Behind the Veil: the Effect of Banning the Islamic Veil in Schools.*

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Abstract

The Islamic veil is a subject of intense controversy in many Western countries. In particular, it remains an open question whether banning the veil in schools prevents female Muslim students from engaging in normal schooling, or whether it is a policy that promotes their integration. We shed light on this question by exploring the effects of the 1994 ministerial circular that required French schools to ban Islamic veils. We show that the ban coincided with a significant improvement in the educational attainment of female students of Muslim origin, as well as a rise in mixed marriages.

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1 Introduction

Rising immigration from Africa and the Middle East is fueling extreme political tensions in many Western countries, particularly in Europe, with the rise of far-right political groups that are hostile to immigrants and their descendants. Immigration from Muslim countries is a source of particular tension, as many Westerners perceive Islam and Muslims as a threat to western values (see, e.g. Cesari [2013], Ciftci [2012], Sniderman et al. [2004]).

Driven by their public opinion, Western countries have implemented policies that are less and less tolerant towards minorities and foreign cultures. Several governments have already adopted regulations restricting the wearing of veils by Muslim women, particularly the wearing of veils covering the entire face.[1] These anti-veil policies are often presented as a way to protect host country values, but we know very little about their effects on the integration of Muslim populations into their host societies. One of the main objectives of this paper is to shed light on this issue by analysing the ban of hijabs, niqabs, and burkas (hereafter, Islamic veils) in French schools in 1994. Our research strategy compares the educational outcomes of students with Muslim and non-Muslim backgrounds across cohorts who reached puberty (and the age of wearing the veil) either just before or just after the prohibition.

Islamic veils have been a subject of controversy in France for nearly thirty years. Despite fierce debates, the question remains open as to whether banning the veil at school is a mark of intolerance that prevents female Muslim students from engaging in regular schooling, or whether it is instead a policy that promotes their academic integration. In 1989, shortly after the first-ever exclusions of veiled students were implemented, the highest French administrative court (the *Conseil d'Etat*) issued a tolerant statement that went against these exclusions. Solicited by the socialist government then in place, the *Conseil d'Etat* indicated that a general ban on Islamic veils would be a violation of students' freedom of conscience.

A few years later, after the return to power of the right wing, a significant hardening of the doctrine took place. In 1994, the new Minister of Education, François Bayrou, issued a circular in which he officially asked public schools to ban "ostentatious" religious symbols at

[1]Several European countries have banned full-face veils in public spaces, including France (2010), Belgium (2011), Bulgaria (2016), Austria (2017) and Denmark (2018). In the Netherlands, burqas and niqabs have been prohibited in schools, hospitals, and public transport since 2012. In Norway, they have been prohibited in schools and universities since 2017. Local bans have also been issued in Spain and Italy. In Germany, several regions have banned the wearing of Islamic veils by female teachers.

school, on the grounds that they are by themselves instruments of proselytizing which impede the normal course of teaching activities. The 1994 circular targeted mostly Islamic veils and asked principals and teachers to oppose the wearing of them. The circular also provided legal recommendations on how to effectively ban them (e.g., by invoking the problems posed by the wearing of the veil in certain sports activities or in certain experimental science or technology courses). However, the general idea was to privilege the dialogue with families, to convince rather than coerce and two mediators were appointed to help schools implement the circular. According to these mediators, the method was very effective : in the year that followed the circular, about 3000 families asked for explanations about the circular, but in more than 95% of cases, families complied with the new regulation and accepted that their daughter could go to school without being veiled [Chérif, 2003].

To identify the effect of the 1994 circular, we focus on women who were born in France, and we compare the educational outcomes of those whose fathers' nationality at birth is from a predominantly Muslim country (hereafter, Muslim group) with those whose fathers' nationality at birth is French (hereafter, non-Muslim group). The vast majority of women in the non-Muslim group were not directly affected by the ban and can serve as a "control" group. The Muslim group, on the other hand, was directly targeted by the veil prohibition, although it is hard to foresee ex-ante in which direction it was mainly affected. For students who wore the veil, the ban may have had a negative effect on those who were most attached to it, as it may have led them to drop out of school. But the ban may also have had a positive effect on students who were forced to wear the veil and on students suffering from stigmatization and discrimination in school because of it. Finally, for those who did not wear the veil, the ban may have had positive effects on all of those whose parents wanted them to wear it, by reducing family tensions.

Data from the Labor Force Surveys (LFS) conducted between 2005 and 2019 suggests that positive effects of the 1994 circular dominate. When comparing women in the Muslim group to those in the non-Muslim group, the data reveal a very significant increase in educational attainment in the Muslim group for the cohorts that attended middle school and reached puberty after the ban. This increase clearly coincides with the implementation of the circular: the more years the Muslim group women spent in middle school after the circular the higher their educational attainment. When comparing men in the Muslim group with those in the non-Muslim group, there is no similar increase in educational attainment in the

Muslim group, which is consistent with the assumption that the observed increase for females is driven by a policy targeting female students. We are not aware of other interventions that could have changed the educational trajectory of Muslim group women who were in middle school in 1994. We replicate our main results in an independent data source, showing that this pattern does not only appear in the LFS data. Our main finding, that positive effects dominate, is consistent with ethnographic surveys conducted at the time of the ban, which suggest that most young women from Muslim families who lived in France would prefer not to wear the veil (e.g., Lacoste-Dujardin [1996]).

Further explorations show that the veil ban did not coincide with any significant change in the educational level of women whose fathers' nationality was neither Muslim nor French, consistent with the assumption that – among women born from a non-French father – only Muslim group women were affected by the ban on the veil. Heterogeneous analyses further reveal stronger effects for Muslim women with a Maghreb or Middle East origin (a group comprising 90% of Muslim fathers) than for Muslim women originating from other African countries (a group comprising 50% of Muslim fathers only). This further suggests that living in a Muslim family is the main driver of our effects, rather than an overall trend in women with non-European backgrounds. We also find that Muslim women who had a mother who never worked (which we show to be a sign of parental attachment to tradition and to the wearing of the veil) benefit more from the ban than women whose mothers worked at some point. This is consistent with the idea that tensions between parents and adolescents about the veil were more likely to occur in more traditional families. Finally, we analyze the longer-term effects of the ban and provide suggestive evidence that the 1994 circular has helped to improve the integration of Muslim group women into French society. In particular, we find that the circular coincided with a very significant increase in the proportion of Muslim group women who marry a person from the non-Muslim group.

Ministerial circulars do not have the force of law, and the decisions they inspire can always be challenged in court by citizens. In 2004, the French government passed a law indefinitely prohibiting veils in schools and quelling any possible debate.[2] Cohorts reaching puberty in 2004 were also the first to benefit from a reduction in the number of years needed

[2]The law did not simply forbid the wearing of Islamic veils, but the wearing of any visible sign of religious affiliation. In 2004-2005, however out of 639 religious signs recorded in French schools, only 2% (i.e., 13) were not Islamic veils [Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche, 2005].

to complete one of the high school diplomas (*Baccalauréat professionnel*). When comparing Muslim with non-Muslim group women, if anything, there is an increase in the proportion of high school graduates in the Muslim group for cohorts reaching puberty in 2004, although smaller than for cohort reaching puberty in 1994. This result might reflect not just the 2004 law effects, but also the differential effects of the high school diploma reform, which explains why our paper focuses mainly on the effects of the 1994 circular.[3]

To our knowledge, this article develops the first evaluation of the French ministerial circular of 1994 and offers one of the very first empirical contributions to the debate on policies restricting the wearing of the Islamic veil in schools in Western countries.[4] In another recent contribution, Abdelgadir and Fouka [2020] use the LFS conducted between 2005 and 2012 to provide an evaluation of the 2004 law. Building on a comparison of cohorts born just before and after 1985 (i.e., those having turned age 19 just before or after 2004), they conclude that the law had a negative effect on the educational attainment of girls from the Muslim group. Because of its concomitance with the recent high school reform, the 2004 law is not the focus of our paper. It turns out, however, that when we replicate this analysis with the full set of available LFS, we identify no significant change after the 1985 cohort. Below we discuss some possible reasons for this empirical discrepancy, one of which being that using a larger number of LFS (i.e., covering the period 2005-2019 rather than 2005-2012) helps to reduce the statistical noise that confounds the estimation of changes across cohorts.

Generally speaking, our analysis of the 1994 circular contributes to the literature examining the role of social pressure and the importance assigned by adolescents to the perceptions that others have of them (see e.g. Akerlof and Kranton [2002], Austen-Smith and Fryer Jr [2005], Bursztyn et al. [2018], Bursztyn and Jensen [2015], Coleman [1961]). Our findings are consistent with a model where a significant fraction of Muslim group female students are caught between school contexts in which wearing the veil is not the norm and family environments which impose costs to those not "acting" Muslim whenever possible. Before the ban, attending school forced these students to experience social adversity, either at school (if they chose to wear the veil) or at home (if they refused to wear the veil), with the pos-

[3]Several papers have attempted to evaluate the high school reform, see for example Defresne and Dubois [2013] or, more recently, Charousset [2021].

[4]There is, however, a long-standing literature exploring the effect of country of origin on the education and labor market outcomes of second-generation immigrants in France, see, e.g., Rathelot [2014] or Aeberhardt, Coudin, and Rathelot [2017]

sible consequence of their disengagement from school. After the ban, tension was removed from one side and attending school without wearing the veil was no longer perceived as a problematic choice at home (it was possible to attend school without experiencing social reprobation), resulting in lower dropout probability.

Recent contributions made by Dahl et al. [2020] echo the idea that female students with a Muslim background continuously experience opposing tensions and that this provides insight into how they may respond to legal changes to the rules of integration in their parents' host society. They show that a reform that increased opportunity to integrate into German society (through easier access to German citizenship) eventually had a negative impact on the well-being of female students with a Muslim background, most likely by increasing tensions with identity-concerned parents.[5] Religious disagreements between parents and children have also been documented as detrimental to their relationship [Myers, 2004, Stokes and Regnerus, 2009].

Our research also contributes to the economic literature on the integration of children with a foreign cultural background and, more specifically, on the integration of children with a Muslim background into non-Muslim Western societies. With the recent record influx of Muslim migrants fleeing poverty and conflicts in Africa and the Middle East, the integration of these families and their children is the subject of major policy debates in non-Muslim host countries, especially in Europe. The economic literature has long documented that children with a foreign cultural background drop out early from school, mostly because they live in low-income families with limited proficiency in the language of the host country (see, e.g., Dustmann et al. [2012], Schnepf [2007]). However, it remains to be determined why the role of these family inputs varies greatly across children's countries of origin and host countries [OECD, 2015]. In this context, our paper highlights the key role played by a different mechanism, namely the difficulties faced by adolescents with a foreign cultural background in reconciling their culture of origin with that of their host country. These difficulties appear to be especially important for children with a Muslim background living in a non-Muslim Western country, since expressing their commitment to Islam can be interpreted as a commitment to an anti-Western ideology and cut them off from their peers [Cesari, 2013]. Eventually,

[5] A large body of literature documents a negative relationship between parent-adolescent conflicts and adolescents' school performance and behavior (see e.g. Collins and Laursen [2004], Dotterer et al. [2008], Timmons and Margolin [2015])

our research also helps to unravel why school problems are generally much more prevalent for students whose parents come from a Muslim country than for other second-generation students (Brinbaum and Kieffer [2009] and Brinbaum et al. [2010]).

The remainder of the paper is organized as follows: Section 2 describes the institutional and historical context, while Section 3 describes available data and variables. Section 4 presents our conceptual framework and Section 5 provides some basic evidence about the effect of the 1994 circular. Sections 6, 7 and 8 develop our regression analysis, and Section 9 concludes.

2 Historical and institutional context

In September 1989, three Muslim girls were expelled from a middle school of the city of Creil (70 km north of Paris) on the grounds of refusing to remove their Islamic headscarves during the school day. In a letter to parents, the school principal explained that, according to him, Islamic headscarves represent an "excessive externalization" of religious affiliation, incompatible with the neutrality that must prevail in public schools.[6] After this event, other veil-related disputes broke out in the following weeks, most notably in the cities of Marseille and Avignon.

The Conseil d'Etat statement

In an effort of appeasement, the (socialist) Minister of Education at that time, Lionel Jospin, seized the *Conseil d'Etat*, which is in French law, the final arbiter of conflicts between citizens and public institutions. At the end of 1989, the *Conseil d'Etat* issued a statement against a general ban of Islamic veils at schools. According to the *Conseil*, such a prohibition would go against students' freedom of conscience and their right to express their religious beliefs. The *Conseil* stated that banning veils at school was only possible on a case-by-case basis and under particular circumstances, when wearing a veil threatens the smooth running of courses (for example, a student refusing to take off her veil during swimming lessons could be expelled). In the same year, the Minister published a circular in which he rephrased the *Conseil's* statement, by calling educational teams to judge case by case the problems raised by the wearing of veils in their schools. Following the *Conseil's* statement and the Ministerial circular, the

[6] Supported by Jacques Chirac's party (RPR, right-wing), this school principal will be elected member of the parliament in the following general elections, in 1993 (and reelected in 1997).

expulsions in the city of Creil were canceled and the three girls went back to school.

