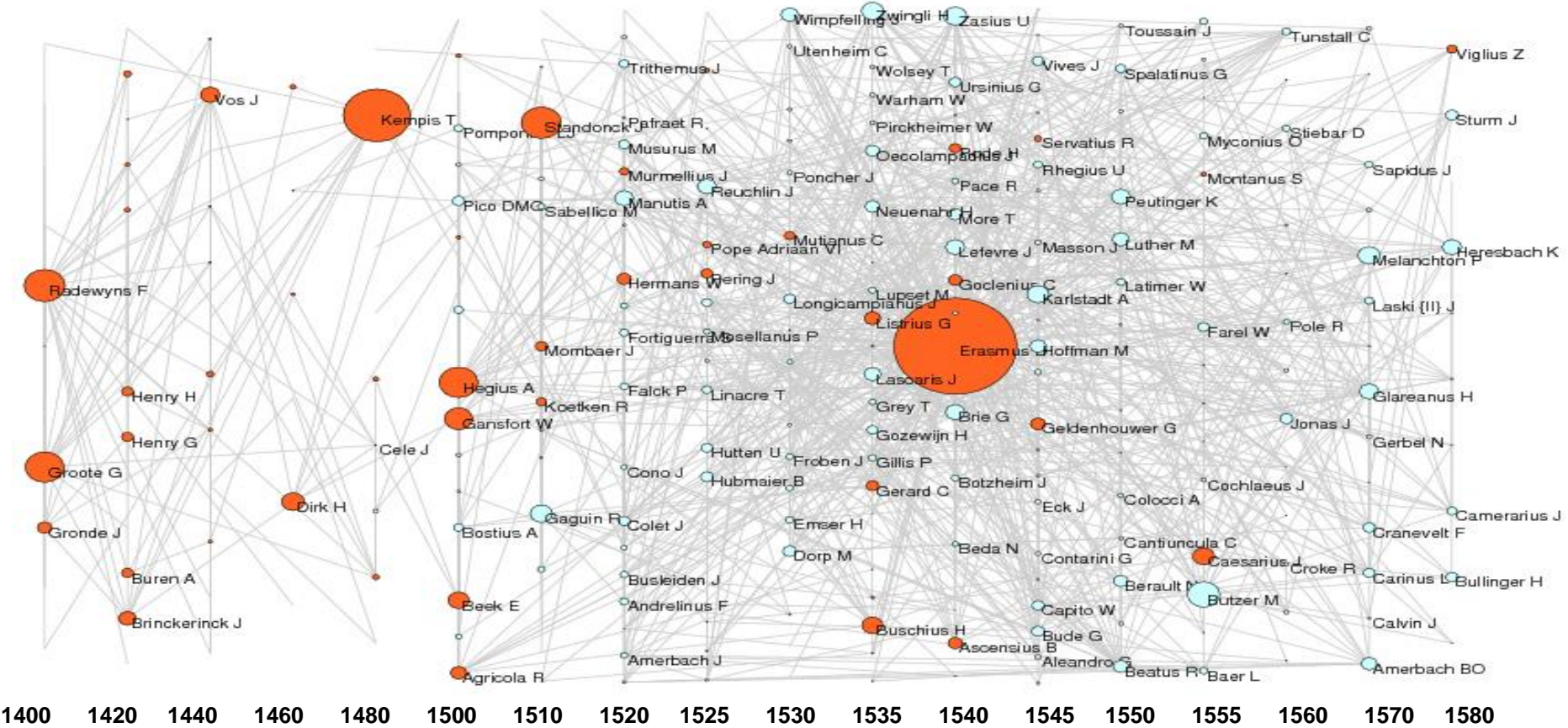
## Organisation of the BCL

- Organisation
  - No vows
  - Mixed life of religious and daily activities made the BCL influential in society
  - Manual labour consists of book production
- Stimulate human capital formation
  - Translation of bible
  - Focus on vernacular
  - Citizens learn how to read and write

## Summary of the mechanism

- The BCL operated in a turbulent period in history
- The BCL accumulated human capital among citizens without inducing animosity from the Roman Catholic Church or political rulers.
- The BCL built human capital by institutionalizing education, providing education for all and taking care of people.
- This human capital was key to the head start of the Netherlands.
- The literate workforce put pressure on the Habsburg rulers leading to economic and religious resentment and the Revolt in 1572.

# Network of people influenced/educated





# Diffusion of the BCL



## Empirical Challenges

- Mapping the diffusion of the BCL from 1380 onwards
- Measuring human capital formation
- Measuring early economic development

## Diffusion

- Population figures for 67 cities in 1400 (>1,000)



# Human capital

- Book production
- Printing press
  - Invented by Johannes Gutenberg around 1450 in Mainz
- Data: Incunabula Short Title Catalogue
  - Database of 15th-century European printing by the British Library
- Variable:
  - # of printed books produced <1500
  - $n = 67$

# Human Capital

- Literacy
- Data: Amsterdam marriage registers (1600-1625)
  - Bride and groom have to sign and state where they come from
    - Signature vs. X measures literacy
    - Place of former residence measures location
- Variable:
  - Share of signatures from location between 1600-1625
  - $n = 33$

