



FERTILITY AND DEMOGRAPHIC REGIMES IN THE 19TH-CENTURY COUNTRYSIDE OF SOUTH BELGIUM.

How to explain diversity in terms of fertility decline?

ESHD Webinar, 18th June 2024

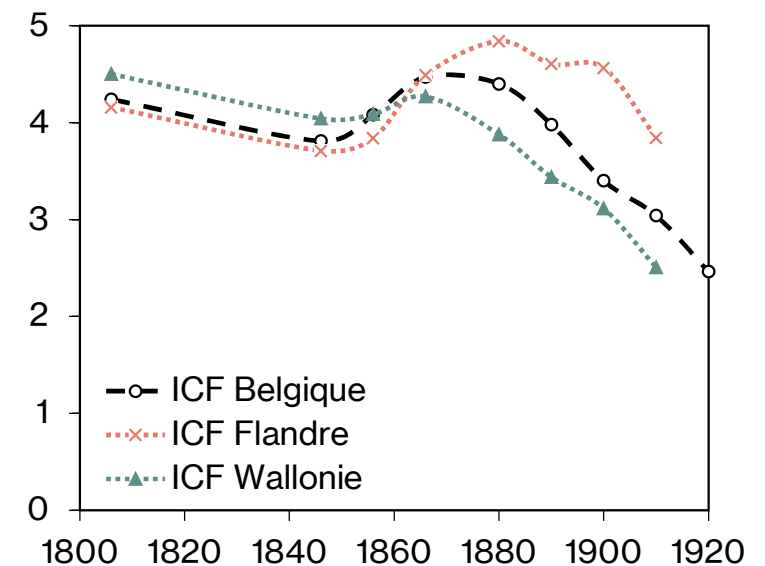
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Introduction

- **A study about fertility decline during the 19th century in the countryside of South Belgium**
 - A global context of evolutions and changes; a favourable context for the fertility decline
 - A well-documented process but very little at a local level, and even less for the countryside
 - Use of administrative tools available in Belgium but largely under-exploited
- **What we know?**
 - Intensity and timing of changes vary according to regions (Coale and Watkins, 1986)
 - National and regional studies (Lesthaeghe, 1977) or subnational studies that are essentially driven in urban or industrial areas
 - Most studies are limited by the unavailability of detailed data before 1880
 - Fertility decline is thought to have begun in the countryside of southern Wallonia (Poulain, 1996)

Indices conjoncturels de fécondité

Source: DGSIE



Why fertility decline?

Theoretical background



Classical theories: economic development as a prerequisite for demographic change

Disappearance of the child's economic function (Caldwell, 1976, 1982; Becker, 2016)

Improved living standards, modernization of economic structures (Van Bavel, 2010; Tilly and Scott, 2002)



Systemic approach: adapting demographic behaviors to socioeconomic changes

The DT generates strong population growth that leads to the search for a new balance between population and resources

The fertility decline is a possible response; a global approach to the « demographic regime » (Davis, 1963)



Diffusionist approach: deconstruction of the causality link between economy and fertility

Emergence of new behaviors that spread throughout society (Coale and Watkins, 1986; Casterline, 2001)

Why fertility decline?

Theoretical background

- The « demographic regime » as a particular combination of demographic components to maintain a balance between populations and resources
- In ancient societies, nuptiality is a regulator (Dupâquier, 1972). But some critics are addressed to the model of Dupâquier: Disciplinary confinement, Spatial compartmentalization and Social homogeneity (Le Bras, 1996)
- The theory of multiphase responses: demographic change is a response to tension (Davis, 1963; Friedlander, 1969, 1983)
 - Fertility is one possible response and its use defines the timing of fertility decline (Davis, 1963)
 - One answer in a possible set that includes socio-demo-economic changes (Friedlander, 1969, 1983)
- Contributions of this theoretical background
 - The plurality of the processes (Alter et al., 2010)
 - The fertility regime is placed in a demographic dynamic

What do we want to explain?

Objectives and background of the study

- One main objective: Analysis and interpretation of the diversity of patterns of fertility decline in rural southern Belgium
 - Considerable discrepancies in terms of reproductive behaviors and timing of fertility decline in Belgium and in rural Wallonia
 - Discrepancies are function of adaptation strategies that depend on structural and cyclical characteristics of local systems
 - Characteristics of the socio-demo-economic systems
 - Degree of openness to the outside world
 - Socioeconomic background
 - Cultural and social background

Exogenous parameters

Endogenous parameters

How to do it?

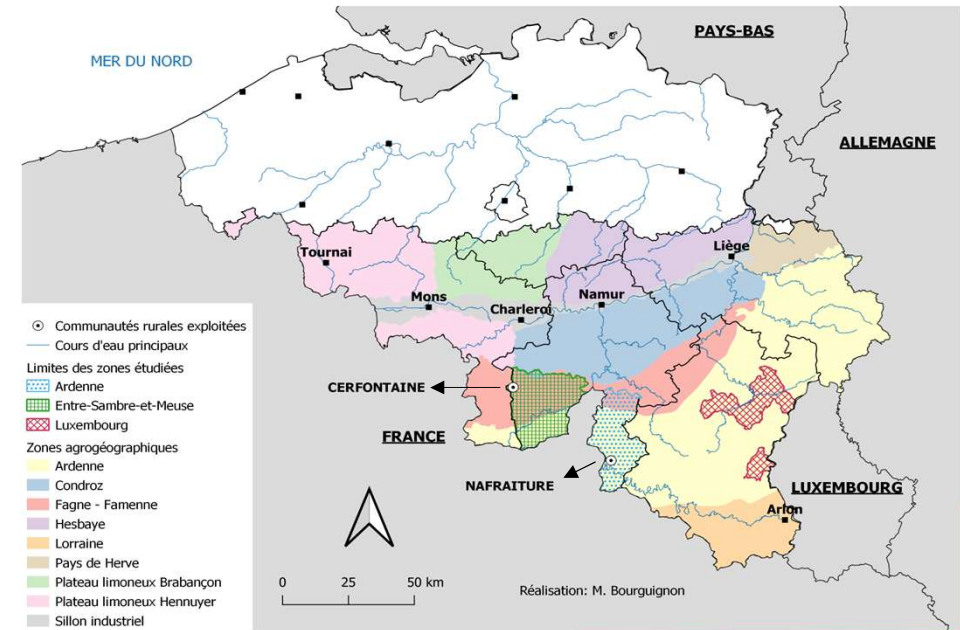
Approaches, data and methods



How to do it?

