

Communication proposal
EPC 2020

Less First Births but Faster as Age at Union Formation Increases in France

Marie-Caroline Compans – Institut national d'études démographiques (Ined)

marie-caroline.compans@ined.fr

Eva Beaujouan – Wirtschaftsuniversität Wien (WU)

[eva.beaujouan\(at\)wu.ac.at](mailto:eva.beaujouan(at)wu.ac.at)

Abstract

First unions and first births are closely related and have been extensively studied as part of the family formation process and in the wider context of transitions to adulthood. This article examines in France how being younger or older at the formation of the first co-residential partnership will determine the occurrence and the timing of a first birth afterwards. Based on data from the *Study on Individual and Conjugal Trajectories* (Épic, Ined-Insee, 2013–2014), we estimate the net effect of age at first union on the level and the timing of fertility, through respectively logistic regression models and analysis of variance models (ANOVA). As age at first-union formation increases, fewer and fewer men and women become parents. Age largely reflects characteristics related to unions formed at different stages of the life course, and individual characteristics of people more or less prone to begin their partnership history at different ages. However, among those who had a child, a later age at union formation is in itself a factor for accelerating transitions to parenthood. While women may feel more social and biological pressure to conceive, age also seems to be a reason for men to hurry a first birth.

Paper draft

Background

In Europe, while the first union (particularly consensual) is less systematically linked to the birth of a first child than in the past (Winkler-Dworak et Toulemon, 2007), the first partnership and the first birth remain strongly linked (Baizán, Aassve et Billari, 2003). The age at first union is an important factor that can influence the occurrence and timing of childbearing. Starting a partnership reflects different circumstances depending on age at union formation, in relationships in which individuals may be more or less prone to have a first child. For example, young ages at cohabiting may reflect a desire to start a family relatively early, especially when these unions are direct marriages (Baizán, Aassve et Billari, 2003). More family-oriented orientations may also be found within specific social groups with a religious background (Philipov et Berghammer, 2007). Mating at relatively young ages can also occur while individuals are still in education, which contributes to postpone parenthood (Ní Bhrolcháin et Beaujouan, 2012). However, having a child is largely governed by norms and expectations around an 'ideal age' to form a family (Testa, 2006). Motivations may also be related to preventing conception from becoming more difficult to achieve, due to age-related risks of infertility, especially for women. Indeed, between the ages of 20 and 30, women's ability to have a child is almost constant, and then declines from the early thirties, and in particular from the age of 35 (Dunson, 2002 ; Leridon, 2008). Therefore, later ages at first partnership are of particular interest. When people are in their thirties, the prospect of remaining childless and the pressure of time and increasing biological difficulties can prompt them to hurry the birth of a first child after union formation.

We can also question the characteristics of individuals forming a first union late. On the one hand, it may be linked to difficulties in finding a partner (Cooke, Mills et Lavender, 2012 ; Schytt, Nilsen et Bernhardt, 2014). On the other hand, fewer preferences towards the family life may also explain a later entry into a relationship, and a greater propensity to remain childless. This may be related to social characteristics, for instance with more educated women being more often single and permanently infertile (Berrington, 2004). However, a desire for a child may emerge from a late union (Rijken et Knijn, 2009). Finally, with age, the likelihood of mating a partner who already has children increases, which can affect one's child desires (Beaujouan, 2011).

The age of the partner is also of interest. As women get older, they tend to form a relationship with partners of their age, while men form more frequently a union with younger women (Bozon, 1990). These trends can influence the likelihood of having a first child and first births rates. As already mentioned, women's reproductive capacities decrease (Dunson, 2002 ; Leridon, 2008). Research points out those difficulties in conceiving may also increase with the age of men, but later than for women (La Rochebrochard, Thonneau et Mcelreavey, 2003). In addition, late partnerships (around 30) are less often a choice for women than for men (Bergström, Courtel et Vivier, 2019), the latter remaining less socially and biologically constrained by their age to conceive (Billari et al., 2011). This article seeks to address this gender question more precisely. The pressure of time is less a biological constraint for men than

for women. However, men may be in a hurry to have a first child after a relatively late partnership, as considerations about not being ‘too old’ or ‘in a good shape’ to care for a child may play a role.

Research questions

Three main issues are raised throughout the article. First, are rates of transitions to parenthood the same over ages at the formation of the first union or does it vary? Is age itself an explanatory factor for differences in the occurrence and timing of births? Does it reflect other social characteristics of men and women and what characteristics?

Data and methods

To study the relationship between age at first union and first birth, we use the French survey *Study on Individual and Conjugal Trajectories* (Épic, Ined-Insee, 2013–2014), which interviewed a sample of 7,825 men and women aged from 26 to 65 years. This survey focused on measuring partnership histories, providing information on the number, order and characteristics of romantic and important relationships (Rault and Régnier-Loilier, 2019). In order to study the influence of age on fertility histories, we restricted the sample to cohorts that have reached the end of their fertile lives, that is to say people born between 1948 and 1970 who were aged between 43 and 65 at the time of the survey. To the extent that we are interested in the occurrence of a first birth following a first union, people who had a child before the first partnership are excluded. Particular attention is also paid to the occurrence of a birth following the beginning of the first *cohabitation*. Births occurring before are rare (6% among women and 7% among men among the 1948–70 cohort). Relationships formed close to the end of reproductive life are also excluded (40+), to focus on people who were still likely to conceive. First unions formed after the age of 40 are about 1% for women and 2% for men. Final samples are of 2,349 women and 1,762 men.

In this article, we look at the occurrence of a first birth following the first union. These may be births occurring in this first partnership or in a subsequent one. The first cohabiting relationship is considered as the beginning of one’s partnership history, and as an appropriate setting to start thinking about starting a family. Moreover, in the selected cohorts, 90% of first births occurred within the first cohabiting relationship. The majority of individuals formed a first cohabiting union between the ages of 20 and 23 (46% of women and 48% of men, Table 1). First unions formed between age 32 and 40 represent 3.9% of the first unions for women, and 6.5% for men. On average, men and women complete their studies at ages around 19. The timing of other events is then different by gender, with men forming their first cohabiting union on average about 2 years later and having a first child 2.8 years later than women.