The 1994 Circular

The 1989 *Conseil d'Etat* statement did not avoid the proliferation of local disputes in the coming years. In the early 1990s, many teachers and principals started to complain about not having clear instructions on what to do when Muslim students wear a veil in school. In 1994, one year after the return of the right to power, a group of newly elected MPs (among which the former Creil principal) began to lobby for veil prohibition in schools [Pelletier, 2005]. In September 1994, the new Minister of Education, François Bayrou, issued a circular where he proposed a new interpretation of the laws regulating French secularism at school, but in a particularly restrictive sense. The text of this circular introduced a distinction between discreet religious signs and ostentatious signs, asking school principals to ban the latter. To be specific, it is written: "It is not possible to accept at school the presence of signs so ostentatious that their meaning is precisely to separate certain pupils from the rules of coexistence at school. These signs are, in themselves, elements of proselytism, all the more so when they involve challenging certain courses or disciplines, whether they endanger pupils or cause disruption in the school's life. I, therefore, ask you to propose (...) the prohibition of these ostentatious signs, even though the presence of more discreet signs, showing only the attachment to a personal conviction, cannot be subject to the same reservations, as stated by the *Conseil d'Etat* (...)". The circular ends by proposing a model article to be included in schools' internal rules,[7] in which it is stipulated that "ostentatious signs, which in themselves constitute elements of proselytism or discrimination, are prohibited". Bayrou also appointed two senior mediators (Rachida Dati and Hanina Cherifi, both with a Muslim background) to help schools to implement the circular and resolve conflicts that might arise by its implementation. The 1994 circular main aim was to regulate the wearing of Islamic veils in public schools, but, as Chérifi [1996] later put it, the general idea was to "convince rather than coerce".

In the French context, a circular is a document that sets out the state of the law for civil servants, so as to promote the most uniform application of the law across the country. A circular therefore does not enact new norms but proposes an interpretation of the existing ones. This interpretation functions as a working tool for public agents (in our case, principals and teachers) and as a source of information for users (in our case, students and their families).

[7] Appendix A presents the full text of the circular.

By influencing agents' practices and users' representations, the impact of a circular can be very important, even if the decisions that it inspires can always be challenged before a court. In the year that followed the 1994 circular, about 3,000 families expressed concerns, but the vast majority eventually agreed to send their children to school without the veil [Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche, 2005]. Only 139 cases could not be settled and led to exclusions.[8] One of the most direct consequences of the circular was therefore to drastically reduce the possibilities of wearing the veil in school. In 2003, in an interview at one of the main French weekly magazine (the *Nouvel Observateur*), one of the mediator appointed by the Ministry of Education, Hanina Cherifi, confirmed that during the academic year 1994-1995, "... we had 3000 cases for which an intervention was necessary. In 2002, only about 150". Such a change in the rules for wearing the veil in schools is likely to have affected the educational trajectories of all female students of Muslim origin, whether they were in favor of or opposed to wearing the veil. One of the main objectives of our research will be precisely to evaluate the overall impact of the 1994 circular.

The 2004 Law

In the years following the 1994 circular, disputes between schools and families remained to be judged by teachers and principals themselves, on a case-by-case basis, in often-difficult local contexts. Teachers and principals wishing to implement the 1994 circular were in the front line, as it was up to them to convince students (and their families) to give up wearing the veil. Moreover, when the dialogue with students failed, and exclusions had to be decided, teachers and principals could not be certain that these exclusion decisions would not be ultimately cancelled by the *Conseil d'Etat*.

In this context, the French President Jacques Chirac set up a national commission to help to define a better implementation of the principle of secularism in French society. During the public hearings organized by this commission, almost all teachers and principals auditioned declared themselves in favor of a new law that would clearly affirm the illegality of osten-

[8] According to reports to the Senate and to the Ministry of Education, only about 39% of these exclusion decisions were overturned before a court (see Rapport d'Information au Sénat [2004] or Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche [2005]). It should be noted that the few students who were definitely excluded had the option of continuing their education through public distance learning (which is free for middle-school students). On the other hand, private Muslim education was hardly an option, as private Muslim schools were very rare in France (in 2007, there were no more than 4 in the whole of France, see Goulet, Nathalie and Reichardt, André, [2016].

tatious religious symbols and would relieve educational teams from having to judge on a case-by-case basis the legality of these symbols.[9] In March 2004, a new law about secularism in French society was approved by the vast majority of the parliament, the most emblematic article of which being the prohibition of ostentatious religious symbols in schools.

According to the 2005 report to the Ministry of Education [Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche, 2005], there were only 47 exclusions of veiled students in the year that followed the 2004 law. This contrasts with the 139 exclusions in the year that followed the 1994 circular. This is consistent with the assumption that the number of potential conflicts between schools and families declined strongly across the 1994-2004 period, so that the 2004 law only completed the evolution begun in 1994.

The educational system and the 2008-2009 high school reform

Between 1989 and 2004, the French doctrine about the presence of Islamic veils in schools moved from tolerance to total prohibition. In this paper, our main ambition is to assess the extent to which this change affected the school trajectories of female students from Muslim families and their ability to complete secondary education.

In France, elementary education lasts five years (from age 6 to 11), middle school lasts four years (from age 11 to 15), and high school lasts three years. Given that the decision of wearing a veil is usually taken at puberty (i.e., around ages 12-13), it is generally during the middle school years that the conflict between wearing the veil and school attendance becomes relevant. Specifically, according to a report to the government on the application of the 2004 law,[10] there were about 640 veiled students in 2004-2005, a little less than 53% in high school (grades 10 to 12), a little less than 47% in middle school (grades 6 to 9), and less than 1% in primary schools. These numbers are consistent with the assumption that students wore the veil mostly from grade 7 (age 12-13) to grade 12 (age 17-18).

Schooling is compulsory until the age of 16, but many students begin to disengage from school earlier, before the end of middle school, especially in deprived neighborhoods. According to a recent report from the Ministry of Education, among families in the bottom quartile

[9]The commission comprised 20 members and conducted about 140 hearings. The commission delivered a report to the president with proposals about how the principle of secularism should be implemented in French society. One of the main proposals was to ban the Islamic veil in schools (see Commission de réflexion sur l'application du principe de laïcité dans la république [2003]).

[10]See Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche [2005].

of the income distribution, more than 7% of middle school students miss more than four half days of school per month without justification [Cristofoli, 2019]. Moreover, middle school students with academic difficulties have to go to pre-vocational or to vocational education with very little possibility to find their way back to high school. In the 1990s, about 20% of middle school students had to go to pre-vocational education before the end of middle school and a total of about 35% never enter high school [Durier and Poulet-Coulibando, 2004].

After middle school, students can continue in high school so as to prepare for the *baccalaureat*, i.e., the high school diploma which marks the end of secondary education and opens the possibility of continuing in higher education. Since 1987, French high schools offer three possible tracks: the general education track, the technological track, and the vocational track. Each track leads to a particular type of high school diploma.

The general and technological high school diploma require three years of preparation (from 10th to 12th grade). Until 2007, the vocational high school diploma required four years of preparation. From 2008, this same diploma requires only three years of preparation (firstly for 1/3 of the different possible occupational tracks, then in a generalized way in 2009). By reducing the length of the program, this reform induced a rise in the proportion of students who continue in vocational high school and, eventually, a rise in the overall proportion who obtain a high school diploma.

The first cohort to be fully impacted by the reform is the cohort of students born in 1992, since they entered into high school in 2008 or 2009 (depending on whether they had repeated a grade or not, in middle or primary school).[11] Administrative data from the Ministry of Education confirms that the proportion of vocational high school graduates stays a little above 12% for cohorts born in the 1980s, but then increases to over 20% for the cohort born in the mid-1990s (see Thomas [2019]). Hence, the first cohorts who benefited from the vocational high school reform were born at the beginning of the 1990s, but these cohorts are also the first who had not yet reached puberty when the 2004 law was issued. To put it differently, the cohorts who were the first to be impacted by the law are also the first who benefited from the reduced cost of vocational high school graduation (as well as from the introduction of catch-up exams for final-year vocational high school students). In this context, the effect

[11] Students who were born in 1991 and entered into vocational high school in 2006 or 2007 may also have been impacted by the introduction of catch-up exams for final-year vocational high school students in 2009. The introduction of these catch-up exams coincides with a significant rise in the pass rates of vocational high school diploma, especially between 2009 and 2011 (see Thomas [2019]).

of the 2004 law cannot be separately identified from the effect of the high-school reform and this is the reason why we will focus on the 1994 reform.

3 Data and sample

We use data from the Labor Force Surveys (hereafter LFS) conducted by the French Statistical Institute between 2005 and 2019. They provide us with information on respondents' gender, education, and date and place of birth for a large representative sample of individuals aged 15 or more. They also provide information on the respondent's parents country of birth and nationality at birth. The LFS is a rotating panel of housing units where each unit remains in the survey for six consecutive quarters. In the following, we keep only the observations that correspond to the first quarter. This leaves us with about 60,000 observations per year and a total sample size of about 850,000 observations.

To check the robustness of our main findings, we also use data from the Permanent Demographic Sample (*Echantillon Demographique Permanent*, hereafter EDP). The French statistical office has maintained and updated this database since 1968 using general population censuses and administrative registers of birth, marriages and deaths (see Couet [2007]). It provides information on gender, date of birth, educational attainment, country and region of birth, and parents' nationality at birth for representative samples of the French population, namely the same set of key information as the LFS. However, the EDP is less reliable than the LFS for measuring some individual characteristics (notably educational attainment) and the samples that can be constructed with the EDP are only half the size that can be constructed with the LFS.

Eventually, as a complement, we also use data from the survey of Trajectories and Origins (Trajectoires et Origines in French, hereafter TeO) conducted in 2008 by the French Statistical Institute and the French Institute for Demographic Surveys. The TeO sample (N≈22,000) is much smaller than the LFS sample, but it provides information on respondents' religious affiliation as well as on that of their parents.

Definition of Muslim and non-Muslim groups

The LFS does not provide direct information on the religious affiliation of respondents' parents. To circumvent this issue, we use available information on the nationality of respondents' parents (defined at the time of parents' birth). Specifically, we know for each respondent whether her father's nationality at birth is French or whether it is from either (a) a Maghreb country (i.e., Algeria, Tunisia or Morocco), (b) a Middle East country (essentially Turkish in the French context), (c) a non-Maghreb African country, (d) a country from South-Asia (i.e., Laos, Vietnam or Cambodia), (e) a European country, or (f) a country from the rest of the world. In the French context, the first two groups of countries include a vast majority of Muslims, whereas the third group is more heterogeneous and include a tighter majority of Muslims [Simon and Tiberj, 2010, 2016]. In the remainder, we focus on LFS respondents who were born in France (i.e., who likely went to school in France). Since Islam faith is passed from fathers to children, we define as "Muslim" those whose father's nationality is from either a Maghreb country, a Middle East country, or a non-Maghreb African country. Conversely, "non-Muslim" are those whose father's nationality at birth is French. Using the TeO survey, we checked that a vast majority ($\approx$82%) of women in our Muslim group have a father who is actually Muslim, versus less than 1% of women in our non-Muslim group. As it happens, our "Muslim" group captures around 87% of the population of women who have a father that is Muslim.

Available LFSs also provide information on father's country of birth, so we could define our Muslim group using this information rather than information on father's nationality at birth. The TeO survey suggests, however, that father's nationality at birth provides a better proxy of father's religion than father's country of birth. Specifically, when we focus on women born in France, the proportion whose father is a Muslim is only about 58% for those whose father was born in a predominantly Muslim country, against 82% for those whose father's nationality is from of a predominantly Muslim country.[12]

Within our Muslim group, there is a majority of individuals whose father's national-

[12]We further checked that our results are unchanged when we use information on father's country of birth to further refine our definition of the Muslim and non-Muslim groups. Specifically, only about 1% of individuals in our Muslim group have a father who was not born in a Muslim country and our results are unchanged when we drop these individuals from the Muslim group. Conversely, about 5% of individuals in our non-Muslim group have a father who was born in a Muslim country and, again, our results are unchanged when we drop them from our non-Muslim group.

ity is from a Maghreb country, while a smaller fraction of individuals had a father whose nationality at birth was from a Middle East or a non-Maghreb African country.

Generally speaking, the purpose of our paper is to compare the evolution of the educational attainment of individuals in the Muslim group with the evolution of the educational attainment of individuals in the non-Muslim group. In particular, we explore whether the difference in high school graduation rates between these two groups changed across cohorts born between the mid-1970s (the last to be unaffected by the 1994 circular) and the early 1980s (the first to reach puberty after the circular). In the French context, the vast majority of individuals finish secondary education before age 21 and, consequently, our working samples will be restricted to individuals aged 21 or more. We checked that our results are unchanged when samples are restricted to individuals aged 22 or more. Some descriptive statistics for our working sample are provided in Appendix Table B1 and B2.