Approaches, data and methods

- A first macro analysis of fertility decline
 - Aggregate data (1800-1910)
 - Average regional trends
 - Classic demographic analysis
 - Focus on three rural regions



	Entre-Sambre-et-Meuse	Ardenne namuroise	The East of the province of Luxembourg
Border area with...	France	France	GD of Luxemburg
Types of culture	Exploitation of wood resources (coal, beams, poles, sleepers, firewood, bark, etc.) Familial crops	Large areas of woodland, unsophisticated crops Development of tobacco growing from the end of the 19th century	Familial crops, mainly cereals
Farm characteristics	Majority-owned farms Medium-sized farms	Mainly owned farms Large farms	Mainly owned farms Large/very large farms
Industrial activities	For additional income Iron and steel industry, quarries, shoe factories	Undeveloped and rudimentary A few proto-industrial activities (nail works, slate quarries, quarries)	Little developed, except the metalworking sector (in decline since the end of the 18th century)
Similar charecteristics	Low population density, Geographical "isolation" of local communities, Self-centered nature of the village community, Relatively poor means of communication		

How to do it?

Approaches, data and methods

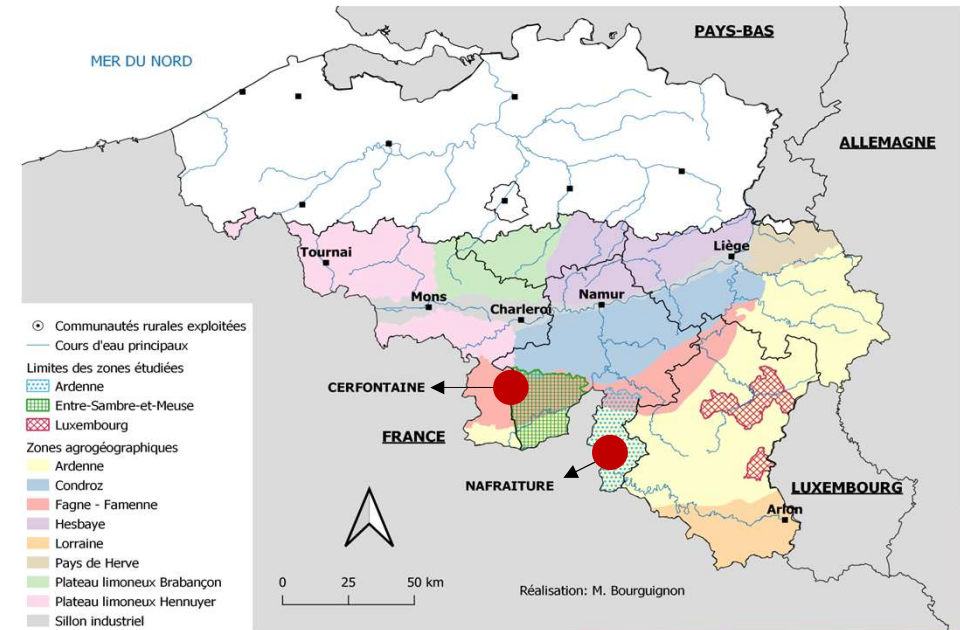
CADRE III. — RELEVÉ GÉNÉRAL DU MOUVEMENT DE L'ÉTAT CIVIL EN 1890.																								
PROVINCE DE NAMUR. — ARRONDISSEMENT ADMINISTRATIF DE DINANT.																								
COMMUNES.	MARIAGES.												DIVORCES.											
	Age des mariés.												Age des divorcés.											
	Moins de 18 ans.						18 à 24 ans.						Moins de 18 ans.						18 à 24 ans.					
	H.		F.		H.		F.		H.		F.		H.		F.		H.		F.		H.		F.	
	TOTAL.		TOTAL.		TOTAL.		TOTAL.		TOTAL.		TOTAL.		TOTAL.		TOTAL.		TOTAL.		TOTAL.		TOTAL.		TOTAL.	
Buissonville	4												8											
Bure	6												12											
Celles	10												20											
Chairière	1												2											
Chevetogne	7												14											
Ciergnon	1												2											
Ciney	27												54											
Conneux	4												8											
Coraimont													2											
Custinne	1												2											
Dinant	39												78											
Dion	7												14											
Dorinne	4												8											
Drehanche	1												2											
Durnal	3												6											
Emptinne	3												6											
Eprave	3												6											
Evrehailles	7												14											
Falaën	4												8											

Statistiques du mouvement de la population et de l'état civil

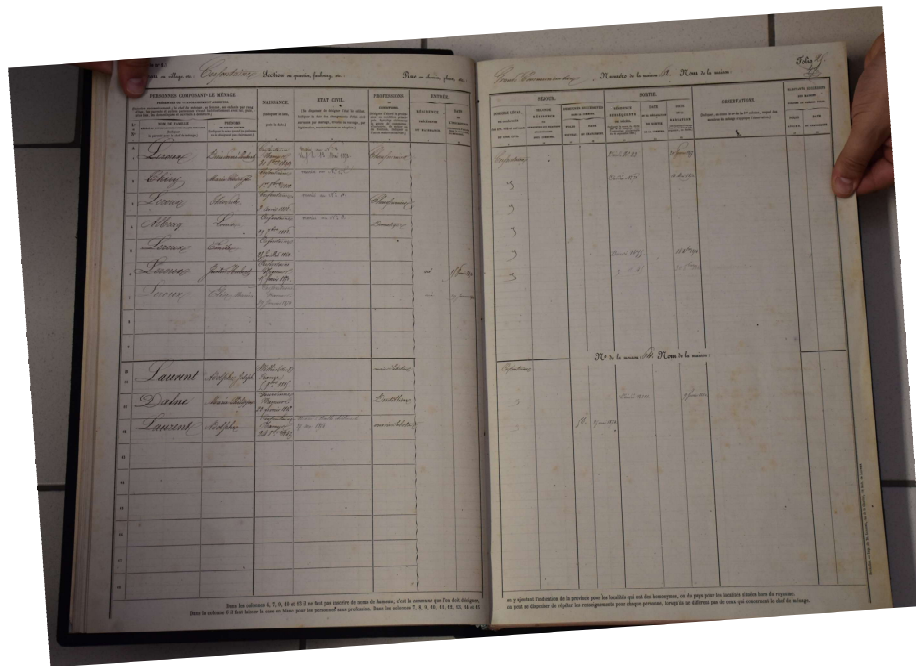
How to do it?