Table 1 : Distribution of age at first partnership and mean ages at transitions to adulthood by gender (weighted)

	F	M
Age at first partnership, % (non-weighted n)		
< 20	32,8 (699)	10,9 (188)
20–23	42,5 (1034)	46,0 (816)
24–27	15,3 (398)	25,6 (460)
28–31	5,6 (130)	11,1 (189)
32–40	3,9 (88)	6,5 (109)
Mean ages (years)		
Education completion	18,7	19,2
First partnership	22,2	24,4
First birth	25,5	28,3

In addition to descriptive statistics, this paper investigate factors that can explain the level and timing of first births following the first partnership. The birth of a first child is often explored through duration models. This method has been widely used because it can study individuals that have not reached the end of reproductive life. However, by focusing on age, it is important to study a homogeneous group of generations that have reached the end of their reproductive lives at the time of the survey. In addition, event-history analyses are more adapted to the study of events that always take place (e. g. deaths), but are less easy to understand when some individuals do not experience the event estimated (e. g. not having a child). The estimates obtained reflect both the timing and the occurrence of the event. We therefore use two different types of models. The first one, based on logistic regressions, estimates the fertility level (whether or not having a first child) within an average time after the formation of a first union (4 years). The second type of models illustrates better the timing of a first birth. It estimates the influence of factors on the mean duration between first unions and first births among men and women who had a child, based on analysis of variance models (ANOVA). Despite age at the first-union formation, the characteristics explored are: age at education completion; partner's previous fertility; age difference between partners; duration between the beginning of the relationship and cohabitation; union status at union formation (direct marriage or not); social background (social status of the father); religious practice; birth cohort; and whether the first union broke up within 4 years. In doing so, we ask whether age still has a significant influence on the occurrence and the timing of first births, once these variables are taken into account in multivariate analyses.

1. The influence of age at union formation on the birth of a first child

1.1. The decrease of transitions to parenthood with age at first-union formation

To begin with descriptive analyses, the Figures 1a and 1c show proportions of women and men who had a first child by age at union formation, within the 2, 3, 4 and 5 years following the formation of the first partnership (lines); and regardless of the timing since union formation (grey area). The area in white therefore represents proportions of individuals without children at the end of their reproductive life. Figures 1b and 1d represent these same proportions, but among people who had a first child. It gives a better idea of the timing of fertility.

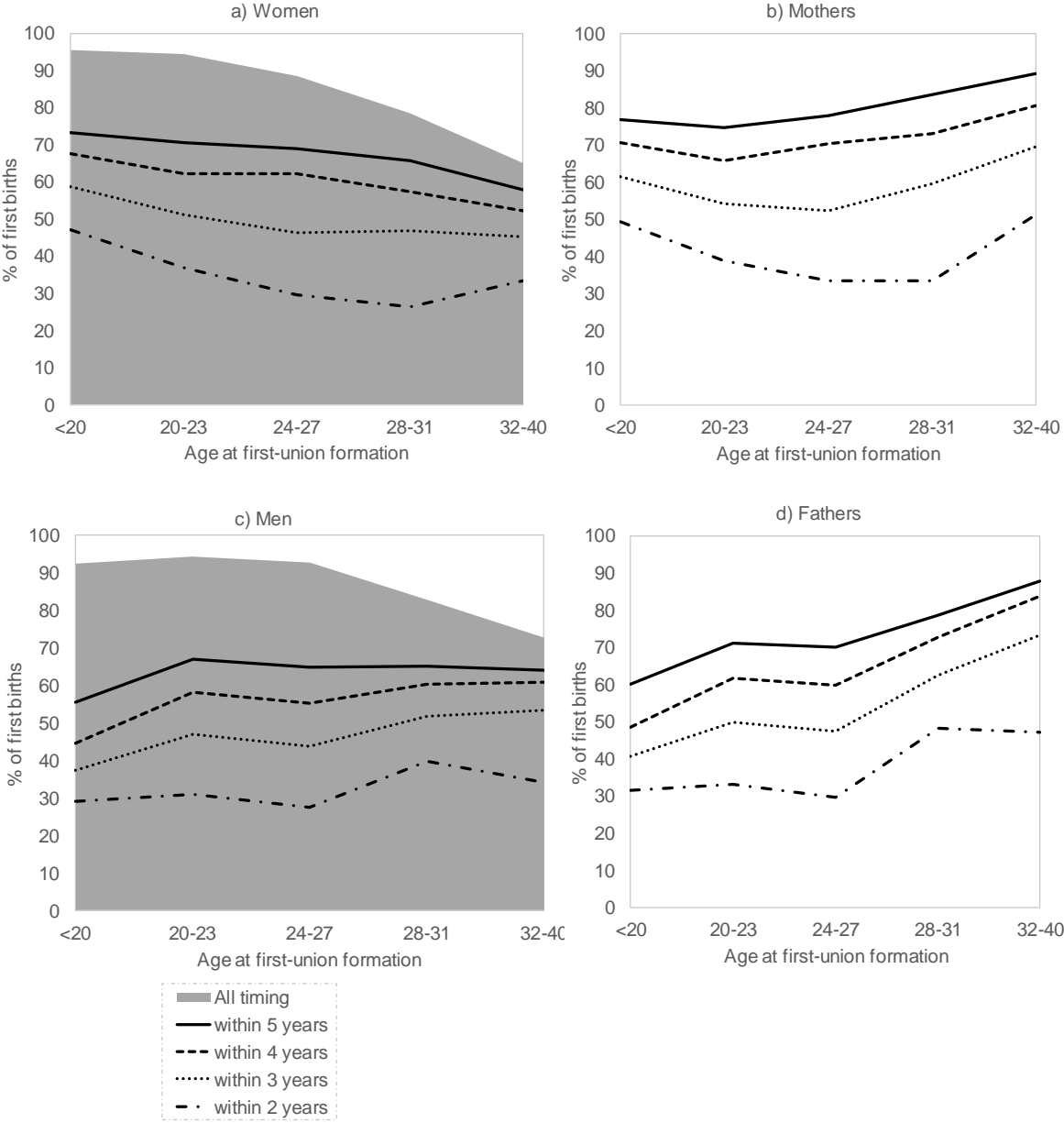
Transitions to fatherhood and especially motherhood decrease with age at first partnership (Figures 1a and 1c), particularly after age 27. According to estimations of sterility by age for women without children, between 96 and 97% of them would be able to have children at age 20, 88% at age 32, 83% at age 35 and 70% at age 40 (Toulemon, 2004). Among the youngest women at the time of the first marriage, it can be considered that for these generations, almost all those who were not sterile had a child. However, at later ages, even if we take into account a certain delay before trying to conceive, the proportion of women with children is still well below what can be expected when taking into account only biological capacities. Then, other reasons may explain this decline (social characteristics, less intentions to have a child). In addition, for women, the occurrence of a birth becomes rare with age at all durations, except for short durations at 32–40 years, suggesting an acceleration at these later ages (Figure 1a). For men, the occurrence of a birth within 4 years tends to increase from an early age onwards (Figure 1c). The age curves are then almost flat within 5 years, suggesting that men are not particularly constrained by their age.