4 Conceptual framework and hypotheses

The 1994 circular and the 2004 law were preceded by intense debates in the media and parliament. Among the objections raised against the ban was the idea that it would encourage school dropout among female students who wished to live according to the rules of Islam. Among the arguments in favor of a new ban was the idea that a "silent majority" of young female students with a Muslim background lived in families and neighborhoods wishing them to live according to the rules of Islam, regardless of the female students' personal desires.[13]

Qualitative surveys conducted in the late 1980s and early 1990s do suggest that, at that time, the vast majority of female students and young adults from Muslim families did not wish to wear a veil [Lacoste-Dujardin, 1996]. They also suggest that high school and middle school students who wore the veil were a heterogeneous group [Gaspard and Khosrokhavar, 1995]. On the one hand, some of them were strongly attached to the wearing of the veil, sometimes even against the wishes of their parents. The veil represented for them a means of affirming a new cultural identity, that of being both a woman who is veiled and free to make her own choices, a woman who is at the same time Muslim and part of French society. On the other hand, others wore the veil only because their parents wished them to do so. They

[13]The report of the 2003 commission for the application of the principle of secularism presents a summary of pros and cons [Commission de réflexion sur l'application du principe de laïcité dans la république, 2003].

reported that the veil made interactions with their peers more difficult and did not understand why such constraints were imposed on them and not on their brothers. This created tensions with their parents, many of whom were especially concerned with preventing their daughters from dating non-Muslim boys.[14] In fact, marriage to non-Muslims is forbidden for women (but not to men) in traditional Muslim societies. In the words of Gaspard and Khosrokhavar [1995], the veil issue "traumatizes" these teenagers, who felt they could not escape the alternative of being rejected either at home or at school. Similar ideas are found in the article written in 1996 by one of the mediators appointed to help schools implement the 1994 circular [Chérifi, 1996]. Ultimately, in a secular country like France, the wearing of the veil can be perceived by teenage girls either as a means of self-assertion that makes school investment easier or as a factor that isolates them from their schoolmates and makes school investment difficult. In the following section, we develop a simple conceptual model so as to make as clear as possible the potential implications of a ban on the veil in such a context.

Model

Let us assume that the utility of students from the Muslim group is written $U(e, v)$ where e denotes their investment in school[15] and v denotes the degree to which they can dress, eat, and behave according to the beliefs and religious precepts of their parents. Variable v is continuous, as the observance of precepts can be very rigorous, but it can also be partial or even very partial. We also assume that v is upward bounded by school regulations, i.e., there exists v_{max} such that $v \leq v_{max}$. In this set-up, the veil ban corresponds to a decrease in v_{max}.[16]

For the sake of simplicity, we assume that U is linear quadratic in v,

$$U(e, v) = u(e) - 0.5c(v - v_{max})^2 + \sigma ev, \tag{1}$$

where parameter c represents the cost that parents impose on their children when they do not observe religious precepts as much as possible. Parameter σ measures the degree to

[14] As mentioned above, there is long-standing social science literature showing that parent-adolescent relationships and conflicts have far-reaching influence on adolescents' development, relations with others, and school performance (see, e.g.,Collins and Laursen [2004], Dotterer et al. [2008], Steinberg and Morris [2001], Timmons and Margolin [2015]).

[15] Variable e must be understood in a broad sense, meaning effort, time spent at school, interest in studying, etc.

[16] Nevertheless, even after the ban on the veil, v_{max} is not null: it remains possible to wear "non-ostentatious" religious signs. No school uniform is imposed. It is also possible to ask for meals adapted to one's beliefs (without pork for example) in school canteens.

which investment in school (e) and religious observance in school (v) are complements or substitutes in the utility function. When σ is positive, the two arguments are complements: this corresponds to students for whom time spent at school and school efforts are less costly when they can respect religious precepts at school. When σ is negative, the two arguments are substitutes: this corresponds to students for whom time spent at school and school efforts are more costly when they have to respect religious precepts in front of their schoolmates. Eventually, we impose that U is concave, which amounts assuming that u is strongly concave, with $u'' < -\sigma^2/c$. Function $u(e)$ can be interpreted as the utility function that would describe student's preferences if she was born in a non-Muslim family.

In this framework, students choose v^* in $[0, v_{max}]$ and e^* in $[0, +\infty[$ so as to maximise $U(e, v)$. Their optimal choices depend directly on whether σ is positive or negative.

Specifically, when σ is positive, it is not difficult to check that U always increases with v (so that $v^*= v_{max}$), while optimal e^* is given by $u'^{-1}(-\sigma v_{max})$ and is increasing in v_{max} (because of u's concavity). Hence, the investment of students for whom school and religion are complements are unambiguously negatively affected by a decline in v_{max}. The effect is stronger when the complementarity is strong.

When σ is negative, restricting to interior solutions, first order conditions imply:

$$v^* = v_{max} + \sigma e^*/c \quad \text{and} \quad u'(e^*) = -\sigma v_{max} - \sigma^2 e^*/c. \tag{2}$$

It is not difficult to check that $\partial e^*/\partial v_{max} = -\sigma/(u" + \sigma^2/c) < 0$. Hence, when σ is negative, given the concavity of U, the impact of a decline in v_{max} on e^* is unambiguously positive.

In sum, under very standard assumptions about preferences, the overall impact of a decline in v_{max} is ambiguous. It depends on the relative number of students for whom school investment and religious observance are substitutes with those for whom school investment and religious observance are complements. Assuming that there is a majority for whom the two arguments are complements (σ is positive), a decline in v_{max} induces a majority of students to disengage from school, with a potentially negative overall effect on educational attainment. In contrast, if there is a large majority of students for whom σ is negative, we can expect a decrease in v_{max} to be followed by a decrease in family tensions, with an overall positive effect on education attainment in the Muslim group.

In the following sections, we are going to compare changes in the educational attainments

of women from Muslim and non-Muslim groups over the cohorts who reached puberty before and after the 1994 circular. In our conceptual framework, under the maintained assumption that the 1994 circular was associated with a specific decline in v_{max} for female students with a Muslim background (but had no effect on v_{max} for the other students), this approach identifies the overall effect of a decline in v_{max} on female students from the Muslim group. Generally speaking, our findings below are consistent with the "silent majority" hypothesis, suggesting that the proportion of female students positively affected by the ban was much higher than that of female students negatively affected, meaning the dominant effect is driven by the effect of the ban on female students for whom school investments and religious observance are substitutes. As discussed in section 9, there were in practice very few veiled students in French schools in the early 1990s, meaning very few students for whom the ban may have represented an additional active constraint, so it is not surprising that negative effects were ultimately very limited.

5 Basic evidence: pre-prohibition vs post-prohibition cohorts

As suggested in the previous section, it is difficult to predict ex-ante the magnitude and even the sign of the effect of the ban on female students in the Muslim group. One simple way to shed light on this issue is to compare the educational outcomes of women in our Muslim and non-Muslim groups, before and after the prohibition of Islamic veils. Is there a specific improvement in the level of education of women in the Muslim group after the prohibition? One first approach to this question is to compare the probability of high school graduation for groups of cohorts born either in the early seventies (1971-1974) or in the late eighties (1987-1990). In reasoning on groups of cohorts, our goal is to start with the simplest analysis possible. The oldest group of cohorts was aged 20 (or more) when the 1994 circular was issued and was unaffected by the anti-veil policies. In contrast, the youngest group of cohorts was directly impacted by these policies, since they were still in pre-elementary or elementary school in 1994. Additionally, these younger cohorts completed their high school education before 2009 and were not impacted by the high school reform conducted at that time.

Changes in high school graduation across cohorts

Table 1 shows the proportion of high school graduates for our two groups of cohorts, and for women and men in the Muslim and non-Muslim groups, separately.[17] When we first focus on pre-prohibition cohorts in 1971-1974, the educational gap between the Muslim and non-Muslim groups is very significant and very similar for women and men, namely about -13.4 percentage points for women (49.1% vs. 62.5%) and -12.5 percentage points for men (41.6% vs 54.1%). Most strikingly, when we focus on post-prohibition cohorts (1987-1990), the gap between women in the Muslim and non-Muslim groups is only half the size of the gap in pre-prohibition cohorts (-6.8% vs. -13.4%), whereas the gap between men in the Muslim and non-Muslim groups remains almost as high in post-prohibition as in pre-prohibition cohorts (-10.5% vs -12.5%). Hence, when we compare pre- and post-prohibition cohorts, we see a clear improvement in the relative level of education of women with a Muslim background, while the relative level of education of men with a Muslim background is quasi-unchanged. The high school graduation gap between women in the Muslim and non-Muslim groups declines by about 6.6 percentage points between pre-prohibition and post-prohibition cohorts, and this decline is statistically significant at the 1% level. In contrast, the high-school graduation gap for men only declines by about 1.8 percentage points, and this decline is not statistically significant at standard levels. Overall, Table 1 clearly suggests that the prohibition of Islamic veils in French schools coincided with a specific improvement in the level of education of women in the Muslim group.[18] In the next section, we further test this assumption by comparing more closely the exact timing of prohibition policies and the evolution of educational outcomes across cohorts.

Graphical analysis

The previous analysis suggests that the 1994 circular helped many female students in the Muslim group to stay engaged in school, maybe by releasing them from family tensions or from stigmatization and discrimination. If this hypothesis is correct, however, the rise in the

[17] As explained in the data section, we focus on LFS respondents who were born in France and who were at least 21 years of age at the time of the survey. These conditions assure that individuals in our sample were educated in France and have completed secondary education. We checked that we obtain almost the same results when we further restrict the sample to respondents who are at least 22 years of age at the time of the survey.

[18] Table G1 in the online Appendix shows the replication of Table 1 using data from the EDP. As discussed in section 3, the EDP is less reliable than the LFS in measuring educational attainment, and the sample size is much smaller. The results nonetheless appear to be consistent with those obtained in Table 1 with the LFS.

educational level of women in the Muslim group should be observed primarily between the cohorts who reached puberty and attended middle school just *before* the circular and those who reached puberty and attended middle school just *after* the circular. Specifically, the rise should be primarily observed somewhere between cohort 1979 and cohort 1983, since cohort 1979 was the last to go through the four years of middle school and reach puberty *before* the circular, while cohort 1983 was the first to go through the four years of middle school and reach puberty *after* the circular.

To shed light on this issue, Figure 1A compares the evolution of the probability of high-school graduation for women in the Muslim and non-Muslim groups across cohorts born between 1971 and 1990. Figure 1B further shows the evolution of the estimated difference in high school graduation probability between the two groups, taking as a reference the difference observed for the 1979 cohort.[19]

These figures reveal that the difference is stable (and close to about 15 points) across cohorts born between 1971 and 1979. The relative level of education of the Muslim group then increases substantially between cohort 1979 and cohort 1982, before stabilizing again at a level about 7 percentage points higher than the 1979 baseline. Hence, the rise in the educational level of women in the Muslim group clearly coincides with the implementation of the circular: the more years they spent in middle school after the circular, the better their educational attainment was (compared to women in the non-Muslim group). In a further investigation, we did not find other interventions that could have changed the educational trajectory of Muslim group women who were in middle school in 1994. These findings are consistent with the assumption that the 1994 circular played a key role in the improvement of the educational attainment of women in the Muslim group.

Our graphical analysis also shows no effect for cohorts who were already in high school when the 1994 circular was issued (cohorts 1976-1979), in line with a model where the middle school years and the puberty years are the most relevant ones. We see the lack of effects for those in high school in 1994 as an empirical result that may be the consequence of the ban coming in an age when most of the educational career is already settled. As mentioned in Section 2, low achieving middle school students were often placed in vocational education

[19]Estimated differences in Figure 1B are obtained from regressing a dummy indicating high school graduation on a full set of interactions between a Muslim dummy and cohort dummies. We also control for department of birth, survey date and father's nationality at birth fixed effects, as well as a dummy indicating father's occupational status.

with little possibilities to enter high school later, something mediated by school disengagement during middle school [Cristofoli, 2019, Durier and Poulet-Coulibando, 2004]. In such a context, difficulties encountered during the middle school years, such as experiencing conflicts at home or discrimination, are likely to have much more lasting effects than shocks experienced later, after the middle school years.

Figure C1 in the online appendix replicates this graphical analysis focusing not on women but on men. Consistent with Table 1, Figure C1 does not show any change comparable to that shown by Figure 1B. The difference in the proportion of high school graduates between men in the Muslim and non-Muslim groups is as large for the cohorts born in the early 1980s as for those born in the late 1980s or in the early 1970s. This result further suggests that the improvement in the educational attainment of women in the Muslim group born between the late 1970s and the early 1980s is a consequence of the circular banning Islamic veils, since such a ban directly affects females, not males. Appendix Figures G1 and G2 show that these results still hold true when we use data from the EDP, even though contrasts are less well-estimated due to the smaller sample size.

Overall, the 1994 circular appears to have helped a significant fraction of female students in the Muslim group to persevere at school. This seems consistent with the assumption that many students were caught between facing rejection either at home or school when deciding whether to wear the veil. By releasing tension from the family side, the 1994 circular may have helped many to persevere at school, at least until the end of high school. In theory, our findings are also consistent with the assumption that some veiled students were discriminated against in French schools before the ban. As discussed in section 9, however, the proportion of veiled students in French schools was likely too small for the reduction of discrimination against them to account for the observed impact of the 1994 circular.