Approaches, data and methods

- **A first macro-analysis** of fertility decline
 - Aggregate data (1800-1910)
 - Average regional trends
 - Classic demographic analysis
 - Focus on three rural regions
- **A second micro-analysis** of fertility decline
 - Two rural communities
 - Individual data (1800-1910) for tracking individuals and reconstructing their fertile life course
 - Traditional demographic and Event-history analysis



How to do it? Approaches, data and methods



L'an treize de la république le vingt six du mois
 thermidor à dix heures du matin par devant nous Benoit
 maire officier de l'état Citoyen de la Commune de Corfontaine
 Arrondissement de troyes département des Ardennes
 Comparu Quenlin Joseph Dubois âgé de quarante sept ans
 journalier demeurant à Corfontaine le quel nous a déclaré
 que le vingt cinq du mois de thermidor à sept heures
 du matin et ne lui assistant du Sexe masculin de lui Deschamps
 de marie Victoire Corrier âgé de quarante ans son épouse
 légitime mariage et auquel il a déclaré vouloir donner
 légitimes de Jacques Joseph les dits Déclaration et pour
 valoir en présence de pierre d'elz âgé de quarante cinq
 vaillieur Diabois demeurant à Corfontaine et de François giron
 tisserant âgé de trente deux ans demeurant aussi à Corfontaine
 Et ont les Memoires Signé Orce nous le présent acte de Naiss
 après tout leur en a été fait lecture l'appere de l'enfant a été
 ne l'akoir Signer
 B. Prieme

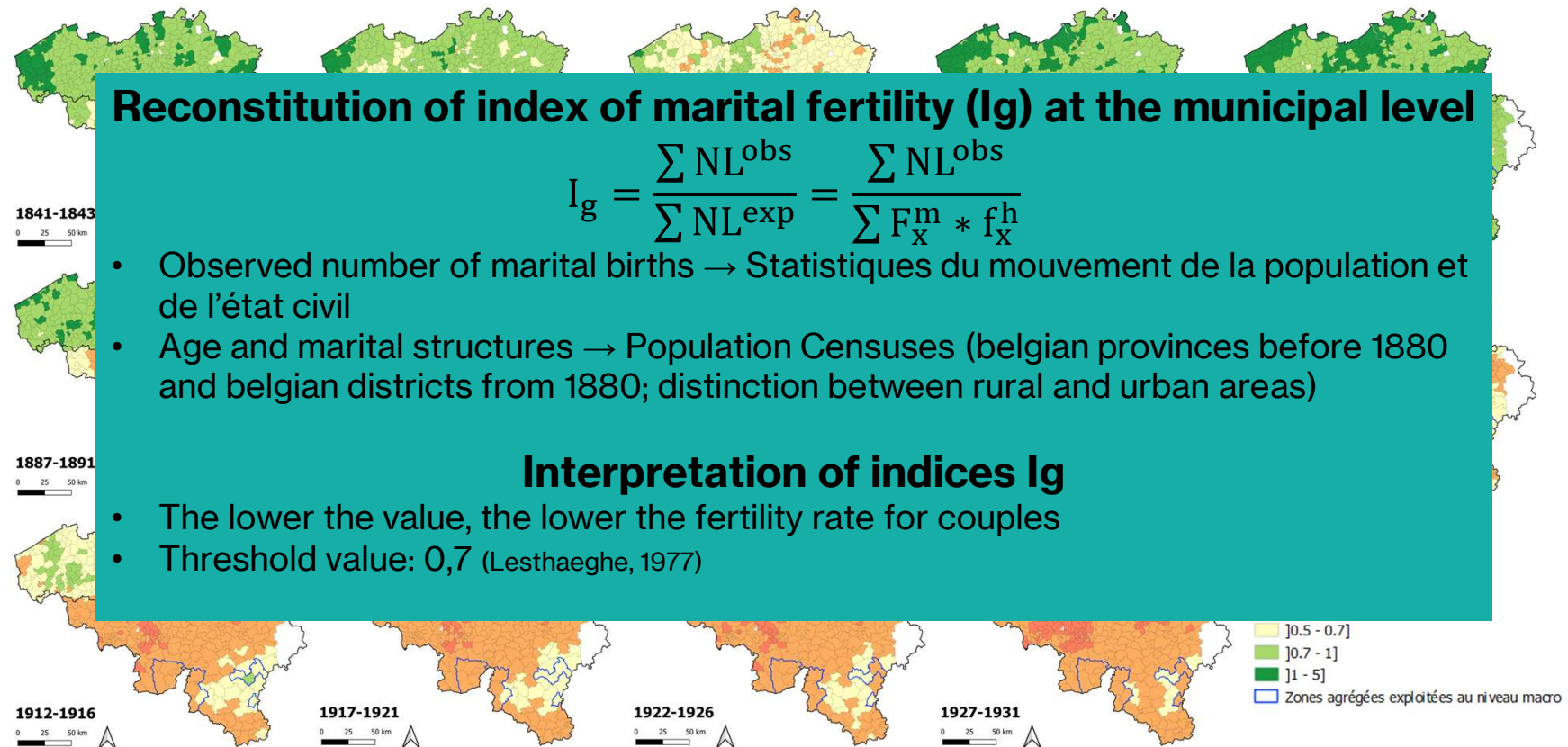
Deuxième jour du mois de février mil huit cent quarante-neuf,
à Nes heures d'un matin
Acte de Décès de Joseph Dubois, époux de Pelagie Javard
décédé, le vingt-sept à quatre heures d'un matin, profession
de Sucres âgé de quarante trois ans, né à Corvenlain,
demeurant à Corvenlain,
fil de Jean quin Dubois, profession de Journaler
domicilié en dernier lieu à Corvenlain, et de Marie Victoire Cordier
profession de ménagère, domicilié en dernier lieu à Corvenlain
Sur la déclaration faite par Augustin Joseph Polberg, âgé
de ans, demeurant à Corvenlain,
profession de garçon Chambrée, qui a dit être ami du défunt et par
Joseph Goblet, âgé de treize ans,
profession de Cultivateur, qui a dit
être ami du défunt
Constaté suivant la loi, par moi, Alexis Cazé, Sous-maire,
faisant les fonctions d'officier public de l'état civil de la commune de Corvenlain
et après lecture faite aux déclarants ils ont Signé avec moi
A. J. Polberg & Goblet & Cazé