## Economic Development

- City growth
- Data: Lourens and Lucassen (1995)
- Variable:
  - City population growth 1400-1560
  - Cities > 1,000 inhabitants
  - $n = 67$

## Empirical Strategy

- Establish a relationship between BCL and outcome variables
  - *BCL* is measured as a dummy variable
  - Several covariates  $X_i$
  - Outcome variables  $Y_i$

Equation: 
$$Y_i = a_0 + a_1 BCL + a_2 X_i + \varepsilon_i \quad (1)$$

- Causality
  - Distance to Deventer ( $DD_i$ ) serves as an instrument for the *BCL*
  - Identifying assumption:  $DD_i$  is uncorrelated with unobserved factors in (1)

First stage equation: 
$$BCL_i = b_0 + b_1 DD_i + b_2 X_i + \mu_i \quad (2)$$

## Impact BCL on Book Production, 1470-1500

|                   | Book share         | Book share         | Book share        | Book share         |
|-------------------|--------------------|--------------------|-------------------|--------------------|
|                   | OLS                | OLS                | OLS               | OLS                |
|                   | (1)                | (2)                | (3)               | (4)                |
| BCL               | 0.023**<br>(0.010) | 0.020**<br>(0.009) | 0.019*<br>(0.009) |                    |
| #BCL houses       |                    |                    |                   | 0.011**<br>(0.003) |
| Log pop 1400      |                    | 0.009*<br>(0.005)  | 0.006<br>(0.005)  | 0.002<br>(0.004)   |
| Sea dummy         | No                 | No                 | Yes               | Yes                |
| Roman trade route | No                 | No                 | Yes               | Yes                |
| River dummy       | No                 | No                 | Yes               | Yes                |
| Observations      | 66                 | 66                 | 66                | 66                 |



## Impact BCL on Book Production, 1470-1500

|                   | BCL       | Book share | BCL       | Book share | # houses  | Book share |
|-------------------|-----------|------------|-----------|------------|-----------|------------|
|                   | 1st stage | 2SLS       | 1st stage | 2SLS       | 1st stage | 2SLS       |
|                   | (1)       | (2)        | (3)       | (4)        | (5)       | (6)        |
| BCL               |           | 0.026*     |           | 0.024*     |           |            |
|                   |           | (0.015)    |           | (0.014)    |           |            |
| #BCL houses       |           |            |           |            |           | 0.007**    |
|                   |           |            |           |            |           | (0.003)    |
| Dist. Deventer    | -0.006**  |            | -0.008**  |            | -0.026**  |            |
|                   | (0.001)   |            | (0.001)   |            | (0.005)   |            |
| Log pop. 1400     |           |            | 0.322**   | 0.005      | 1.169**   | 0.004      |
|                   |           |            | (0.065)   | (0.005)    | (0.235)   | (0.004)    |
| Sea dummy         |           | No         |           | Yes        |           | Yes        |
| Roman trade route |           | No         |           | Yes        |           | Yes        |
| River dummy       |           | No         |           | Yes        |           | Yes        |
| Observations      |           | 66         |           | 66         |           | 66         |
| F-test instrument |           | 65.39      |           | 56.90      |           | 24.69      |

## Impact BCL on Male Literacy

|                   | Literacy | Literacy | Literacy | BCL      | Literacy | #houses  | Literacy |
|-------------------|----------|----------|----------|----------|----------|----------|----------|
|                   | OLS      | OLS      | OLS      | 1st st   | 2SLS     | 1st st   | 2SLS     |
|                   | (1)      | (2)      | (3)      | (4)      | (5)      | (6)      | (7)      |
| BCL               | 0.059*   | 0.054**  |          |          | 0.288**  |          |          |
|                   | (0.031)  | (0.025)  |          |          | (0.089)  |          |          |
| # BCL houses      |          |          | 0.017*** |          |          |          | 0.061**  |
|                   |          |          | (0.007)  |          |          |          | (0.023)  |
| Dist. Amsterdam   |          | 0.000    | -0.000   | -0.002   | 0.000    | 0.003    | -0.000   |
|                   |          | (0.000)  | (0.000)  | (0.002)  | (0.001)  | (0.007)  | (0.000)  |
| Log pop. 1400     |          | 0.006    | 0.002    | 0.216**  | -0.040   | 1.000**  | -0.039   |
|                   |          | (0.017)  | (0.018)  | (0.086)  | (0.045)  | (0.310)  | (0.030)  |
| Dist. Deventer    |          |          |          | -0.006** |          | -0.027** |          |
|                   |          |          |          | (0.002)  |          | (0.006)  |          |
| Observations      | 33       | 33       | 33       | 33       |          | 33       |          |
| F-test instrument |          |          |          | 9.92     |          | 16.79    |          |