The timing of first births can be understood better if we focus only on individuals who have a child. For fathers, the proportion of births that occur within 2 to 5 years after the first union increases significantly with age at union formation (Figure 1d). At shorter durations, there is a significant acceleration from the late twenties onwards. For mothers, births tend to slow down for unions formed in the early twenties, and then gradually accelerate (Figure 1b). The over-representation of short durations among the 32–40 group may be related to the fact that men and women who would wait longer did not have children, either because of difficulties to conceive or because they did not wish to have children at late ages. Overall, some men and women who form a later union hurry a first birth.

These probabilities were calculated without taking into account union separations. It is so because we focus on the occurrence and timing of first births since the beginning of the individuals' partnership histories. Nevertheless, these probabilities were also calculated by taking into account separations from 'survival' tables of unions (Figure 4 in Appendix 1). The cumulative incidence of first births since the formation of unbroken unions at different time intervals shows similar trends by age. Only the irregularity observed for men under age 20 disappears, suggesting that at younger ages the more frequent break-ups prevent the occurrence of a birth within 5 years after the formation of a first union. This exception aside, whether or

not separations are taken into account, the conclusions of the descriptive analysis remain the same.

Figure 1 : Proportions of first births by age at first partnership within different timeframes after union formation



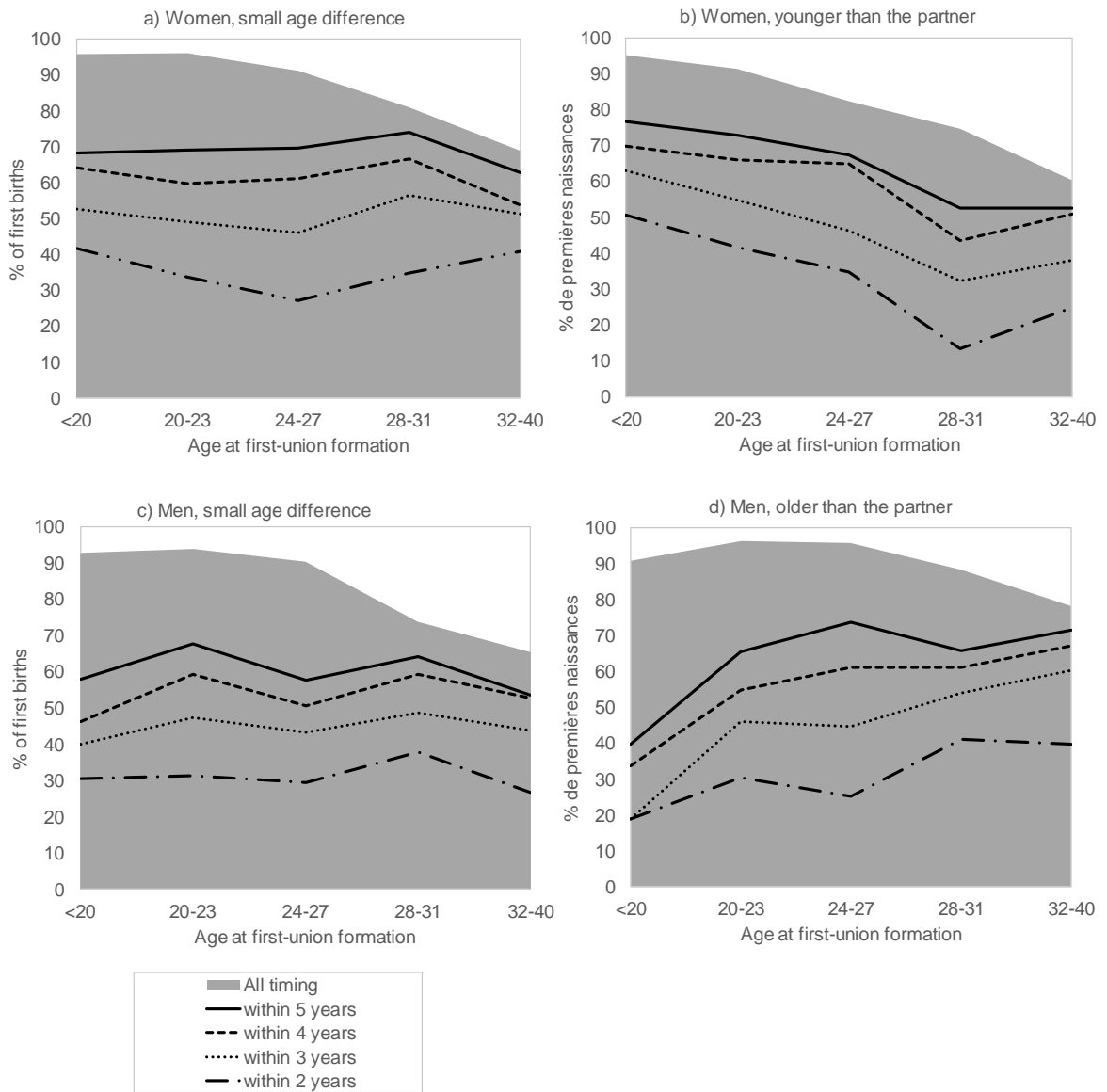
Notes: Graphs on the left include men and women without children at first partnership (1948–70 cohort). Graphs on the right include individuals who have become parents. The grey area shows transitions to parenthood regardless of the timing of first births. Lines are probabilities of having a first child within various timeframes after first-union formation.