D'un mil huit cent trente. Nauf, au mois d'avril la quatorzième
année, pendant moi Hubert François Jozet, à Dougenquabie, de la
commune de Capetaine, province de Namur, faisant les fonctions
d'officier del état civil, ont comparu : Jacques Joseph Dubois, âgé
de quatre-vingt ans, né audit Capetaine, célibataire, professeur
de Sionhorn, domicilié à Capetaine, fils unique de son quatorzième
Joseph Dubois, journalier, domicilié en dernier lieu à Capetaine, et de Marie-Victoire Corbier, veuve, domiciliée aussi audit
Capetaine ;
Et Melanie Joseph Meunier, âgé de vingt-neuf ans, née
à Capetaine, célibataire, profession de Vendeuse, domiciliée au même
lieu, fille unique de Clement Joseph Meunier, marchand, et de Marie-
Joseph Balte, vendeuse, tous et l'autre domiciliés audit Capetaine.
Lesquels m'ayant requis de procéder à la célébration du mariage
projeté entre eux, j'ai d'abord fait lecture des pièces susdites :
1. De l'acte de Naissance de Jacques Joseph Dubois, constatant qu'il
est né le cinq d'octobre l'an treize ; 2. De l'acte de Naissance de
Melanie Joseph Meunier, constatant qu'elle est née le premier
sept mil huit cent onze ; 3. De l'acte de Décès de Jacques Dubois
constatant qu'il est mort à Capetaine, le trois novembre mil huit
cent onze ; 4. De deux actes inscrits au registre des publications
de mariage de la commune de Capetaine, constatant que le dit
mariage a été publié les dimanches, vingt-quatre et trente un
mars ; 5. D'un certificat délivré par le gouverneur de la province de
Namur, constatant que Jacques Joseph Dubois a obtenu le b. d. b.
la même date ; 6. Et finalement de quatre-vingt-trois de l'an cinq
et six. — Après cette lecture, Marie-Victoire Corbier, Clement
Joseph Meunier et moi-même Joseph Balte, se sommes, ont déclaré
remettre leur consentement au mariage de leurs fils et fille ;
J'ai ensuite demandé au futur époux et à la future épouse s'ils
voulaient se prendre pour mari et femme ; chacun d'eux a répondu
affirmativement, et aucune opposition ne m'a été faite ;
J'ai déclaré au nom du futur que Jacques Joseph Dubois et
Melanie Joseph Meunier sont unis en mariage.
Et tout en présence de deux témoins, Baptiste Meunier, âgé de vingt
huit ans, habitant, et de Marie-Joseph Corbier, âgé de
vingt-cinq ans, aussi habitant, tous deux amis du futur époux
réservant à Capetaine ; et de Maximilien Wauthier, âgé de
vingt-un ans, menuisier, et de Eugene Gruy, âgé de vingt
trois ans, charrier, tous deux amis de la future épouse, réservant
aussi audit Capetaine. Le qu'on j'ai rédigé le présent
acte, dont il a été donné lecture aux parties et aux témoins
lesquels ont signé avec moi ; à l'exception de Melanie Joseph
Meunier, Marie-Victoire Corbier, Clement Joseph Meunier et moi
Joseph Balte, qui ont déclaré ne savoir écrire ni signer
qu'assistés J. J. Meunier.

[Civil Status records, Familysearch.org](#) ↗
↖ [Population Registers, Personal photograph](#)