In Appendix F, we provide additional graphical evidence showing that the relative level of education of women in the Muslim group remained stable for cohorts who attended middle school and reached puberty after the 1994 circular and before the 2004 law was passed (i.e., cohorts born between 1983 and 1989) and reached slightly higher levels for the cohorts in our dataset who reached puberty after the 2004 law was passed (i.e., born between 1992 and 1998). We do not detect any similar improvement when we compare men in the Muslim

and non-Muslim group before and after the 2004 law.[20] Nevertheless, it must be emphasized again that the 2004 law coincided with a major high school reform, so it is not clear whether the improvement in the relative situation of women with a Muslim background revealed by Appendix F reflects the effect of the 2004 law or the differential effects of the high school reform on girls and boys from Muslim and non-Muslim groups.

6 Regression analysis

The previous graphical analysis suggests that the 1994 circular coincided with a significant rise in the educational attainment of women in the Muslim group. To further test the robustness of this result (and explore heterogeneous effects across different subgroups), this section develops a more parsimonious regression model wherein we assume that the educational attainment of student i from birth cohort c (denoted $Y_{i,c}$) can be written,

$$Y_{i,c} = \alpha Muslim_i + \beta Muslim_i \times T_c + \theta_c + X_{i,c}\Phi + \varepsilon_{i,c}, \tag{3}$$

where $Muslim_i$ is a dummy variable indicating that i is in the Muslim group. T_c is either a dummy variable indicating that individual i was born after 1979 (i.e., aged 14 years or less at t_0=1994), or a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1 depending on whether individuals were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in t_0=1994, respectively. The dosage specification captures the proportion of years spent in middle school after the circular was issued. The θ_c variable represent a full set of cohort fixed effects while $X_{i,c}$ represents a set of control variables including a full set of department of birth fixed effects, survey fixed effects, father's nationality fixed effects as well as a dummy indicating father's occupational status (manual and low-skilled non-manual occupation vs. skilled non-manual occupation). The $\varepsilon_{i,c}$ variable represents the unobserved determinants of educational achievement. The main parameter of interest is β and its identification relies on the assumption that the variation in average $\varepsilon_{i,c}$ across cohorts are the same for the Muslim and non-Muslim group.[21] Standard errors are clustered at the department of birth $\times$ father's nationality at birth level, so as to account for potential correlation of residuals within groups

[20] Our graphical analysis also shows no effect for cohorts who were already in high school when the 2004 law was passed (cohorts 1986-1989).

[21] In line with our identification assumption, Table B3 in the online appendix shows no significant variation across cohorts in the difference in students' geographical and social background across Muslim and non-Muslim groups.

of individuals with a similar background.

The first two columns of the Panel A of Table 2 shows the regression results when we use the same female sample as Figure 1A and high school graduation as the dependent variable. Column (1) corresponds to the specification where T_c is a dummy variable, while Column (2) corresponds to the specification where T_c is a dosage variable. Consistent with our previous graphical analysis, both specifications show a significant increase in the relative proportion of high school graduates for women in the Muslim group who reached puberty after the Ministry of Education officially asked schools to ban Islamic veils in 1994. The estimated effects vary from 7.2 percentage points to 7.8 percentage points depending on the specification (which corresponds to an increase of about 15% in high school graduation rates). The two last columns of Panel A replicate this regression analysis using the male sample. Consistent with our graphical analysis, the regression results show no significant variation in the relative proportion of high school graduates among Muslim group men who reached puberty after the 1994 circular.[22]

Panel A focuses on the impact of the 1994 ban on the proportion of high school graduates in successive cohorts. This dependent variable can be measured on samples of individuals aged 21 or more, but it is only a proxy for the total number of years of education completed and for the final level of education attained by students in each cohort. Panel B shows the result obtained when we focus on respondents aged 24 or more and when we use a more comprehensive measure of the final level of education attained by individuals as dependent variable.[23] The regression results confirm that the 1994 circular was followed by a very significant increase in the relative level of education attained by women in the Muslim group. The estimated effect (β=0.17) corresponds to an increase of about 16% of a standard deviation

[22]It is possible to augment model 3 with variables measuring the proportion of years spent in high school (rather than middle school) after the circular was issued. This augmented model does not reveal any differential effects of the proportion of years spent in high schools after the 1994 circular on the educational level of Muslim and non-Muslim students, consistent with our graphical findings (regression results available upon request). The same results hold true when we focus on younger cohorts and analyse the effects of the proportion of years spent in high school after the 2004 law.

[23]This variable is defined as follows: 0 if the person left school without a diploma, 1 if the person left school with a DNB (end-of-middle school diploma), 2 if the person left school with a secondary vocational diploma (CAP or BEP), 3 if the person left school with a high school degree (*baccalauréat*), 4 if the person left education with a degree that corresponds to 2 years of higher education (BTS, DUT), 5 if the person left education with a degree that corresponds to more than 2 years of higher education. These categories are obtained directly from the variable DDIPL in the LFS. We checked that a one-unit increase in this measure of educational attainment is associated with an average wage increase of about 15%.

of the dependent variable.

Previous literature has also found that peers perceptions have large effects on students' outcomes. Bursztyn et al. [2017] show that single women disengage from actions that could improve their careers to avoid signalling undesirable personality to potential partners. For instance they show that single women decrease their revealed career-focus desires by around 0.8σ when observed by potential partners. Bursztyn and Jensen [2015] find that student's performance decreases by 24% when the identity of top scorers in class is public, a result driven by students' aversion of being recognized as a top scorer. Although, it is hard to directly compare our results with the ones mentioned above, the literature shows that concern for their image is of great importance to students and can have a decisive influence on their academic performance.

Finally, Appendix F provides additional regression results focusing on the 1983-1998 cohorts and confirms that the educational attainment of women in the Muslim group increased somewhat further for the cohorts that reached puberty after 2004, which is consistent with our previous graphical analysis. As mentioned earlier, this result might capture not only the effect of the 2004 law, but also the effect of the high school reform in the late 2000s. It should also be noted that this result apparently contradicts those of Abdelgadir and Fouka [2020]: they focus on the 2004 reform and use the 2005-2012 LFS to compare students born just before and after 1985 (i.e., who reached age 19 before and after 2004) and find a decline of about 2.9 percentage points in the proportion who completed some secondary education. Appendix Table E2 replicates Abdelgadir and Fouka [2020] main analyses using their specification and different LFS waves. Comfortingly, we find exactly the same result as them when we use their specifications and the 2005-2012 surveys (as they do), but this effect disappears completely when we use the 2005-2019 surveys, i.e., a sample twice larger. Using the full set of available surveys seems to help eliminate the sampling variability that confounds cohort analysis when one uses the 2005-2012 smaller sample.[24]

[24]In addition to using all available LFS surveys, there are other differences between our preferred specifications and those of Abdelgadir and Fouka [2020] which are discussed in Appendix E2.

7 The role of religion and tradition: additional explorations

In the previous sections, we focused on French-born women whose fathers' nationality at birth was from countries with a Muslim majority, namely either a Middle Eastern country, a Maghrebian country, or another African country. As mentioned above, the TeO survey shows that more than 80% of these women had a Muslim father. On closer examination, however, this proportion is about twice as high for the subgroup of women whose fathers are from Maghreb or the Middle East (90%) as for the subgroup whose fathers are from another African country (50%). If the rise in women's education in the Muslim group after the 1994 circular is indeed related to their father's religion (and not simply to their non-European origin, for example), we should therefore observe a sharper rise in educational attainment for women whose fathers are from Maghreb or Middle-East than for those whose fathers are from another African country. Table 3 confirms that this is the case. Specifically, Column (1) of this table shows the results of replicating our basic regression analysis when we distinguish between women whose fathers are from the Maghreb or the Middle East regions and women whose fathers are from other areas of Africa. This column shows that the estimated increase in education for women in the first subgroup is twice as high as those in the second subgroup, even though the difference between the two estimated effects is not significant at standard level due to the small number of observations.[25]

Assuming that the effects of the 1994 circular reflect an easing of tensions between parents and daughters over the wearing of the veil, these effects should also be stronger in families most attached to tradition. To test this assumption, we used mothers' housewife status as an indicator for attachment to tradition and we compared women whose mothers never worked with women whose mothers worked at some point in their lives. In traditional Muslim societies, women are expected to remain housewives and cannot work outside the home without their husbands' consent. The TeO survey confirms that Muslim families in which the mother never worked are on average much more attached to the wearing of the veil than families in which the mother worked at some point.[26] In this context, we expect

[25]Further explorations suggest that the effect of the circular is even stronger on the Middle East group than on the Maghrebi one, consistent with the fact that the Middle East group corresponds to a more recent immigration wave, often from very conservative rural Turkish areas, much less integrated into French culture (see e.g., De Tapia [2009]).

[26]For instance, the survey shows that, in our Muslim group, 26% of women who never worked wear the

the effect of the circular to be greater for women whose mothers were housewives. Table 3 (Column (2)) confirms that this is the case, even though, once again, the difference between the two estimates is not significant at standard levels.

To test the importance of religion even more directly, we estimated for each individual the probability that her mother wore a veil[27] and we investigated whether the increase in educational attainment observed after the 1994 circular was stronger for those whose mothers were more likely to wear the veil. Column 3 of Table 3 suggests that this is the case. It shows that the increase in the level of education after the 1994 circular is stronger when we look at families where the probability that the mother wears the veil is higher. Consistent with previous evaluation, the estimated differential effect of the circular (β=0.32) corresponds to an increase of about 30% of a standard deviation of our measure of educational attainment.

As a final check on the role of religion and the robustness of our findings, we re-estimated equation 3 using French-born women whose fathers' nationality at birth was neither French nor from a predominantly Muslim country as a treatment group (rather than Muslim group women). Appendix section D shows the result of this placebo test and confirms that the circular did not coincide with any significant changes in the relative level of education of these women, in line with the idea that among women whose fathers were not French, only women whose fathers were Muslim were affected by the ban.

In the end, our analysis of the heterogeneity of the estimated effects appear to be consistent with the idea that they reflect the diversity of families' relationship to the Muslim religion. As a complementary analysis we would ideally explore whether the 1994 circular reduced parent-child conflicts for the affected cohorts. However, we are not aware of any dataset that would allow us to conduct these analyses in a meaningful way.[28]

veil compared to only 3.6% of those who worked at some point in their lives.

[27]First, using TeO survey and focusing on female respondents born between 1945 and 1960, we estimated a model where the dependent variable is a dummy indicating that the respondent wears a veil and where the independent variables are respondents' nationality, working status (i.e. housewife), and respondents' partners' nationality and working status (i.e. skilled worker). Second, using the estimated coefficients, we estimated for each LFS respondent in our samples the predicted probability that her mother wears a veil. The effect of the predicted probability that a mother wears a veil on educational outcomes is identified under the maintained assumption that the mother's housewife status and nationality affect education outcomes only insofar as they explain the mother's on wearing the veil.

[28]The TeO survey provides interesting information about the different forms of discriminations that respondents may have experienced when they were in school, but the sample size is too small to precisely and robustly identify changes from one birth cohort to the next.

8 Long term outcomes

In the previous sections, we have shown that the 1994 circular was followed by a significant improvement in the academic performance of female students in the Muslim group. Our goal now is to explore whether the circular has had longer-term consequences. By lengthening the number of years spent in high school and university, we can speculate that the 1994 circular has facilitated the integration of young women from the Muslim group into different networks of friends, with the possible consequence of a larger pool of potential spouses and perhaps also, in the longer term, a higher probability of marrying outside the Muslim group. It is this hypothesis that we will first try to test. In a second step, we will also explore the impact of the circular on the labor market situation of women from the Muslim group.

One difficulty in these exercises is that the different cohorts born between, say, 1975 and 1986 are not observed at the same age in the surveys conducted between 2005 and 2019. For example, the cohort born in 1975 is observed between 30 and 44 years of age, while the cohort born in 1986 is observed between 19 and 33 years of age. This is problematic because age (or experience) has a very strong effect on the probability of being married or on the probability of being employed, especially in a country like France [OCDE, 2016]. To address this issue and neutralize age effects, we will restrict our working sample to respondents born between 1975 and 1986 in the 30-33 age group, namely the only age group for which information is available in all cohorts born between 1975 and 1986. The price to pay to neutralize age effects is to divide the size of our working sample by about six (from about 100,000 to about 15,000).

Table 4 focuses on this new working sample and shows the result of a regression analysis where the dependent variables are respondents' educational attainment, as well as variables indicating whether respondents are married, whether they are married to someone in the Muslim group or to someone in the non-Muslim group and their number of children. As in our previous analyses, the main independent variable is the interaction between a Muslim group dummy and a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1 depending on whether respondents were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in t_0=1994, respectively, and using a full set of cohort fixed effects and father's nationality at birth fixed effects as control variables. For each dependent variable, the estimated impact of the interacted independent variable captures the change in the gap between the Muslim and non-Muslim groups across cohorts who attended middle school (and reached puberty)

before and after the 1994 circular.