1.2. First births after union formation by age difference with the partner

In addition to age at union formation, fertility behaviours can also depend on the age of the partner. Figure 2 shows the same analyses as above, distinguishing couples by the age difference between males and females partners. Partners are considered as having the same age when the age gap is less than 3 years. We also distinguish couples in which the man is at least 3 years older than his spouse. When the age gap between partners is small, proportions of first births in the medium run (up to 5 years after union formation) are similar for men and women (Figures 2a and 2c): lines are flat until age 31 and decline from age 32 onwards. However, having an older male partner is associated with a significant decrease with age in transitions to motherhood (Figure 2b). This may reflect the fact that the probability that the partner already have children increases with age at first union, which could correspond to (or lead to) less intentions to conceive. Conversely, for men in union with younger women, the proportion of medium-term births increases with age (Figure 2d). This suggests that the characteristics of the partner's age moderate the influence of one's age at first union on fertility.

Overall, these descriptive analyses show that men' and women's age at first partnership influence the levels and timing of transitions to parenthood. However, some results can reflect the fact that some types of unions are more frequent at younger or older ages (e.g., partner's previous children). In addition, a late first partnership may be specific to people from a particular social background. Conversely, a first union formed at an early age may be linked to more family-oriented values. These aspects are explored in the following sections, through multivariate analyses controlling for various characteristics to assess the net effect of age.

Figure 2: Proportions of first births by age at first partnership within different timeframes after union formation, according to partner's age difference



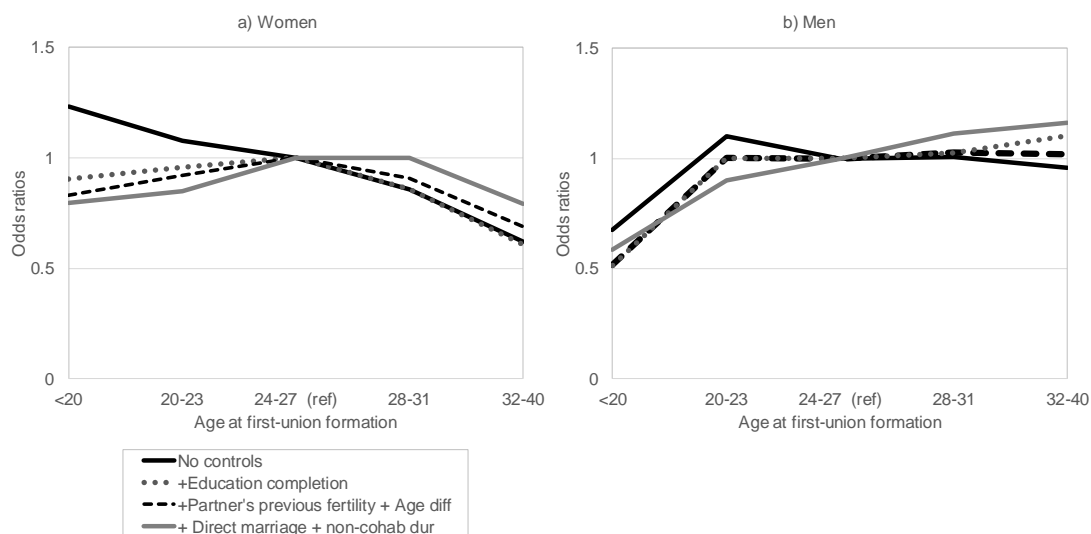
2. Estimating the role of age on the occurrence of a first birth after union formation

We estimate the occurrence of a first birth within 4 years after union formation by age at first-union formation and age at education completion. We also control for some characteristics of the first union (partners' age difference, length of the non-cohabiting period, marital status at union formation) and individual characteristics (religious practice, father's social status, and birth cohort). We first estimate a model controlling only by age before adding different controls. On the one hand, we are interested in which characteristics change estimates for age. On the other hand, we question the significance effect of age once a set of characteristics are controlled for. We also ultimately control for separation within 4 years of union formation.

Figure 3 depicts estimated odds ratios of the influence of age at union formation on the occurrence of first births, based on nested logistic regression models. Without any control, transitions to motherhood decrease, with a significant difference at extreme ages (<20 and 32+). With the addition of age at education completion, age estimates vary significantly before age 24, the curve becoming flat. Thus, for women, the duration of studies seems to explain the variation in the occurrence of births in their twenties. With the introduction of partner's age difference, partner's previous fertility, but especially the union status at the time of its formation and the duration of the non-cohabiting period, estimates change at late ages. The addition of religious practice and social origin does not change the estimated effects of age (not shown).

For men, estimates of the influence of age are not statistically significant and are close to 1, with the exception of young ages, and it does not change much with additional controls. Men who report a first union before the age of 20 are indeed less likely to have a first child within 4 years after union formation. This effect disappears once we control for the occurrence of a separation (Figure 6 in the appendix). As observed with lifetables, the lower fertility of young men in the medium run is probably due to separations that are more frequent.

Figure 3 : Influence of age at first partnership on the occurrence of a first birth within 4 years after union formation (odds ratios), various controls (logistic regression).



Overall, age at first union has little influence on transitions to motherhood and fatherhood. In other words, age itself does not have a significant impact on the occurrence of first births. Rather, the variations observed by age seem to reflect the characteristics of the first union and of the partner.