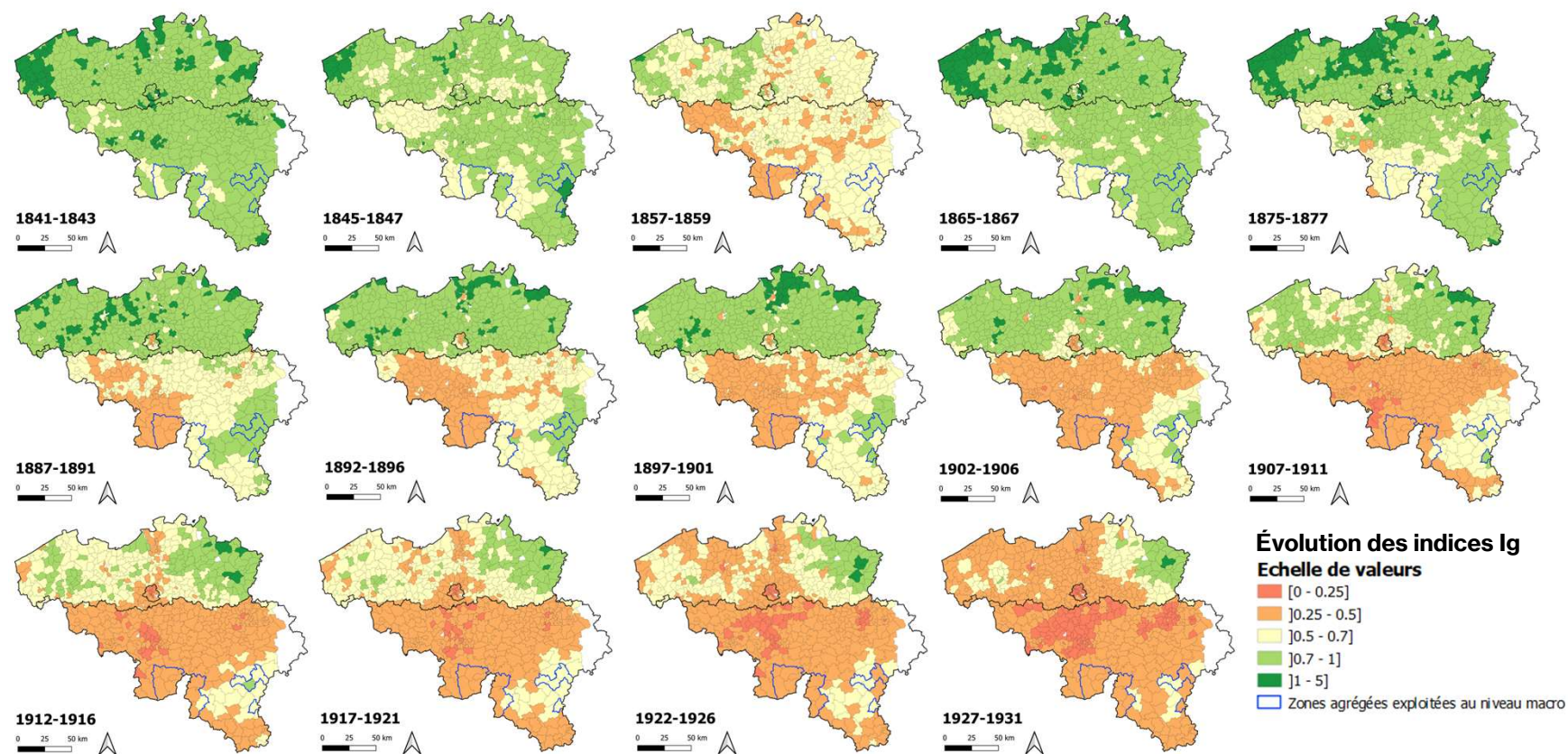
Results

(1) Diversity of demographic regimes



Results

(1) Diversity of demographic regimes

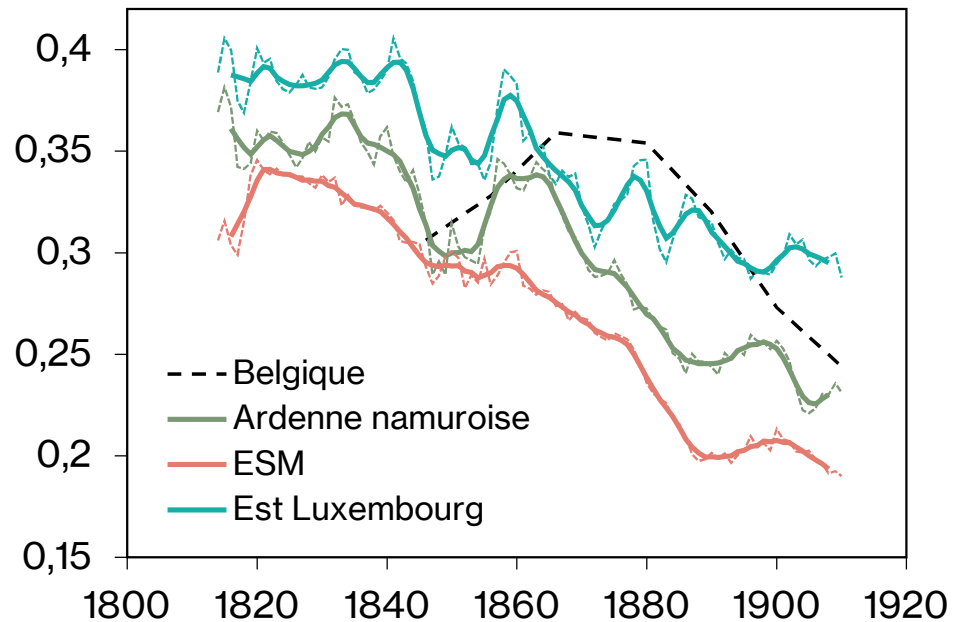


Results

(1) Diversity of demographic regimes

Indexes of total fertility (If)

Source: Belgium = Lesthaeghe, 1977



Reconstitution of total fertility indexes (If) per year and for three aggregate regions

$$I_f = \frac{\sum N^{obs}}{\sum N^{exp}} = \frac{\sum N^{obs}}{\sum F_x * f_x^h}$$

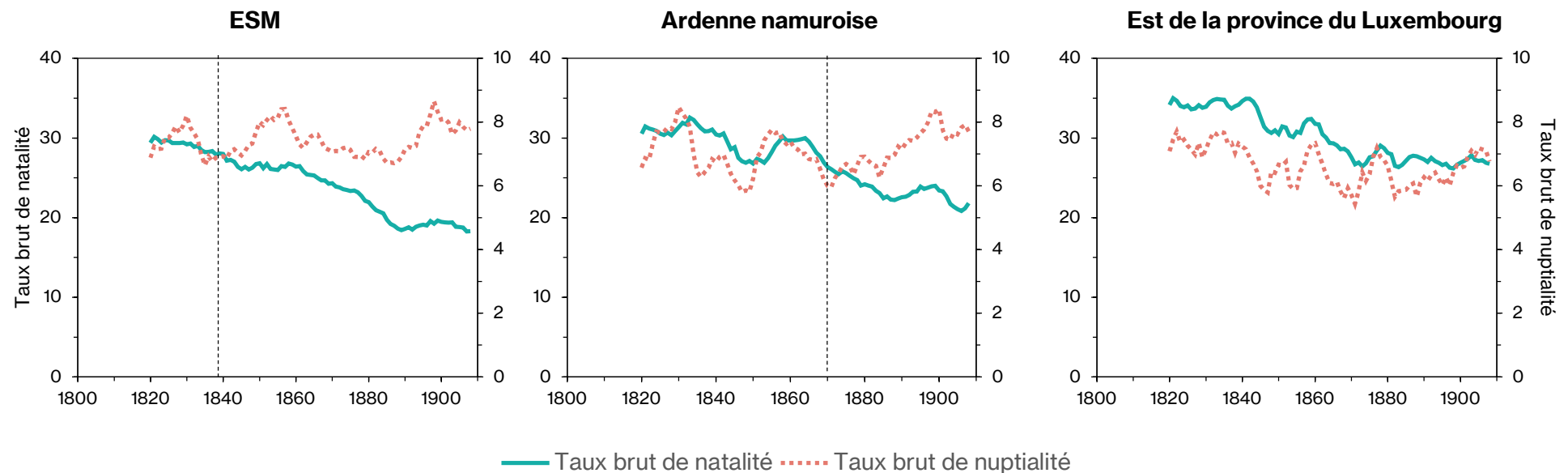
- Observed number of births → Civil status records + published statistics
- Age structures → Population censuses
- Use of census age structures for the previous intercensal period