When we focus on female respondents (Table 4, Panel A), this regression analysis first confirms that the 1994 circular coincides with a significant improvement in the level of education of the Muslim group relative to the non-Muslim group in this subsample. Specifically, the first column shows that the difference in educational attainment (as measured by the 0 to 5 scale described above) between women in the Muslim and non-Muslim groups falls by about -0.36 for post-1983 cohorts compared to pre-1980 cohorts, namely a decrease of about 20% of a standard deviation. Our new working sample is smaller than the one used in the previous sections, but the effect of the 1994 circular on educational attainment remains highly significant and similar in magnitude. Columns 2 to 5 of the same panel reveal that this rise in the level of educational attainment of women in the Muslim group coincides with a significant increase in their probability of being married (+13.3 percentage points, which corresponds to a 23% increase in this probability) as well as in their number of children. Also, the rise in the probability of being married is mostly driven by a significant rise in the probability of being married to a person from the non-Muslim group (+8.2 percentage points, which corresponds to a doubling of this probability), namely a very significant rise in the probability of mixed marriages. These results are in line with the idea that the circular contributed to expand the pool of potential spouses (especially non-Muslim ones) for young women in the Muslim group, perhaps because the circular made them stay longer in higher education and integrate new friendship networks or perhaps because not wearing the veil and being more educated made it easier for them to establish relationships with new people outside the family circle.

Panel B of Table 4 shows the results of replicating this regression analysis on men. We find that the circular coincides with a small rise in the relative level of educational attainment of Muslim group men, but (consistent with previous analysis) the effect is modest and not statistically significant. We also find a significant rise in their probability of being married, albeit of a smaller magnitude than that observed for women. This increase likely has some of the same determinants as that observed for Muslim group women, since anything that favors marriages for one group of women also mechanically favors marriages for their potential spouses. As it happens, the increase in the probability of non-mixed marriage is similar for Muslim group men and women.[29]

[29]Other externalities are possible in that the increase in marriages of Muslim group women to non-Muslim group men likely contributes to additional marriage opportunities between Muslim group men and

Eventually, we explored whether the circular was followed by changes in labor market outcomes (see Table 5). We do not find any significant net effect on labor market participation, employment or wages, as measured at age 30-33. Several forces tend to cancel each other out. On the one hand, the 1994 circular is followed by an increase in educational attainment of Muslim group women, which likely pushes up their employment probability and wages. On the other hand, as we have seen, the 1994 circular is followed by an increase in their probability of being married and in the number of dependent children at age 30-33, which likely has negative effects on their labor market outcomes at that same age.[30] In the end, by simultaneously improving the level of education and the degree of marital integration of young women in the Muslim group, the circular does not seem to be associated with any major change in their labor market outcomes at age 30-33.

9 Discussion and conclusion

In this paper, we first showed that the difference in high school graduation probability between French-born women with Muslim and non-Muslim background decreased significantly over the cohorts born between the early 1970s and the late 1980s, whereas the same differential remained stable for men. We further showed that the increase in the relative proportion of high school graduates among women with a Muslim background occurs mostly for cohorts who attended middle school and reached puberty just after the 1994 ministerial circular, namely after the French Ministry of Education officially asked public schools to ban ostentatious religious symbols, and in particular, Islamic veils.

Qualitative surveys conducted among young women from the Muslim group in the late 1980s suggest that the majority did not wish to wear a veil [Lacoste-Dujardin, 1996]. At the same time, middle and high school students who wore the veil were far from a homogeneous group. Some were strongly attached to the wearing of the Islamic veil, while others wore it to please their parents [Gaspard and Khosrokhavar, 1995]. The prohibition of Islamic veils in schools likely negatively affected the educational outcomes of students who were attached to the wearing of the veil. In contrast, the prohibition likely affected positively the educational

non-Muslim group women.

[30] In addition, since we are working with a fixed age, the work experience of young women in the Muslim group is also (mechanically) negatively correlated with their level of educational attainment (i.e., more time in school implies less time in the labor market at any given age), which represents another negative factor for their labor market outcomes at any given age.

outcomes of students who preferred not to wear a veil, but lived with families who wished them to wear a veil. Before the ban, some students in this last group were veiled while others were not, but the ban removed family pressure to wear the veil for both of them, with the likely result of more successful schooling.

In this framework, one simple reason why positive effects dominate (and negative effects appear so weak) may simply be that very few students were strongly attached to wearing the veil at the beginning of the 1990s.[31] As a matter of fact, based on the 2004 report to the Senate [Rapport d'Information au Sénat, 2004] and the 2005 report to the Ministry of Education [Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche, 2005], there were only about 2000 to 3000 veiled students in French secondary schools before the 1994 circular. The report to the Senate also indicates that veiled students were equally distributed across middle schools and high schools, meaning there were about 1,000 to 1,500 veiled students in middle schools in 1993-1994. Assuming that middle school veiled students were either 8th or 9th graders (students enter 8th grade at age 13), we end up with 500-750 veiled students per year and cohort at the time of the circular. As there were more than 400,000 female students per year-cohort in the early 1990s, and about 15% of them had a father whose nationality was from a Muslim country, we end up with a proportion of about 0.8% to 1.3% veiled students per cohort of students whose fathers had the nationality of a Muslim country.

The fact that there were few veiled students in French schools in the early 1990s also makes it unlikely that the positive effects of the ban were induced by a reduction in discrimination against veiled students. We cannot exclude the possibility that some veiled students were not treated fairly by their teachers and principals, particularly during the transition from middle school to high school.[32] Given the small number of veiled students, however, the effect of removing veil related discriminations can hardly explain the positive effects we identify.

Over the last few decades, the level of education attained in France by female students from Muslim families has come considerably closer to that of female students from non-

[31] In their book, Gaspard and Khosrokhavar [1995] point out that in practice there are only a handful of veiled students in each of the schools they surveyed, even though they focused on schools with very large immigrant populations.

[32] According to Brinbaum et al. [2010], about 25% of Muslims who have attended French schools believe they have suffered discrimination. In particular, many feel that they have been prevented from continuing their studies in the type of high school they wanted.

Muslim families. Our article shows that this narrowing of the gap has essentially coincided with the implementation of the 1994 ban on the Islamic veil in schools. In a country with a long-standing secular tradition, this regulation seems to have helped the new generation of Muslim group women to overcome the divorce between their family and host cultures. During the same period, the educational gap between male students from Muslim families and other male students of the same cohorts has remained almost as wide as it was thirty years ago. Further research is needed to determine whether we would have obtained the same results in other contexts, other time periods, or other countries. As suggested by the recent contribution of Fouka [2020] on the German-speaking minority in the US after WWI, assimilation policies do not always succeed in improving the integration of the minorities they target. Much remains to be understood about how to better help today's immigrants and their children to build themselves despite the clash of cultures.

References

Abdelgadir, Aala and Vasiliki Fouka. 2020. "Political secularism and muslim integration in the west: Assessing the effects of the french headscarf ban". *American Political Science Review 114*(3), 707–723.

Aeberhardt, Romain, Elise Coudin, and Roland Rathelot. 2017. "The heterogeneity of ethnic employment gaps". *Journal of Population Economics 30*(1), 307–337.

Akerlof, George A and Rachel E Kranton. 2002. "Identity and Schooling: Some Lessons for the Economics of Education". *Journal of Economic Literature 40*(4), 1167–1201.

Austen-Smith, David and Roland G Fryer Jr. 2005. "An Economic Analysis of "Acting White"". *The Quarterly Journal of Economics 120*(2), 551–583.

Brinbaum, Yaël and Annick Kieffer. 2009. "Les scolarités des enfants d'immigrés de la sixième au baccalauréat: différenciation et polarisation des parcours". *Population 64*(3), 561–610.

Brinbaum, Yaël, Laure Moguérou, and Jean-Luc Primon. 2010. "Parcours et expériences scolaires des jeunes descendants d'immigrés en france". *Trajectoires et Origines. Enquête sur la diversité des populations en France, sous la dir. de C. Beauchemin, C. Hamel et P. Simon. Premiers Résultats. Documents de travail de l'INED n°168, chapitre 6*, 47–53.

Bursztyn, Leonardo, Georgy Egorov, and Robert Jensen. 2018. "Cool to be Smart or Smart to be Cool? Understanding Peer Pressure in Education". *The Review of Economic Studies 86*(4), 1487–1526.

Bursztyn, Leonardo, Thomas Fujiwara, and Amanda Pallais. 2017. "'acting wife': Marriage market incentives and labor market investments". *American Economic Review 107*(11), 3288–3319.

Bursztyn, Leonardo and Robert Jensen. 2015. "How Does Peer Pressure Affect Educational Investments?". *The Quarterly Journal of Economics 130*(3), 1329–1367.

Cameron, A Colin and Douglas L Miller. 2015. "A practitioner's guide to cluster-robust inference". *Journal of human resources 50*(2), 317–372.

Cesari, Jocelyne. 2013. *Why the west fears Islam: An exploration of Muslims in liberal democracies*. New York, Palgrave Macmillan.

Charousset, Pauline. 2021. *Inégalités d'accès à l'enseignement supérieur : trois facteurs institutionnels*. PhD dissertation, Université of Paris 1.

Chérifi, Hanifa. 1996. "Jeunes filles voilées: des médiatrices au service de l'intégration". *Hommes et Migrations 1201*(1), 25–30.

Chérif, Hanina. 2003. *Ecole: légiférer ou pas ?* Le Nouvel Observateur.

Ciftci, Sabri. 2012. "Islamophobia and threat perceptions: Explaining anti-Muslim sentiment in the West". *Journal of Muslim Minority Affairs 32*(3), 293–309.

Coleman, J. S.. 1961. *The adolescent society: the social life of the teenager and its impact on education*. Oxford, England: Free Press of Glencoe.

Collins, W Andrew and Brett Laursen. 2004. "Parent-adolescent relationships and influences". *Handbook of adolescent psychology 2*, 331–362.

Commission de réflexion sur l'application du principe de laïcité dans la république. 2003. *Rapport de la commission de réflexion sur l'application du principe de laïcité dans la République Remis au Président de la République le 11 Décembre 2003*. La Documentation Française, Paris.

Couet, Christine. 2007. "Insee's permanent demographic sample (edp)". *Courrier des Statistiques, English Series* (13), 117–199.

Cristofoli, Sophie. 2019. "En 2017-2018, l'absentéisme touche en moyenne 5,6% des élèves du second degré public". *DEPP, Note d'information n° 19-04*.

Dahl, Gordon B, Cristina Felfe, Paul Frijters, and Helmut Rainer. 2020. "Caught between cultures: Unintended consequences of improving opportunity for immigrant girls". Working Paper No. 26674, National Bureau of Economic Research.

De Tapia, Stéphane. 2009. "Permanences et mutations de l'immigration turque en france". *Hommes & migrations. Revue française de référence sur les dynamiques migratoires* (1280), 8–20.

Defresne, Florence and Mireille Dubois. 2013. "Le baccalauréat professionnel en trois ans après la troisième: vers une élévation du niveau des élèves?". *Éducation et formations 84*, 61–69.

Dotterer, Aryn M, Lesa Hoffman, Ann C Crouter, and Susan M McHale. 2008. "A longitudinal examination of the bidirectional links between academic achievement and parent–adolescent conflict". *Journal of Family Issues 29*(6), 762–779.

Durier, Sébastien and Pascale Poulet-Coulibando. 2004. "Formation initiale, orientations et diplômes de 1985 à 2002". *Economie et Statistique*, 15–33.

Dustmann, Christian, Tommaso Frattini, and Gianandrea Lanzara. 2012. "Educational Achievement of Second-Generation Immigrants: An International Comparison". *Economic Policy 27*(69), 143–185.

Fouka, Vasiliki. 2020. "Backlash: The unintended effects of language prohibition in us schools after world war i". *The Review of Economic Studies 87*(1), 204–239.

Gaspard, Françoise and Farhad Khosrokhavar. 1995. *Le foulard et la République*. Paris, La Découverte.

Goulet, Nathalie and Reichardt, André,. 2016. *De l'Islam en France à un Islam de France: établir la transparence et lever les ambiguïtés, Rapport d'information au Sénat n° 757,*. La Documentation Française, Paris.

Lacoste-Dujardin, Camille. 1996. *Yasmina et les autres de Nanterre et d'ailleurs: Filles de parents maghrébins en France*. La Découverte.

Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche. 2005. *Rapport sur l'application de la loi du 15 mars 2004 sur le port des signes religieux ostensibles dans les établissements d'enseignement publics*. La Documentation Française, Paris.

Myers, Scott M. 2004. "Religion and intergenerational assistance: Distinct differences by adult children's gender and parent's marital status". *Sociological Quarterly 45*(1), 67–89.

OCDE. 2016. *OECD Employment Outlook 2016*.

OECD. 2015. *Helping immigrant students to succeed at school and beyond*. OECD, Paris.

Pelletier, Denis. 2005. "L'école, l'europe, les corps: la laïcité et le voile". *Vingtième Siècle. Revue d'histoire* (87), 159–176.

Rapport d'Information au Sénat. 2004. *Rapport sur le projet de loi encadrant, en application du principe de laïcité, le port de signes ou de tenues manifestant une appartenance religieuse dans les écoles, collèges et lycées publics.* Rapport d'information n° 219, Sénat.

Rathelot, Roland. 2014. "Ethnic differentials on the labor market in the presence of asymmetric spatial sorting: Set identification and estimation". *Regional Science and Urban Economics 48*, 154–167.