To describe more precisely the influence of these characteristics, Table 2 reports estimated odds ratios from the full model with all controls. Men (and women but only significant at 6%) who finish their studies early are more likely to have a first child within 4 years after union formation. When the partner is already a parent, the likelihood of having a child decreases. Note that this variable is statistically in the model with the first four variables in Table 2 only, but the introduction of other controls reduces the significance of this result. When the first partnership is a direct marriage, transitions to motherhood and fatherhood are significantly more frequent. The same applies to women and men who have a religious practice. It may reflect more traditional values and preferences towards the family. Moreover, social origin is significantly associated with the birth of a first child. Finally, older cohorts gave birth more frequently than more recent cohorts within 4 years. As expected, the experience of a break-up considerably reduces transitions to parenthood.

Tableau 2 : Estimated odds ratios (OR) of the occurrence of a first birth within 4 years after the first-union formation, men and women (logistic regression).

	F			M		
	OR	SE	p	OR	SE	p
Age at first-union formation						
< 20	0.93	0.11	–	0.79	0.16	–
20–23	0.91	0.09	–	0.96	0.10	–
24–27	1.00	0.00	<i>Ref</i>	1.00	0.00	<i>Réf</i>
28–31	0.87	0.17	–	1.16	0.15	–
32–40	0.71	0.19	–	1.08	0.18	–
Age at education completion						
< 18	1.26	0.16	–	1.40	0.38	***
18–21	1.00		<i>Ref</i>	1.00		<i>Réf</i>
22 +	0.99	-0.08	–	0.63	-0.42	***
Partner's previous children						
Yes	1.00		<i>Ref</i>	1.00		<i>Réf</i>
No	1.27	0.12	–	1.31	0.13	–
Partners' age difference						
< 3	0.99	0.00	–	0.86	-0.07	–
3 +	1.00		<i>Ref</i>	1.00		<i>Réf</i>
Direct marriage						
Yes	2.47	0.45	***	3.23	0.59	***
No	1.00		<i>Ref</i>	1.00		<i>Réf</i>
Non-cohabitant period duration (years)						
< 1	0.76	-0.10	–	1.23	0.10	–
1–2	1.00		<i>Ref</i>	1.00		<i>Réf</i>
3 +	0.78	-0.08	–	1.11	0.00	–
Religious practice						
Yes	1.40	0.17	**	1.38	0.16	*
No	1.00		<i>Ref</i>	1.00		<i>Réf</i>
Father's socio-professional category						
High-Medium category	1.00		<i>Ref</i>	1.00		<i>Réf</i>
Low category	1.37	0.16	**	1.27	0.12	*
Birth cohort						
1948–55	1.26	0.26	**	1.43	0.24	**
1956–62	1.00		<i>Ref</i>	1.00		<i>Réf</i>
1963–70	0.73	-0.29	***	1.01	-0.11	–
Separation within 4 years						
Yes	1.00		<i>Ref</i>	1.00		<i>Réf</i>
No	4.29	0.73	***	5.14	0.82	***
<hr/>						
-2 Log		2,466			1,946	
%		74.4			75.4	
N (non-weighted)		2,349			1,762	

Significant level : * p<0.05, ** p<0.01, ***p<0.001, – n.s.

3. Estimating the role of age on the average timing between the first union and the first birth

In this results section, we estimate the net influence of age on the timing of first births after union formation from analysis of variance (ANOVA) models for men and women who had a first child during their reproductive life. The only control that changes the estimates for age is the one measuring age at education completion (Figure 7 in the appendix). For women, without any controls, the timing of first births does not change until age 27, while adding variables in the models shows that the timing before conceiving decreases with age from the early twenties onwards. Therefore, men and women forming a first union later wait less time before having a child, and this effect is almost linear.

As for the other characteristics taken into account, the timing between the first relationship and the first birth rises with age at education completion, significantly for both women and men. The partner's age difference is significant for women. Those who are in a relationship with an older partner have a first child on average more quickly. Conversely, women who had either a short or a long non-cohabiting period wait longer before having a first child (not significant for men). The fact that the union begins with a marriage is associated with a first birth arriving sooner for both genders, as well as religious practice (significant for women only). Finally, people with a lower social background have a child more quickly. There is also a change between cohorts, with the most recent ones having a first birth later after union formation.

Tableau 3 : Estimates of the influence of characteristics on the mean duration between first union and first birth, men and women (ANOVA)

	F			H		
	Est.	SE	p	Est.	SE	p
Age at first-union formation						
< 20	0.77	0.23	**	1,08	0,35	**
20–23	0.61	0.21	**	-0,05	0,23	–
24–27	0.00		<i>Ref</i>	0,00		<i>Ref</i>
28–31	-0.32	0.36	–	-1,21	0,35	**
32–40	-1.14	0.46	*	-1,75	0,45	***
Age at education completion						
< 18	-0.54	0.17	**	-0,74	0,21	*
18–21	0.00		<i>Ref</i>	0,00		<i>Ref</i>
22 +	0.24	0.21	–	0,50	0,26	–
Partner's previous children						
Yes	0.00		<i>Ref</i>	0,00		<i>Ref</i>
No	-0.33	0.29	–	0,31	0,43	–
Partners' age difference						
< 3	0.44	0.15	**	-0,14	0,21	–
3 +	0.00		<i>Ref</i>	0,00		<i>Ref</i>
Direct marriage						
Yes	-0.99	0.16	***	-1,18	0,24	***
No	0.00		<i>Ref</i>	0,00		<i>Ref</i>
Non-cohabitant period duration (years)						
< 1	0.56	0.17	**	-0,04	0,24	–
1–2	0.00		<i>Ref</i>	0,00		<i>Ref</i>
3 +	0.38	0.18	*	-0,14	0,24	–
Religious practice						
Yes	-0.36	0.15	*	-0,07	0,22	–
No	0.00		<i>Ref</i>	0,00		<i>Ref</i>
Father's socio-professional category						
High-Medium category	0.00		<i>Ref</i>	0,00		<i>Ref</i>
Low category	-0.75	0.16	***	-0,55	0,20	*
Birth cohort						
1948–55	-0.46	0.18	*	-0,70	0,24	**
1956–62	0.00		<i>Ref</i>	0,00		<i>Ref</i>
1963–70	0.48	0.17	*	-0,10	0,23	–
Separation within 4 years						
Yes	0.00		<i>Ref</i>	0,00		<i>Ref</i>
No	-2.68	0.22	***	-3,66	0,30	***
Intercept						
	6.32	0.41	***	8,55	0,59	***
R ²		0.20			0.20	
N (non-weighted)		2,145			1,581	

Significant level : * p<0.05, ** p<0.01, ***p<0.001, – n.s.