Results

(1) Diversity of demographic regimes

Diversity can be seen in the different demographic components

- In societies of the Ancien Regime, nuptiality and fertility were correlated
- With the FDT, an overall loss of the regulating role of nuptiality and a weakening of the nuptiality-fertility interaction
- Changes take place at variable speed: early change in ESM (regulation through fertility) versus late disassociation in Luxembourg (regulation through marriage as long as fertility is not under control)

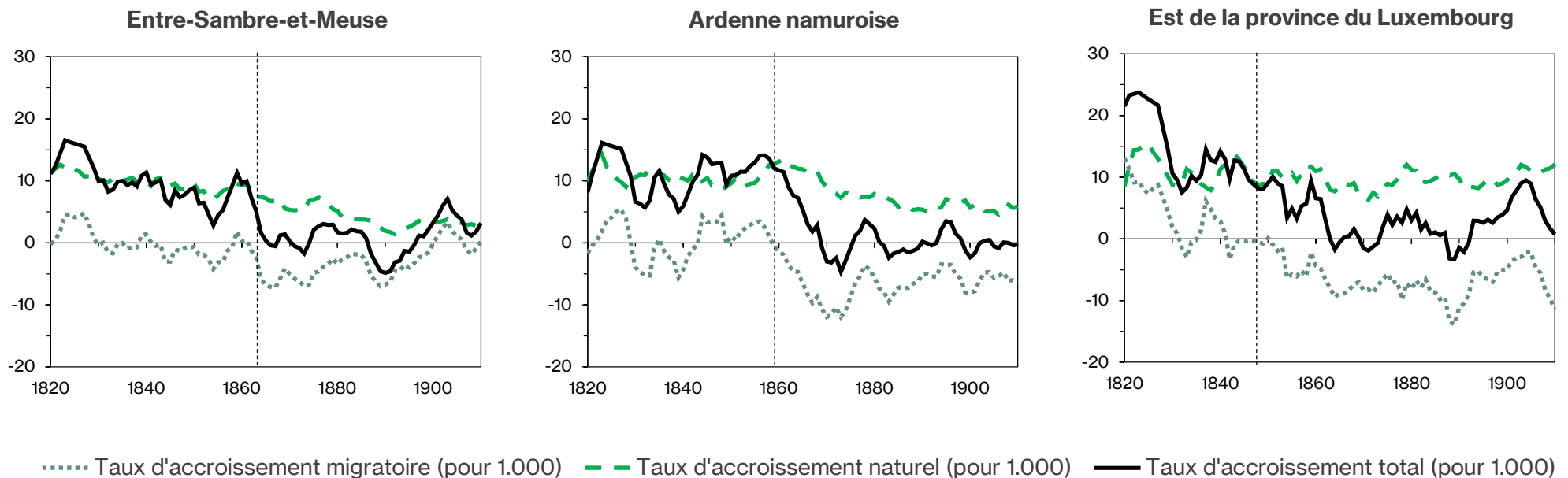


Results

(1) Diversity of demographic regimes

Diversity can be seen in the different demographic components

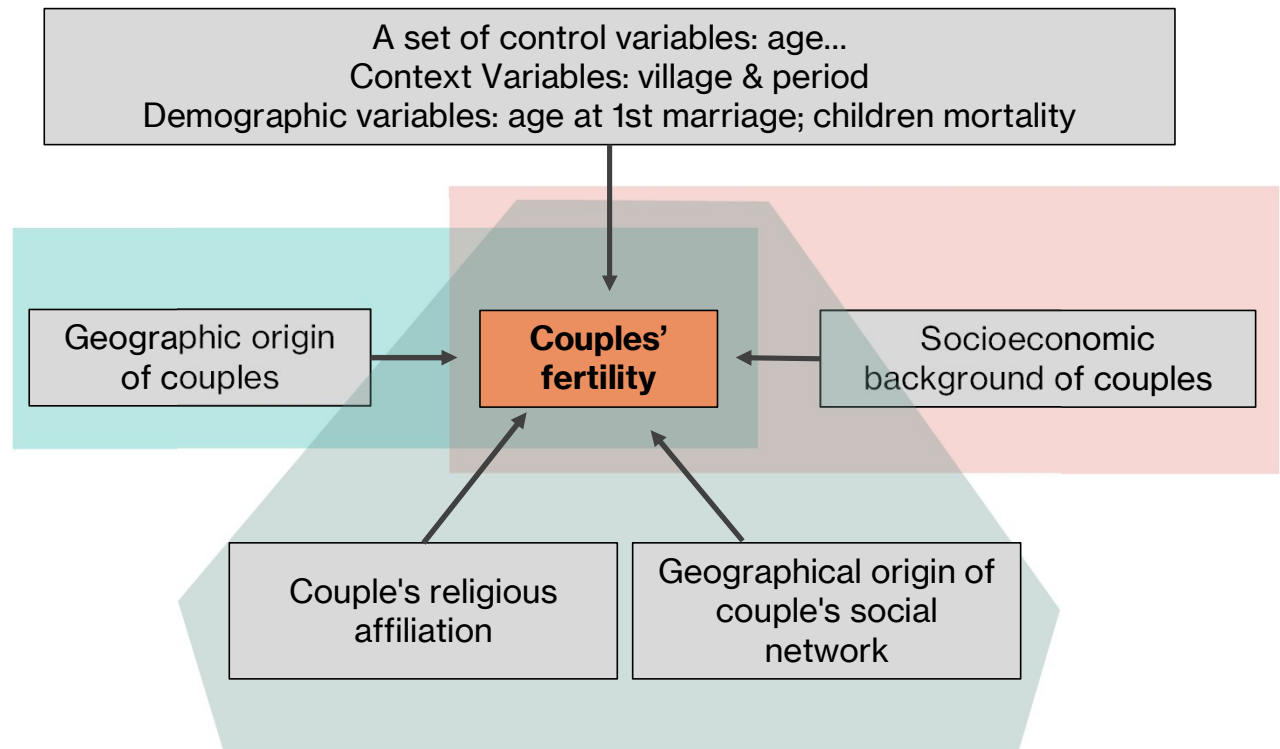
- The contribution of migration to population growth differ over time but also across regions
- Transition to regimes of null or negative migratory growth; a change that appears at different period according to regions