Schnepf, Sylke Viola. 2007. "Immigrants' educational disadvantage: an examination across ten countries and three surveys". *Journal of Population Economics 20*(3), 527–545.

Simon, Patrick and Vincent Tiberj. 2010. "Religions, in Trajectoires et Origines: Enquête sur la diversité des populations en France, coordonné par Cris Beauchemin, Christelle Hamel et Patrick Simon". *Document de Travail, INED, n°168*.

Simon, Patrick and Vincent Tiberj. 2016. "Sécularisation ou regain religieux : la religiosité des immigrés et de leurs descendants". *Documents de travail, INED, n° 196*.

Sniderman, Paul M, Louk Hagendoorn, and Markus Prior. 2004. "Predisposing Factors and Situational Triggers: Exclusionary Reactions to Immigrant Minorities". *American Journal of Political Science 98*(1), 35–49.

Steinberg, Laurence and Amanda Sheffield Morris. 2001. "Adolescent development". *Annual review of psychology 52*(1), 83–110.

Stokes, Charles E and Mark D Regnerus. 2009. "When faith divides family: Religious discord and adolescent reports of parent–child relations". *Social Science Research 38*(1), 155–167.

Thomas, Fanny. 2019. "Résultats définitifs de la session 2018 du baccalauréat: l'effectif de bacheliers poursuit sa progression". *Note d'information de la Direction de l'évaluation de la prospective et de la performance, n°19.03*.

Timmons, Adela C and Gayla Margolin. 2015. "Family conflict, mood, and adolescents' daily school problems: Moderating roles of internalizing and externalizing symptoms". *Child Development 86*(1), 241–258.

Tables

Table 1: High school graduation probability, by gender and birth cohort

	Cohorts 1971-1974 (1)		Cohorts 1987-1990 (2)
Panel A: women			
Muslim (a)	0.491		0.637
	(0.017)		(0.015)
Non-Muslim (b)	0.625		0.705
	(0.003)		(0.004)
(a)-(b)	-0.134		-0.068
	(0.017)		(0.015)
$[(a) - (b)]_t - [(a) - (b)]_{t-1}$		0.066	
P-value		0.003	
Panel B: men			
Muslim (a)	0.416		0.517
	(0.018)		(0.016)
Non-Muslim (b)	0.541		0.623
	(0.003)		(0.004)
(a)-(b)	-0.125		-0.107
	(0.018)		(0.016)
$[(a) - (b)]_t - [(a) - (b)]_{t-1}$		0.018	
P-value		0.447	

Notes: This table shows the proportion of high school graduates among French-born individuals aged 21 or more, separately for women (panel A) and men (panel B). Column (1) displays results for individuals born between 1971 and 1974, while column (2) displays results for individuals born between 1987 and 1990. In each panel, row (a) refers to the Muslim group, row (b) to the non-Muslim group, and row (a)-(b) shows the difference between the Muslim and non-Muslim groups. The last two rows of each panel show the difference in (a)-(b) between the two groups of birth cohorts and its corresponding p-value. Standard errors are in brackets. Source: INSEE, LFS 2005-2019.

Table 2: 1994 circular effect on educational outcomes

	Women		Men	
	(1)	(2)	(3)	(4)
Panel A: high school graduation				
Muslim × 1{aged ≤ 14 at t_0}	0.072***		0.023	
	(0.015)		(0.015)	
Muslim × dosage		0.078***		0.024
		(0.015)		(0.016)
Dep. var. non-Muslim 1971-79	0.666	0.666	0.581	0.581
Dep. var. Muslim 1971-79	0.539	0.539	0.455	0.455
R2	0.088	0.088	0.093	0.093
N	100164	100164	95770	95770
Panel B: educational attainment				
Muslim × 1{aged ≤ 14 at t_0}	0.168***		0.051	
	(0.049)		(0.052)	
Muslim × dosage		0.199***		0.064
		(0.051)		(0.056)
Dep. var. non-Muslim 1971-79	3.217	3.217	2.974	2.974
Dep. var. Muslim 1971-79	2.649	2.649	2.347	2.347
R2	0.129	0.129	0.123	0.123
N	91170	91170	86819	86819

Notes: This table refers to our working samples of French-born individuals who were born between 1971 and 1990. All columns show the results of regressing the outcome variable on cohort, father's nationality at birth, individual's department of birth, and survey fixed effects, as well as a dummy indicating father's occupational status. Panel A refers to individuals aged 21 or more and uses as outcome a dummy variable indicating whether respondents graduated from high school. Panel B refers to individuals aged 24 or more and uses as outcome variable individual's final level of educational attainment measured in a 0 to 5 scale (from 0=no diploma to 5=college graduation). Columns (1) and (2) use the subsample of women, while columns (3) and (4) use the subsample of men. Columns (1) and (3) include and report the interaction between a Muslim dummy and a dummy indicating that the respondent was aged 14 years or less in $t_0 = 1994$. Columns (2) and (4) include and report the interaction between a Muslim dummy and a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1, depending on whether individuals were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in t_0. Standard errors, reported in parenthesis, are clustered at the individual's department of birth × father's nationality at birth level. Significance levels: $^{***} < 0.01$, $^{**} < 0.05$, $^{*} < 0.1$. Source: INSEE, LFS 2005-2019.

Table 3: 1994 circular effect on educational attainment: heterogeneity analysis

	(1)	(2)	(3)
Father's origin			
Maghreb or Middle East father × dosage	0.213***		
	(0.055)		
Rest of African father × dosage	0.101		
	(0.136)		
Father's origin/mother's housewife status			
Muslim father/housewife × dosage		0.311***	
		(0.086)	
Muslim father/working mother × dosage		0.234***	
		(0.070)	
Predicted prob. of having a mother who wears a veil			
Pr(mother wears a veil=1) × dosage			0.323**
			(0.149)
R2	0.129	0.135	0.126
N	91170	77589	75677

Notes: This table refers to our working samples of French-born individuals aged 24 or more who were born between 1971 and 1990. The table shows the coefficients of the interactions between variables capturing individuals' exposure to treatment (i.e., family proximity to Islam) and a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1, depending on whether individuals were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in t0= 1994. Column (1) shows the result when exposure to treatment is captured by father's nationality at birth (Maghreb or Middle East vs Rest of Africa). Column (2) shows the result when exposure to treatment is captured by mother's housewife status. Column (3) shows the result when exposure to treatment is captured by the predicted probability of having a mother who wears a veil. Predicted probabilities in Column (3) are performed in two steps. First, we estimate the probability that women wear a veil using the TeO survey (and the sample of individuals born between 1945 and 1960). Second, using the estimated coefficients, we predict the probability that mothers wear a veil in the LFS sample. All regressions control for birth cohort, individual's department of birth, survey, and father's nationality at birth fixed effect, as well as for a dummy indicating father's occupational status.

Table 4: 1994 circular effect on marriage market outcomes and number of children at age 30-33

			Spouse origin		
	Educ.	Married	Non-Mus.	Mus	Children
	(1)	(2)	(3)	(4)	(5)
Muslim × dosage	0.359***	0.133***	0.082***	0.044	0.191***
	(0.115)	(0.031)	(0.022)	(0.029)	(0.071)
Dep. var. non-Muslim 1975-1979	3.269	0.436	0.354	0.013	1.181
Dep. var. Muslim 1975-1979	2.511	0.564	0.077	0.402	1.261
R2	0.136	0.036	0.040	0.261	0.065
N	16504	16504	16504	16504	16504
Panel B: men					
Muslim × dosage	0.122	0.101***	0.052**	0.036	0.036
	(0.115)	(0.035)	(0.026)	(0.032)	(0.076)
Dep. var. non-Muslim 1975-1979	2.996	0.336	0.282	0.009	0.771
Dep. var. Muslim 1975-1979	2.230	0.415	0.103	0.285	0.772
R2	0.128	0.037	0.035	0.213	0.050
N	15701	15701	15701	15701	15701

Notes: This table refers to French-born individuals aged between 30 and 33 who were born between 1975 and 1986. This table shows the results of regressing several outcome variables on the interaction between a Muslim dummy and a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1, depending on whether individuals were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in $t_0 = 1994$. All regressions control for birth cohort, father's nationality at birth, individual's department of birth, and survey fixed effects, as well as for a dummy indicating father's occupational status. The table reports the estimated coefficient of the interaction between the Muslim dummy and the dosage variable. Standard errors, reported in parenthesis, are clustered at the individual's department of birth × father's nationality at birth level. Significance levels: $^{***} < 0.01$, $^{**} < 0.05$, $^{*} < 0.1$. Source: INSEE, LFS 2005-2019.

Table 5: 1994 circular effect on labor market outcomes at age 30-33

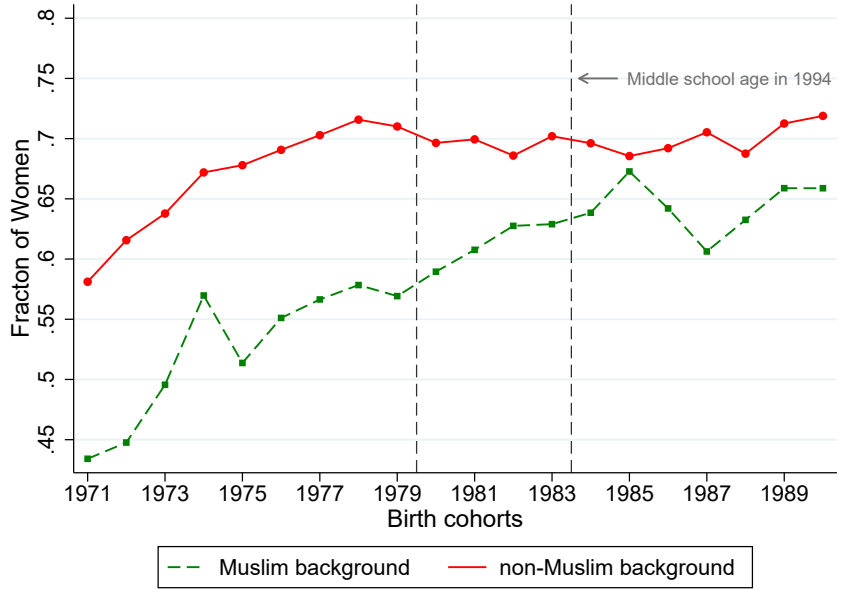
	Labor market part. (1)	Employed (2)	logwage (3)
Panel A: women			
Muslim × dosage	-0.055	-0.001	-0.017
	(0.035)	(0.038)	(0.052)
Dep. var. non-Muslim 1975-79	0.848	0.776	7.227
Dep. var. Muslim 1975-79	0.702	0.542	7.155
R2	0.038	0.050	0.090
N	16504	16504	11699
Panel B: men			
Muslim × dosage	0.003	0.041	-0.008
	(0.024)	(0.034)	(0.035)
Dep. var. non-Muslim 1975-79	0.955	0.883	7.445
Dep. var. Muslim 1975-79	0.909	0.704	7.345
R2	0.012	0.032	0.083
N	15701	15701	12106

Notes: This table refers to French-born individuals aged between 30 and 33 who were born between 1975 and 1986. This table shows the results of regressing several outcome variables on the interaction between a Muslim dummy and a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1, depending on whether individuals were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in $t_0 = 1994$. All regressions control for birth cohort, father's nationality at birth, individual's department of birth, and survey fixed effects, as well as for a dummy indicating father's occupational status. The table reports the estimated coefficient of the interaction between the Muslim dummy and the dosage variable. Standard errors, reported in parenthesis, are clustered at the individual's department of birth × father's nationality at birth level. Significance levels: $^{***} < 0.01$, $^{**} < 0.05$, $^{*} < 0.1$. Source: INSEE, LFS 2005-2019.

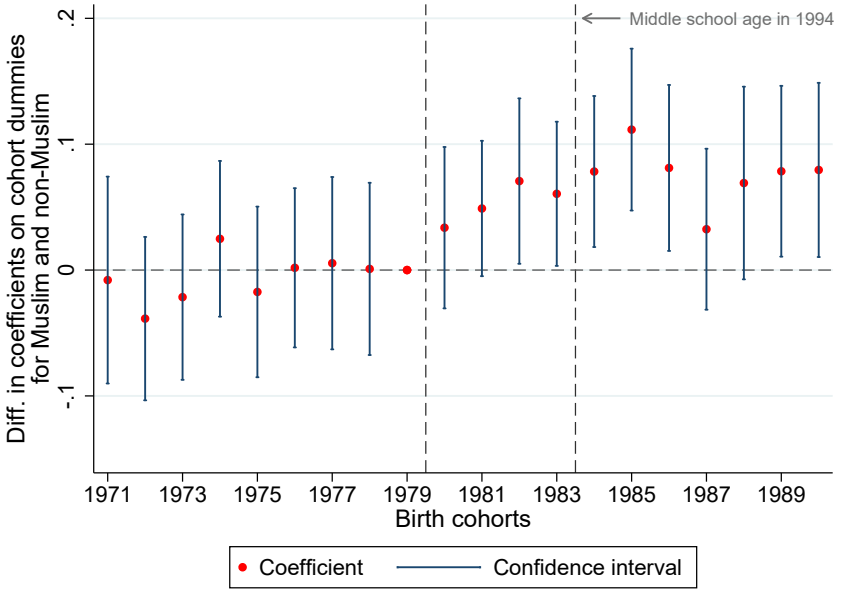
Figures

Figure 1: High school graduation rates for women reaching puberty around the 1994 circular's issue

(A) High school graduation rate of Muslim and non-Muslim.