4. Discussion et conclusion

This article focuses on the birth of a first child and its timing, according to the age at which men and women from the 1948 to 1970 cohorts begin their partnership histories in France. Descriptive analyses first show that transitions to motherhood and fatherhood decrease with age at union formation. In addition, women and more clearly men with children accelerate the transition to a first birth as age at first partnership increases.

This effect of age partly reflects the types of unions that are more likely to be formed at certain stages in the life course; and the characteristics of men and women who are more likely to start their partnership trajectories at an earlier or later age. Multivariate analyses suggest, in particular, that the influence of young ages at first union on fertility is moderated by women's age at education completion. Previous research has already highlighted the role of an older age at the end of studies on the postponement of a first birth (Ní Bhrolcháin et Beaujouan, 2012). On the one hand, longer studies can contribute to developing less interest towards family (Impicciatore et Zuanna, 2017), as women want to invest more in their professional careers. On the other hand, people who finish their studies later are more likely to be in education when they form their first union, and thus wait longer before wanting a first child. The influence of age on the timing of first births for women is also moderated by the length of the non-cohabiting period of the union. However, women who cohabit quickly after the beginning of the relationship (less than 1 year) wait longer to conceive, as well as those who have waited two years or more. Rapid cohabitation can be motivated by material and economic considerations (especially at young ages), without necessarily considering having children quickly. Moreover, women who are less in a hurry to cohabit may also be less prone to start a family.

As individuals age, the likelihood of forming a union with a man or woman who already has children increases. The partner's previous fertility does not influence the fertility timing or the occurrence of a first birth. One might have expected that this would have a negative effect on fertility levels, because the partner no longer wants a child, because individuals accept their step-parent status, or because these unions are more often broken (Beaujouan, 2011). To go further, it would be interesting to investigate the influence of this factor before the formation of first unions. How does the existence of children influence evaluating criteria for potential partners, to what extent it plays a role on the probability of forming a relationship according to age and other characteristics?

Age profiles at union formation can also be linked to unobserved characteristics, such as family preferences and attitudes (Baizán, Aassve et Billari, 2003). For some people, being in a late relationship for the first time may reflect less desire to have children.

While age reflects characteristics related to the period of the life course at which the first union is formed, some of its influence remains significant even when controlled for a set of characteristics. More precisely, it appears as a strong and almost linear factor influencing the timing of first births. This may reflect a certain perception of time pressure, concerns about age-related infertility, desire to catch up with what may be perceived as a 'delay' in relation to the norms governing mating and fertility schedules, or a desire not to be too old to become a parent. However, one could have expected it to be less the case for men than for women, as the former are less socially and biologically constrained by their age to conceive (Billari et al., 2011 ; Dunson, 2002 ; Rijken et Knijn, 2009). A later age at union formation, however, may be closely

related to motivations to become a father, with men perhaps adopting more deferral behaviours regarding partnership, until they feel ready to start a family, resulting in a shorter timing between first union and birth.

On the other hand, once all the characteristics of the individual and the union are controlled for, the occurrence of births within 4 years does not vary according to age at union formation. We can interpret this as the fact that, up to the oldest age group studied here (32– 40), biological constraints are not important enough to limit births in the medium run. The decrease observed in the descriptive analysis would therefore reflect different choices in terms of union and partner, or individual characteristics of people less likely to have children.

Limitations and perspectives can be discussed. The role of separation on fertility could be addressed more. Indeed, a separation can delay the birth of a first child since the first union, and it can also be linked to less intentions to start a family. Conversely, having a child also reduces the likelihood of breaking up (Lyngstad et Jalovaara, 2010). In this article, we do not distinguish whether the first births took place in a first union or a subsequent one, even if the first birth remains mainly an event occurring within the first cohabiting union. The perspective adopted here is indeed to consider the beginning of partnership histories as the starting point for family trajectories, and from there to question the level and timing of first births.

Finally, if the literature lacks particular attention to age as a relevant variable to explain fertility behaviours, the analysis presented here could go even further with a larger sample size. It would be interesting to question differences by educational level and to report on the role of age at union in these differences. Indeed, more-educated people form their first partnership and have their first child later than others (Jalovaara et al., 2018 ; Winkler-Dworak et Toulemon, 2007). Similarly, further research could more systematically examine differences from a generational perspective. Do people wait longer between the first union and the first child from one generation to another? In addition, an international perspective would be interesting to compare this process from first union to first birth in France and other countries.

Despite further investigations, the age-centred analysis at the beginning of partnership trajectories provides elements for a discussion on the social pressure that age can exert for women but also for men, despite less biological constraints for the latter. From the early thirties, age reduces the likelihood of having a child and suggests accelerating behaviours for a first birth after union formation. It would be interesting to examine these results through qualitative analyses, in order to question the motivations of individuals who form late unions and have a first child within a short timing. For men, one may wonder whether these aspects are less related to biology than for women, and for example whether they are more related to their partner's 'biological clock' than their own (Rijken and Knijn, 2009; Santelli and Vincent, 2018).