Results

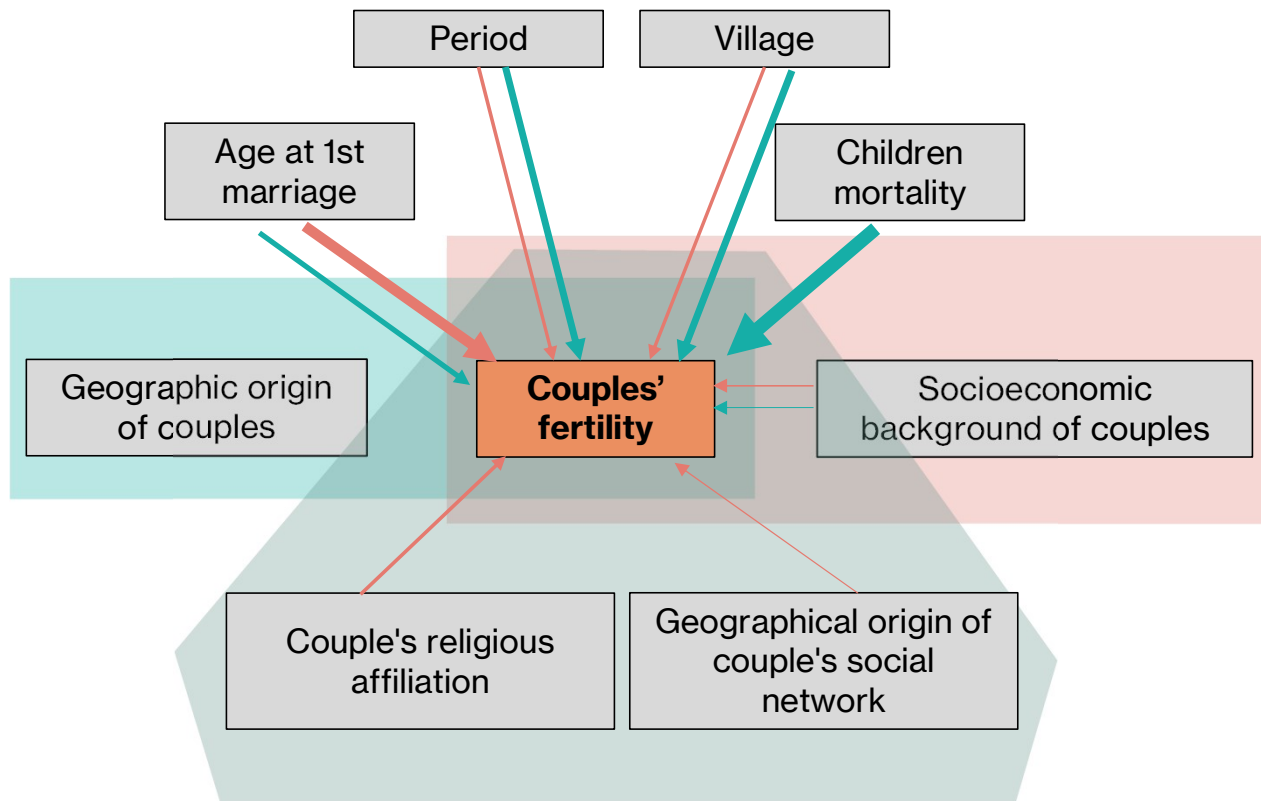
(2) Diversity of individual behaviours

- Cox regression models based on *Event History Analysis*
- Observed marital fertility in 1800-1910 in the two rural communities for women who were married in NC during the same period
- Models for 3 dependent variables
 - Birth of 1st child
 - Birth of at least one child of rank 2+
 - Birth of at least one child of rank 4+



Results

(2) Diversity of individual behaviours



- 1st child
- At least 1 child of rank 2+ or 4+

- A **period** effect
- A **village** effect
- A 'previous experience of child mortality' effect: replacement effect, faster return to fertility, hoarding effect
- An effect related to the **age at 1st marriage**

Results

(2) Diversity of individual behaviors - MIGRATION

- To what extent does the reproductive behavior of migrants and non-migrants differ in rural areas?
- 3 types of indicators based on place of birth and place of residence
 - Age of Migration (duration of the inside/outside socialization)
 - Spatial endogamous or exogamous nature of unions (culture shock)
 - Distance from the place of birth/residence
- **Whatever the birth rank: No major significant results for migrant/non-migrant behaviors; no anticipation of the fertility decline for one group; the relationship remain unchanged over time**
- Migration is more the result of individual strategies (search for spouses, land, etc.) than a sign of emancipation, distancing or modernity
- Mainly rural-rural migration over very short distances (no shock, no rupture)