(B) Estimated differences between Muslim and non-Muslim.



Notes: The top figure displays the fraction of French-born women, aged 21 or more, who graduated from high school, for cohorts born between 1971 and 1990. The solid (dashed) line refers to the Muslim (non-Muslim) group. The bottom figure displays the estimated difference in high school graduation probability between Muslim and non-Muslim groups obtained from regressing a high school graduation dummy on a full set of interactions between the Muslim dummy and cohort dummies and controlling for department of birth, survey date and father's nationality at birth fixed effects, as well as a dummy indicating father's occupational status. Within vertical lines are cohorts reaching puberty around the 1994 circular. Source: INSEE, LFS 2005-2019.

For Online Publication

Appendix A Circulaire 1649 du 20 septembre 1994.

Texte adressé aux recteurs, aux inspecteurs d'académie, directeurs des services départementaux de l'Education Nationale et aux chefs d'établissement.

Neutralité de l'enseignement public : port de signes ostentatoires dans les établissements scolaires.

Depuis plusieurs années, de nombreux incidents sont intervenus dans les établissements scolaires, à l'occasion de manifestations spectaculaires d'appartenance religieuse ou communautaire.

Les chefs d'établissements et les enseignants ont constamment manifesté leur souhait de recevoir des instructions claires.

Il m'a donc paru nécessaire de vous apporter les précisions suivantes.

En France, le projet national et le projet républicain sont confondus autour d'une certaine idée de la citoyenneté. Cette idée française de la nation et de la République est, par nature, respectueuse de toutes les convictions, en particulier des convictions religieuses, politiques et des traditions culturelles. Mais elle exclut l'éclatement de la nation en communautés séparées, indifférentes les unes aux autres, ne considérant que leurs propres règles et leurs propres lois, engagées dans une simple coexistence. La nation n'est pas seulement un ensemble de citoyens détenteurs de droits individuels. Elle est une communauté de destin.

Cet idéal se construit d'abord à l'école. L'école est, par excellence, le lieu d'éducation et d'intégration où tous les enfants et tous les jeunes se retrouvent, apprennent à vivre ensemble et à se respecter. La présence, dans cette école, de signe et de comportement qui montreraient qu'ils ne pourraient pas se conformer aux mêmes obligations, ni recevoir les mêmes cours et suivre les mêmes programmes, serait une négation de cette mission. À la porte de l'école doivent s'arrêter toutes les discriminations, qu'elles soient de sexe, de culture ou de religion.

Cet idéal laïque et national est la substance même de l'école de la République et le fondement du devoir d'éducation civique qui est le sien.

C'est pourquoi il n'est pas possible d'accepter à l'école la présence de signes si ostentatoire

que leur signification est précisément de séparer certains élèves des règles de vie commune de l'école. Ces signes sont, en eux-mêmes, des éléments de prosélytisme, à plus forte raison lorsqu'ils s'accompagnent de remise en cause de certains cours ou de certaines disciplines, qu'ils mettent en jeu la sécurité des élèves ou qu'ils entraînent des perturbation dans la vie en commun de l'établissement.

Je vous demande donc de bien vouloir proposer aux conseils d'administration, dans la rédaction des règlements intérieurs l'interdiction de ces signes ostentatoires, sachant que la présence de signes plus discrets, traduisant seulement l'attachement à une conviction personnelle, ne peut faire l'objet des mêmes réserves, comme l'ont rappelé le Conseil d'État et la jurisprudence administrative.

Je vous demande aussi de ne pas perdre de vue que notre devoir est d'abord l'éducation.

Aucune entreprise éducative n'est concevable sans énoncé préalable d'une règle claire. Mais l'adhésion à la règle est souvent le résultat d'un travail de persuasion.

Les recteurs et inspecteurs d'académie soutiendront donc tout les efforts qui seront les vôtres pour convaincre au lieu de contraindre, pour rechercher des médiations avec les familles, et pour prouver aux élèves qui seraient en cause que notre démarche est une démarche de respect. L'accès au savoir est le moyen privilégié de la construction d'une personnalité autonome. Notre mission est de continuer de l'offrir à tous et à toutes.

Je vous prie de ne pas omettre d'informer toutes les familles des règlements intérieurs adoptés par les conseils d'administration des établissements.

Je vous prie de demander aux enseignants de toutes disciplines aux personnels d'éducation et à l'ensemble de vos équipes, d'expliquer aux élèves dont ils ont la charge ce double mouvement de respect des convictions et de fermeté dans la défense du projet républicain de notre pays.

Responsables de vos établissements, en liaison avec les équipes pédagogiques, représentants du ministre, je vous confirme que vous avez toute ma confiance pour rechercher le meilleurs rythme et les meilleures conditions d'applications de ces principes.

Annexe : Proposition d'article à insérer dans le règlement intérieur des établissements.

"Le port par les élèves de signes discrets manifestant leur attachement personnel à des convictions, notamment religieuses, est admis dans l'établissement. Mais les signes ostentatoires, qui constituent en eux-mêmes des éléments de prosélytisme ou de discrimination,

sont interdits. Sont interdits aussi les attitudes provocatrice, les manquements aux obligations d'assiduité et de sécurité, les comportements susceptibles de constituer des pressions sur d'autres élèves, de perturber le déroulement des activités d'enseignement ou de troubler l'ordre dans l'établissement. ”

Appendix B Tables

Table B1: Characteristics of Muslin and non-Muslim, for cohorts born between 1971 and 1990

	Women		Men	
	Muslim (1)	non-Muslim (2)	Muslim (3)	non-Muslim (4)
Baccalauréat(any)	0.581	0.668	0.469	0.576
Born in Paris department	0.093	0.036	0.105	0.036
Maghreb father	0.767	0.000	0.777	0.000
African father	0.135	0.000	0.128	0.000
Middle-east father	0.098	0.000	0.095	0.000
French mother	0.212	0.975	0.220	0.975
Muslim mother	0.779	0.006	0.766	0.005
Non-Muslim foreign mother	0.009	0.020	0.013	0.019
Skilled father	0.208	0.455	0.226	0.457
Observations	6204	93960	5604	90166

Notes: This table reports descriptive statistics for French-born individuals aged 21 or more and born between 1971 and 1990. Column (1) (resp. (2)) reports the mean of the different variables for women whose father's nationality at birth is from a predominantly Muslim (resp. French) country. Column (3) (resp. (4)) reports the mean of the different variables for men whose father's nationality at birth is from a predominantly Muslim (resp. French) country. Source: INSEE, LFS 2005-2019.

Table B2: Characteristics of Muslin and non-Muslim, for cohorts born between 1983 and 1998

	Women		Men	
	Muslim (1)	non-Muslim (2)	Muslim (3)	non-Muslim (4)
Baccalauréat(any)	0.720	0.716	0.593	0.636
Born in Paris department	0.083	0.041	0.105	0.041
Maghreb father	0.000	0.000	0.000	0.000
African father	0.000	0.000	0.000	0.000
Middle-east father	0.000	0.000	0.000	0.000
French mother	0.528	0.966	0.515	0.966
Muslim mother	0.010	0.011	0.006	0.009
Non-Muslim foreign mother	0.462	0.023	0.479	0.024
Skilled father	0.419	0.497	0.421	0.506
Observations	2120	41934	2115	41710

global Sum˙est "*Notes:* This table reports descriptive statistics for French-born individuals aged 21 or more and born between 1983 and 1998. Column (1) (resp. (2)) reports the mean of the different variables for women whose father's nationality at birth is from a predominantly Muslim (resp. French) country. Column (3) (resp. (4)) reports the mean of the different variables for men whose father's nationality at birth is from a predominantly Muslim (resp. French) country. Source: INSEE, LFS 2005-2019." Source: INSEE, LFS 2005-2019.

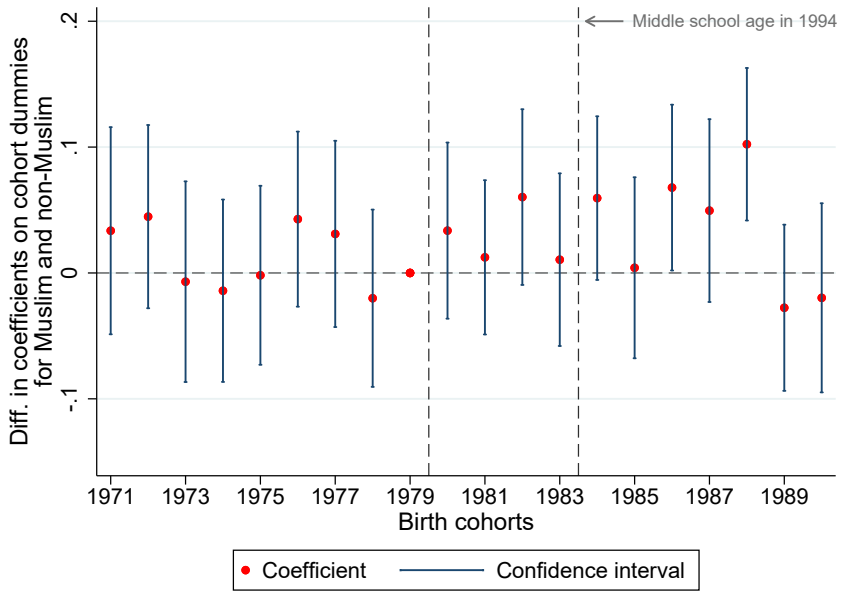
Table B3: Balancing checks for cohorts born between 1971 and 1990

	Survey date		Skilled father		Born in Paris department	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: women						
Muslim × 1{aged ≤ 14 at t_0}	-0.016		0.007		0.002	
	(0.455)		(0.015)		(0.004)	
Muslim × dosage		0.341		0.018		-0.002
		(0.486)		(0.017)		(0.005)
Dep. var. non-Muslim 1971-79	31.812	31.812	0.447	0.447	0.036	0.036
Dep. var. Muslim 1971-79	30.787	30.787	0.182	0.182	0.085	0.085
R2	0.021	0.021	0.016	0.016	0.012	0.012
N	100164	100164	93016	93016	99541	99541
Panel B: men						
Muslim × 1{aged ≤ 14 at t_0}	-0.773*		0.008		0.000	
	(0.450)		(0.014)		(0.011)	
Muslim × dosage		-0.843*		0.004		0.003
		(0.456)		(0.016)		(0.014)
Dep. var. non-Muslim 1971-79	31.749	31.749	0.449	0.449	0.036	0.036
Dep. var. Muslim 1971-79	31.138	31.138	0.204	0.204	0.093	0.093
R2	0.022	0.022	0.014	0.014	0.012	0.012
N	95770	95770	89240	89240	95167	95167

Notes: This table refers to our working samples of French-born individuals aged 21 or more who were born between 1971 and 1990. This table shows the results of regressing a series of pre-determined variables on birth cohort and father's nationality at birth fixed effect. Columns (1), (3) and (5) include and report the interaction between a Muslim dummy and a dummy indicating that the respondent was aged 14 years or less in $t_0 = 1994$. Columns (2), (4), and (6) include and report the interaction between a Muslim dummy and a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1, depending on whether individuals were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in t_0. Panel A (resp. B) displays results for women (resp. men). *Survey date* is a continuous integer variable indicating the time of the survey; *Skilled father* is dummy variable indicating whether the individual's father occupation was skilled non-manual; and *Born in Paris department* is a dummy variable indicating whether the individual was born in Paris. Standard errors, reported in parenthesis, are clustered at the individual's department of birth × father's nationality at birth level. Significance levels: $^{***} < 0.01$, $^{**} < 0.05$, $^{*} < 0.1$. Source: INSEE, LFS 2005-2019.

Appendix C Graphical analysis for cohorts of men reaching puberty when the 1994 circular is issued

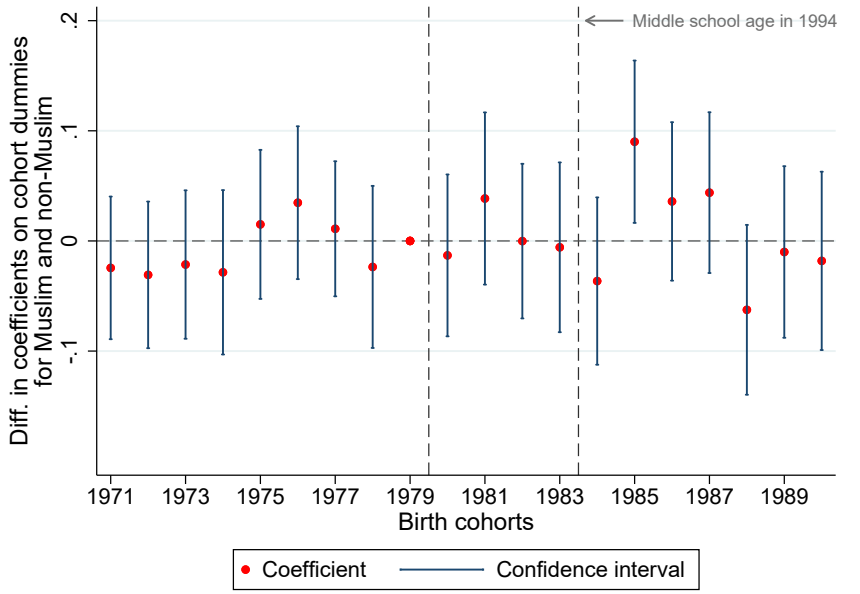
Figure C1: Estimated difference in high school graduation rates between Muslim and non-Muslim men reaching puberty around the 1994 circular's issue



Notes: This figure shows the replication of Figure 1B for men in the Muslim and non-Muslim group.