5. References

- BAIZÁN P., AASSVE A., BILLARI F.C., 2003, « Cohabitation, Marriage, and First Birth: The Interrelationship of Family Formation Events in Spain », *European Journal of Population*, 19, p. 147-169.
- BEAUJOUAN E., 2011, « Second-Union Fertility in France: Partners' Age and Other Factors », *Population (English Edition)*, 66, 2, p. 239-273.
- BERGSTRÖM M., COURTEL F., VIVIER G., 2019, « Uncoupled: Experiences of Singlehood in Contemporary France », *Population*, 74, 1, p. 103.
- BERRINGTON A., 2004, « Perpetual postponers? Women's, men's and couple's fertility intentions and subsequent fertility behaviour », *Population Trends*, 117, p. 9–19.
- BILLARI F.C., GOISIS A., LIEFBROER A., SETTERSTEN R., AASSVE A., HAGESTARD G., SPEDER Z., 2011, « Social age deadlines for the childbearing of women and men », *Human Reproduction*, 26, 3, p. 616–622.
- BOZON M., 1990, « Les femmes et l'écart d'âge entre conjoints. Une domination consentie. II.- Modes d'entrée dans la vie adulte et représentations du conjoint », *Population*, 45, 3, p. 565–602.
- COOKE A., MILLS T.A., LAVENDER T., 2012, « Advanced maternal age: Delayed childbearing is rarely a conscious choice. A qualitative study of women's views and experiences », *International Journal of Nursing Studies*, 49, 1, p. 30–39.
- DUNSON D.B., 2002, « Changes with age in the level and duration of fertility in the menstrual cycle », *Human Reproduction*, 17, 5, p. 1399-1403.
- IMPICCIATORE R., ZUANNA G.D., 2017, « The impact of education on fertility in Italy. Changes across cohorts and south–north differences », *Quality & Quantity*, 51, 5, p. 2293-2317.
- JALOVAARA M., NEYER G., ANDERSSON G., DAHLBERG J., DOMMERMUTH L., FALLESEN P., LAPPEGÅRD T., 2018, « Education, Gender, and Cohort Fertility in the Nordic Countries », *European Journal of Population*.
- LA ROCHEBROCHARD É. (DE), THONNEAU P., MCELREAVEY K., 2003, « Paternal Age Over 40 Years: The “Amber Light ” in the Reproductive Life of Men? Minireview », *Journal of Andrology*, 24, 4.
- LERIDON H., 2008, « A new estimate of permanent sterility by age: Sterility defined as the inability to conceive », *Population Studies*, 62, 1, p. 15–24.
- LYNGSTAD T., JALOVAARA M., 2010, « A review of the antecedents of union dissolution », *Demographic Research*, 23, p. 257-292.
- NÍ BHROLCHÁIN M., BEAUJOUAN É., 2012, « Fertility postponement is largely due to rising educational enrolment », *Population Studies*, 66, 3, p. 311-327.

PHILIPOV D., BERGHAMMER C., 2007, « Religion and fertility ideals, intentions and behaviour: A comparative study of European countries », *Vienna Yearbook of Population Research*, 5, p. 271-305.

RIJKEN A.J., KNIJN T., 2009, « Couples' decisions to have a first child: Comparing pathways to early and late parenthood », *Demographic Research*, 21, 26, p. 765–802.

SCHYTT E., NILSEN A.B.V., BERNHARDT E., 2014, « Still childless at the age of 28 to 40 years: A cross-sectional study of Swedish women's and men's reproductive intentions », *Sexual and Reproductive Healthcare*, 5, 1, p. 23–29.

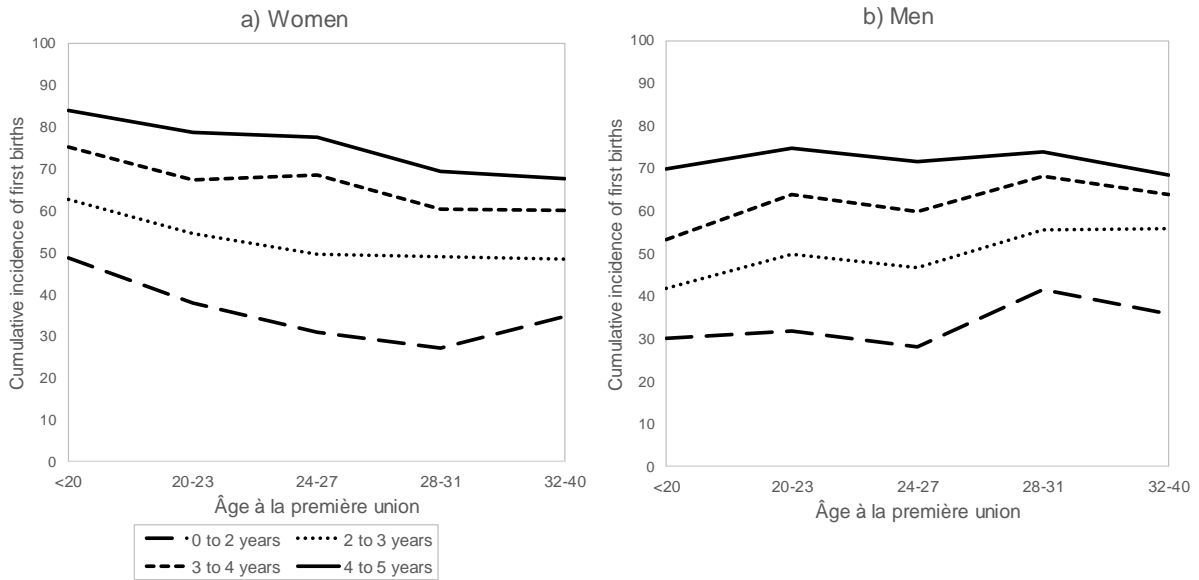
TESTA M.R., 2006, « Childbearing Preferences and Family Issues in Europe », Eurobaromètre.

WINKLER-DWORAK M., TOULEMON L., 2007, « Gender Differences in the Transition to Adulthood in France : Is There Convergence Over the Recent Period ? »,.