## Impact BCL on City Growth, 1400-1560

|                   | Growth<br>1400-1560 | Growth<br>1400-1560 | Growth<br>1400-1560 | Growth<br>1400-1560 | Growth<br>1400-1560 |
|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                   | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 |
| BCL               | 0.381**<br>(0.124)  | 0.347**<br>(0.119)  | 0.327**<br>(0.097)  |                     |                     |
| #BCL houses       |                     |                     |                     | 0.071**<br>(0.027)  | 0.073**<br>(0.026)  |
| Log pop. 1400     | -0.122*<br>(0.069)  | -0.099<br>(0.077)   | -0.092<br>(0.068)   | -0.099<br>(0.077)   | -0.087<br>(0.068)   |
| Sea dummy         | No                  | Yes                 | Yes                 | Yes                 | Yes                 |
| Roman trade route | No                  | Yes                 | Yes                 | Yes                 | Yes                 |
| River dummy       | No                  | Yes                 | Yes                 | Yes                 | Yes                 |
| Observations      | 67                  | 67                  | 61                  | 67                  | 61                  |

## Impact BCL on City Growth, 1400-1560

|                   | BCL<br>1st stage    | Growth<br>1400-1560 | BCL<br>1st stage    | Growth<br>1400-<br>1560 | # houses<br>1st stage | Growth<br>1400-1560 |
|-------------------|---------------------|---------------------|---------------------|-------------------------|-----------------------|---------------------|
|                   | (1)                 | (2)                 | (3)                 | (4)                     | (5)                   | (6)                 |
| BCL               |                     | 0.561*<br>(0.311)   |                     | 0.553*<br>(0.284)       |                       |                     |
| # BCL houses      |                     |                     |                     |                         |                       | 0.150*<br>(0.081)   |
| Dist. Deventer    | -0.006**<br>(0.001) |                     | -0.006**<br>(0.001) |                         | -0.022**<br>(0.004)   |                     |
| Log pop. 1400     | 0.273**<br>(0.063)  | -0.160*<br>(0.097)  | 0.296**<br>(0.070)  | -0.135<br>(0.094)       | 1.064**<br>(0.225)    | -0.131<br>(0.094)   |
| Sea dummy         |                     | No                  |                     | Yes                     |                       | Yes                 |
| Roman trade route |                     | No                  |                     | Yes                     |                       | Yes                 |
| River dummy       |                     | No                  |                     | Yes                     |                       | Yes                 |
| Observations      |                     | 67                  |                     | 67                      |                       | 67                  |
| F-test instrument |                     | 31.47               |                     | 25.84                   |                       | 33.87               |

## Impact BCL on City Growth, 1400-1560

|                   | BCL<br>1st stage    | Growth<br>1400-1560 | # houses<br>1st stage | Growth<br>1400-1560 |
|-------------------|---------------------|---------------------|-----------------------|---------------------|
|                   | (1)                 | (2)                 | (3)                   | (4)                 |
| BCL               |                     | 0.661**<br>(0.283)  |                       |                     |
| # BCL houses      |                     |                     |                       | 0.164**<br>(0.078)  |
| Dist. Deventer    | -0.006**<br>(0.001) |                     | -0.022**<br>(0.004)   |                     |
| Log pop. 1400     | 0.279**<br>(0.073)  | -0.144<br>(0.092)   | 1.064**<br>(0.225)    | -0.142<br>(0.087)   |
| Sea dummy         |                     | Yes                 |                       | Yes                 |
| Roman trade route |                     | Yes                 |                       | Yes                 |
| River dummy       |                     | Yes                 |                       | Yes                 |
| Observations      |                     | 61                  |                       | 61                  |
| F-test instrument |                     | 21.08               |                       | 31.67               |

## Robustness

- Presence of school before 1400 is unrelated to the BCL
  - no significant effect of probit estimates of the presence of schools prior to 1400 on the establishment of BCL activity
- Hanseatic trade has no impact on city growth 1400-1560
  - no significant coefficient for a Hanseatic trade dummy
  - BCL dummy remains similar
- City growth before 1400 is unrelated to the BCL
  - no significant effect of BCL dummy on city growth before 1400

## Robustness

- No impact of other religious movements
  - No first stages on literacy, growth and Revolt for four dominant religious orders (Tertiarians, Franciscans, Beghards, Cistercians)
  - Strong first stage for Modern Devotion orders
- Extending the sample to Germany and Belgium does not change the results
  - Estimates for city growth remain similar
- Placebo test of IV identification confirms importance of Deventer
  - distance to Utrecht (largest urban centre around 1400)
  - distance to Haarlem (early adopter of printing press)
  - distance to Amsterdam (economic centre from about 1560 onwards)
  - distance to Antwerp, Louvain and Mainz (intellectual and commercial centres)

## The Legacy

- Success of the Republic and social and religious change take over the impact of the BCL
  - Period of social change and economic development in the West
  - Reformation spreads
  - The Roman Catholic Church demands the BCL to transform into regular monasteries
- Estimates
  - Literacy rates in 1860 are not explained by BCL
  - City growth 1560-1795 is not explained by BCL
  - The period after 1600 is a different episode (e.g., Acemoglu et al., 2005)



## Work in progress

- Craft guilds provided education
  - In the data there is a strong negative correlation between the presence and intensity of craft guilds and the BCL
- Quantifying religious resentment and Dutch Revolt
  - Strong positive correlation between the timing of the revolt across cities and BCL presence