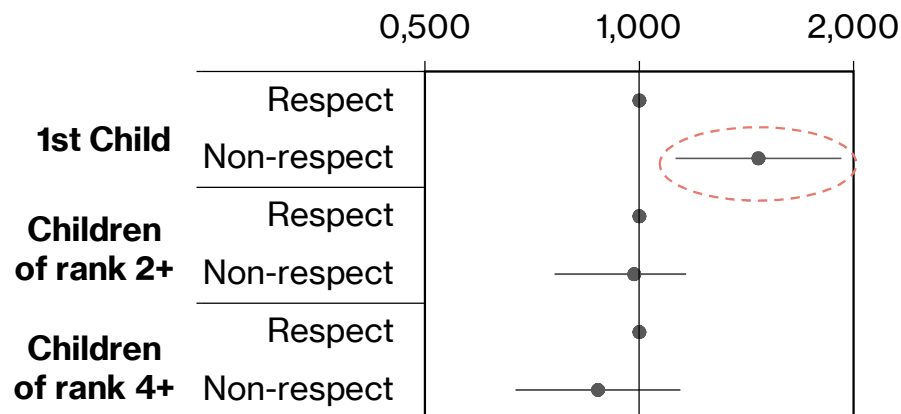
Results

(2) Diversity of individual behaviors – CULTURAL FACTORS

- The fertility decline is the result of the transition from a fertility regime led by cultural institutions to a new regime where couples make their own choice (Eggerickx, 2015; Wrigley, 1978; Lesthaeghe, 1991)
- Does couples' cultural background influence their fertility behaviors?
 - Religion is an obstacle to birth control → MLA index
 - A social network strongly centered on the rural community is an obstacle to birth control → residence of marriage witnesses

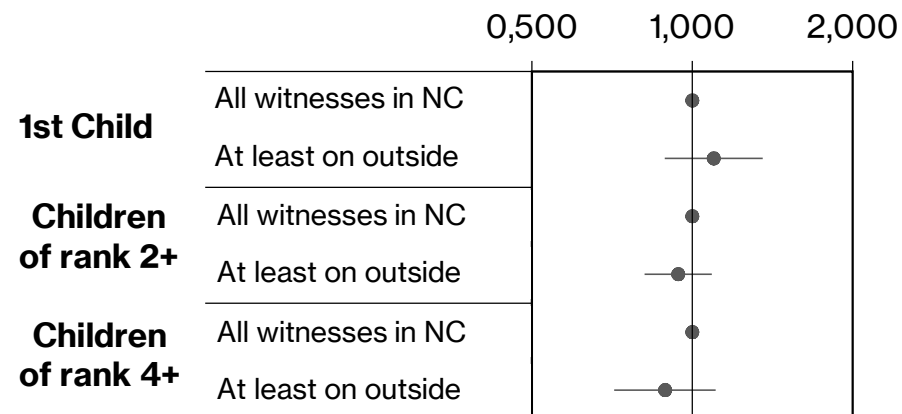
Net effects of 'Marriage during lent and Advent'.

Source: BDI.



Net effects of residence of marriage witnesses.

Source: BDI.

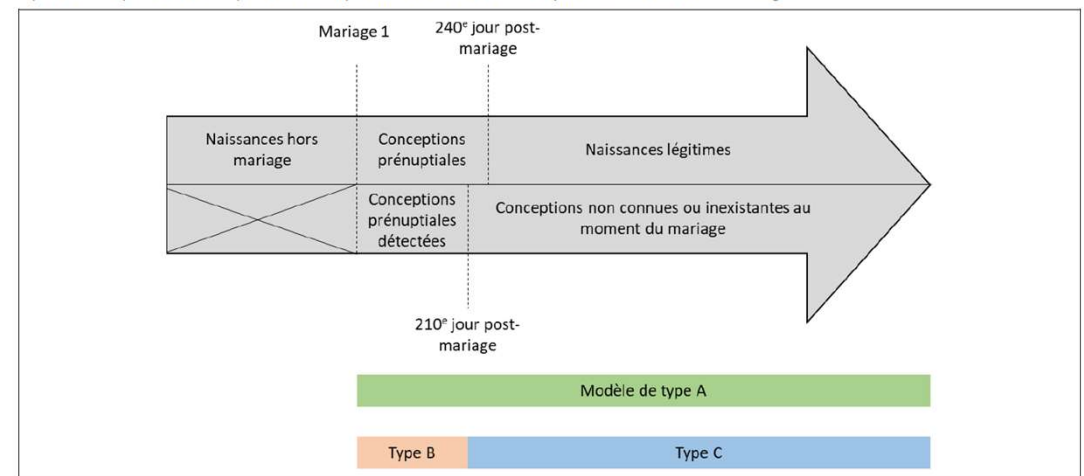


Results

(2) Diversity of individual behaviors – CULTURAL FACTORS

- No clear effect of religious affiliation or geographical characteristics of couples' social network except a higher probability of 1st child among couples who do not respect closed times at marriage. Is it an effect of premarital conceptions?
- New tested models focused on time since 1st marriage
 - Greater effect of respect for closed times among women who knew they were pregnant when they get married
 - Legitimation of premarital conception?
 - The effect still exists for women who are not pregnant/didn't know it
 - A special relationship with sexuality?

Figure 85. Schématisation des nouveaux modèles de Cox testés pour mesurer l'effet des conceptions prénuptiales connues par les couples sur le respect des temps clos et les caractéristiques des témoins de mariage.



Results

(2) Diversity of individual behaviors – SOCIOECONOMIC FACTORS

- Does the socioeconomic background of couples influence their fertility behaviors?
 - Socioeconomic differences in terms of fertility?
 - Socioeconomic differences in terms of schedule of fertility decline?
 - Unequal roles of socioeconomic groups in terms of demographic regulation?
- Two indicators: Socioprofessional background of womens' husbands (hisclass); Ability to sign
- **No major difference based on socioeconomic background of couples**
 - The first child birth occurs slightly less quickly among the more privileged classes: a postponement effect?
 - Lower probability for farmers to having at least one child of rank 2+: a question of inheritance?
 - No major effect of the education level
- Limitations: lack of details on education level; relatively homogeneous population in rural areas

Discussions, benefits and limitations

- A universal explanation for diversity in the timing of fertility decline is an illusion
 - The precursory role of the countryside questions the relevance of classical theories
 - The diversity is explained by local strategies that are influenced by the characteristics of local societies
 - At the individual level, low differences reveal the intensity of changes
- Benefits
 - Fertility trends for the long period (the whole FDT) and at a local scale
 - The plurality of responses to socioeconomic changes
 - Dimensions not covered by theoretical frameworks
- Limitations and perspectives
 - Results are influenced by inherent characteristics of rural communities (migration, social background)
 - A study with a limited geographical scope
 - Re-explore the concept of social control, in particular, intergenerational transmission of fertility behaviors

**Thank you very much
for your kind attention!**

Comments or questions? Now or by email

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