Appendices

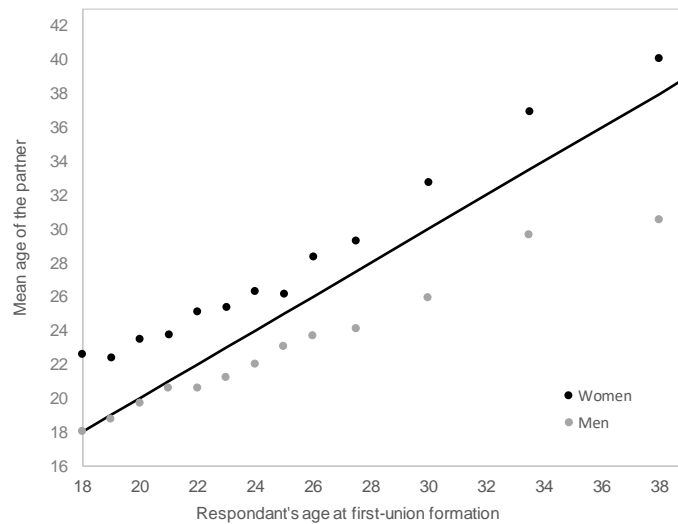
5.1. First births among non-broken unions within different timeframes

Figure 4 : Cumulative incidences of first births after union-formation ('survival tables')



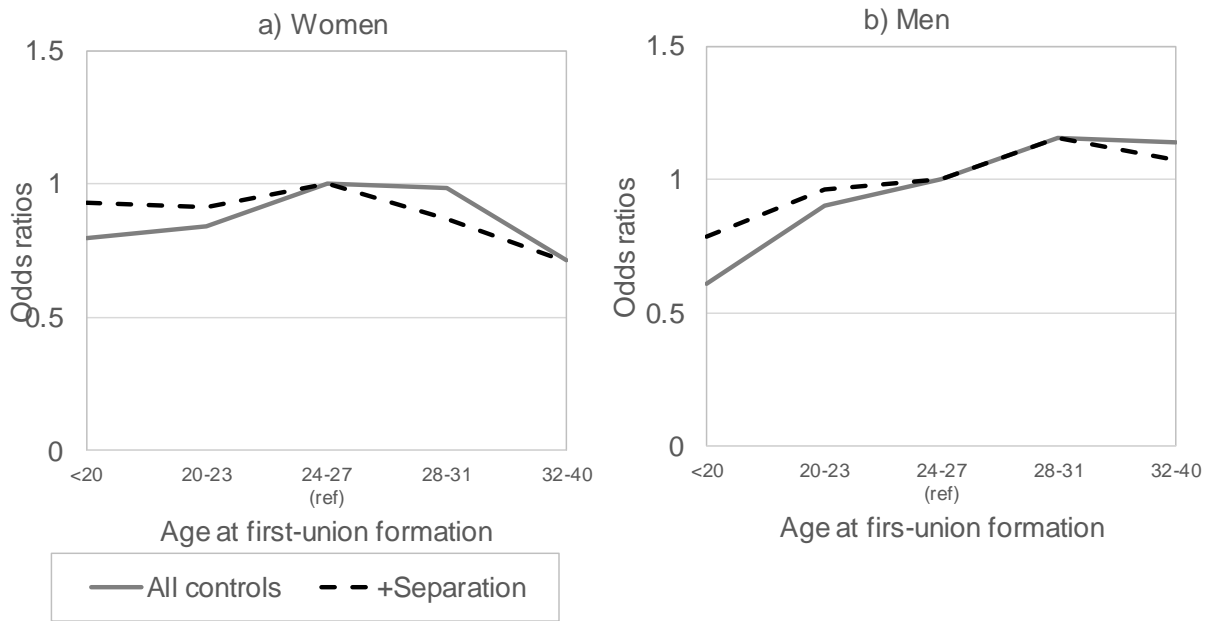
5.2. Mean partner's age at first-union formation

Figure 5 : Mean partner's age at first-union formation by respondent's age



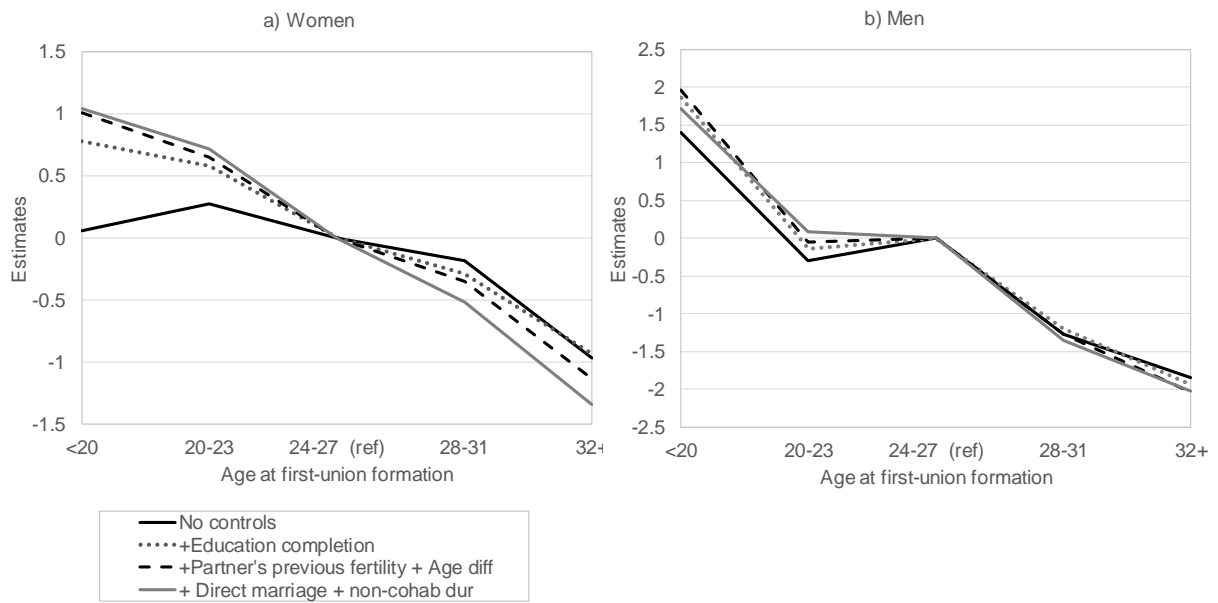
5.3. Estimation of the level of first births within 4 years after union formation

Figure 6 : Influence of age on the occurrence of a first birth within 4 years after union formation (*odds ratio*), depending on controls (logistic regressions)



Note : Other controls are education completion, marital status, partner's previous fertility, duration of the non-cohabitation period, religious practice, father's social status and birth cohort.

Figure 7 : Influence de l'âge à la première mise en union sur la durée moyenne entre la première mise en couple et l'arrivée d'un premier enfant, selon les contrôles (ANOVA).



Notes : Significant at all ages except 20-23 years old.