Appendix D Graphical analysis comparing non-Muslim women and women whose father nationality at birth was neither French nor Muslim

Figure D1: Estimated difference in high school graduation between foreign-non-Muslim and non-Muslim women reaching puberty around 1994



Notes: This figure shows the replication of Figure 1B when comparing non-Muslim individuals and individuals whose father nationality at birth was neither French nor Muslim.

Table D1: 1994 circular effects on high school graduation, comparing non-Muslim women with French and non-French fathers

	(1)	(2)
Other foreign background × 1{aged ≤ 14 at t_0}	0.017	
	(0.014)	
Other foreign background × dosage		0.018
		(0.015)
Dep. var. non-Muslim 1971-79	0.666	0.666
Dep. var. Muslim 1971-79	0.615	0.615
R2	0.089	0.089
N	98900	98900

Notes: This table refers to a working samples of French-born individuals aged 21 or more who were born between 1971 and 1990, and compares women whose father's nationality at birth was French with those whose father's nationality at birth was neither French nor Muslim. All regressions show the results of regressing a high school graduation dummy on birth cohort, father's nationality at birth, individual's department of birth, and survey fixed effect, as well as a dummy indicating father's occupational status. Columns (1) includes and reports the interaction between the other foreign background dummy and a dummy indicating that the respondent was aged 14 years or less (at most middle school age) in $t_0 = 1994$. Columns (2) includes and reports the interaction between the other foreign background dummy and a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1, depending on whether individuals were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in t_0. Standard errors, reported in parenthesis, are clustered at the individual's department of birth × father's nationality at birth level. Significance levels: $^{***} < 0.01$, $^{**} < 0.05$, $^{*} < 0.1$. Source: INSEE, LFS 2005-2019.

Appendix E Robustness of the 2004 law evaluation to the use of alternative specifications

In this appendix, we explore the potential reasons for why our evaluation of the ban seems to contradict those recently conducted by Abdelgadir and Fouka [2020]. In addition to focusing primarily on cohorts that reached puberty before and after 1994 (rather than adulthood before and after 2004), the main difference between our and Abdelgadir and Fouka [2020] approach is that we use all the LFS conducted between 2005 and 2019 rather than just those conducted between 2005 and 2012. Another difference between the two approaches is that the "Muslim" group in Abdelgadir and Fouka [2020] is comprised by those whose father was *born* in a predominantly Muslim country, while for us the "Muslim" group is comprised by those whose father's *nationality* at birth is from of a predominantly Muslim country. We use the father's nationality rather than his country of birth to identify the Muslim group because, as pointed out in Section 3, the father's nationality appears to be more correlated with his faith than his place of birth. Finally, Abdelgadir and Fouka [2020] cluster standard errors at the father's country of birth level (7 clusters) whereas we cluster at the father's nationality $\times$ department of birth level (about 350 clusters). We prefer not to cluster at the father's nationality (or country of birth) level because 7 clusters is generally considered much too small to avoid downward bias in standard error estimates and excessive rejection of the no-effect null hypothesis [Cameron and Miller, 2015].

To take one step further, Table E2 below reports the results of replicating the first column of Table 1 in Abdelgadir and Fouka [2020] (hereafter AF) using different specifications. Column (1) replicates AF result in their Table 1, column 1, using their specifications and their 2005-2012 sample. Comfortingly, we obtain the same result (i.e., a negative impact of about -2.9 percentage points). Column (2) replicates the same analysis using AF specifications and the full 2005-2019 LFS sample. The estimated effect becomes negligible. Column (3) replicates the same regression analysis using the 2005-2012 sample and AF specifications, except that we do not cluster standard errors anymore (and, instead, just used robust standard errors). Standard errors become about twice as large.

Table E2: Replication of Abdelgadir and Fouka [2020] results on some secondary education, using different samples and clustering standard errors at different levels

	Abdelgadir and Fouka [2020]		
	Replication	LFSs 2005-19	robust SE
	(1)	(2)	(3)
Muslim × Born after 1985	-0.0295	-0.0004	-0.0295
	(0.00776)	(0.0089)	(0.0132)
N	45265	100489	45265

Notes: This table reports the results of replicating the first column of Table 1 in Abdelgadir and Fouka [2020] and using different specifications. Column (1) replicates Abdelgadir and Fouka [2020] results in Table 1, Column (1). Column (2) replicates results using Abdelgadir and Fouka [2020] specification and LFSs between 2005-2019. Column (3) replicates Abdelgadir and Fouka [2020] results using robust standard errors. In all columns, the Muslim group is defined as in Abdelgadir and Fouka [2020]: those whose father was *born* in a predominantly Muslim country.

Appendix F Analysis for cohorts of women and men reaching puberty when the 2004 law is issued

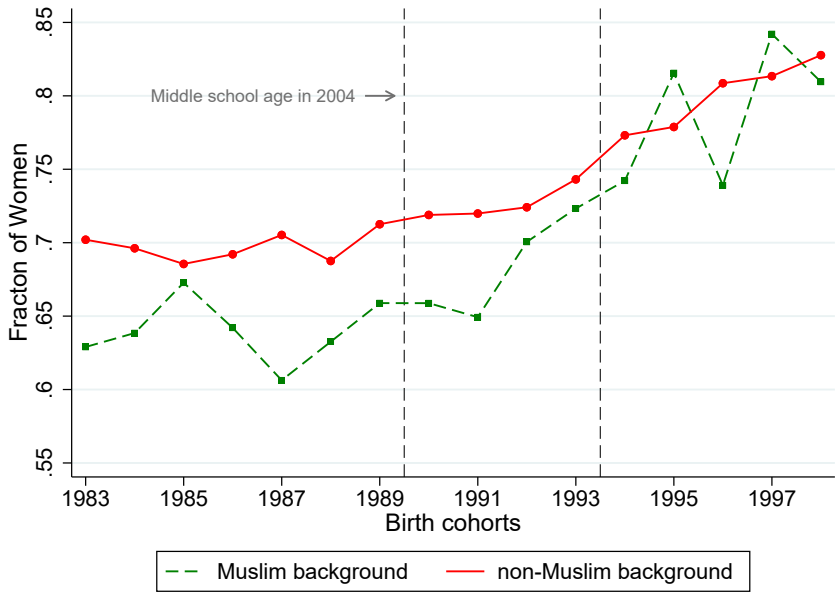
Table F1: 2004 law effect on educational outcomes

	Women		Men	
	(1)	(2)	(3)	(4)
Muslim × 1{aged ≤ 14 at t_0}	0.023		-0.007	
	(0.015)		(0.020)	
Muslim × dosage		0.039**		0.001
		(0.019)		(0.028)
Dep. var. non-Muslim 1983-89	0.697	0.697	0.607	0.607
Dep. var. non-Muslim 1983-89	0.640	0.640	0.505	0.505
R2	0.086	0.086	0.098	0.098
N	45550	45550	45040	45040

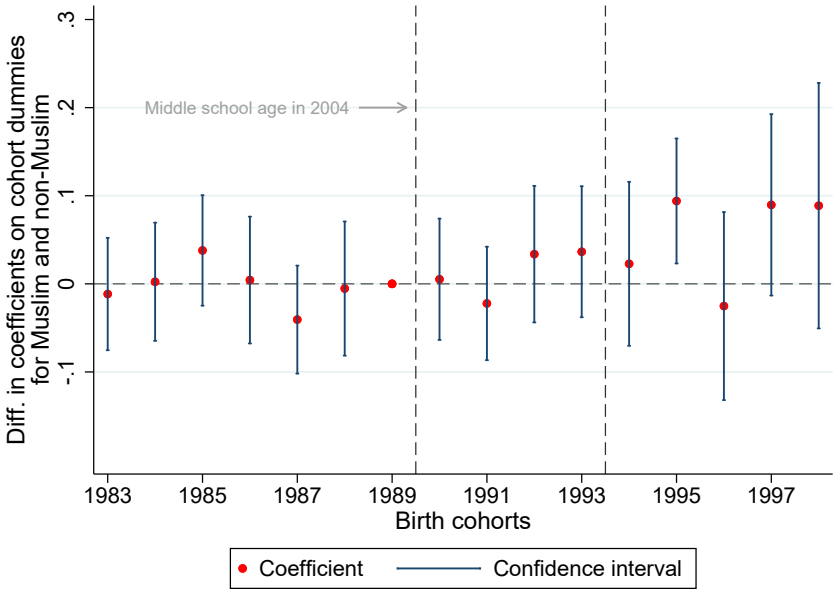
Notes: This table refers to a working samples of French-born individuals who were born between 1983 and 1998. Columns show the results of regressing whether respondents graduated from high school on cohort, father's nationality at birth, individual's department of birth, and survey fixed effects, as well as a dummy indicating father's occupational status. Columns (1) and (2) use the subsample of women, while columns (3) and (4) use the subsample of men. Columns (1) and (3) include and report the interaction between a Muslim dummy and a dummy indicating that the respondent was aged 14 years or less in $t_0 = 2004$. Columns (2) and (4) include and report the interaction between a Muslim dummy and a dosage variable equal to 0, 0.25, 0.50, 0.75 or 1, depending on whether individuals were aged 15 years or more, 14 years, 13 years, 12 years or 11 years or less in t_0. Standard errors, reported in parenthesis, are clustered at the individual's department of birth × father's nationality at birth level. Significance levels: $^{***} < 0.01$, $^{**} < 0.05$, $^{*} < 0.1$. Source: INSEE, LFS 2005-2019.

Figure F1: High school graduation rates for women reaching puberty around the 2004 law's issue

(A) High school graduation rate of Muslim and non-Muslim.

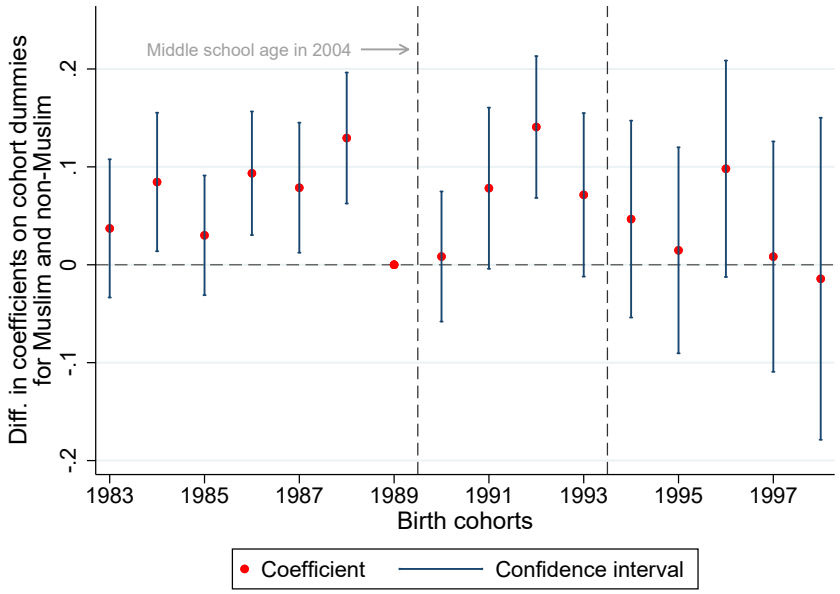


(B) Estimated differences between Muslim and non-Muslim.



Notes: The top figure displays the fraction of French-born women, aged 21 or more, who graduated from high school, for cohorts born between 1983 and 1998. The solid (dashed) line refers to the Muslim (non-Muslim) group. The bottom figure displays the estimated difference in high school graduation probability between Muslim and non-Muslim groups obtained from regressing a high school graduation dummy on a full set of interactions between the Muslim dummy and cohort dummies and controlling for department of birth, survey date and father's nationality at birth fixed effects, as well as a dummy indicating father's occupational status. Cohorts within the vertical lines indicate the cohorts that reached puberty around the 2004 law. Source: INSEE, LFS 2005-2019.

Figure F2: Estimated difference in high school graduation rates between Muslim and non-Muslim men reaching puberty around the 20004 law's issue



Notes: This figure shows the replication of Figure F1B for men in the Muslim and non-Muslim group.

Appendix G Replication of main results using the Échantillon démographique permanent

Table G1: High school graduation probability, by gender and birth cohort using the *Échantillon démographique permanent*

	Cohorts 1971-1974 (1)		Cohorts 1987-1990 (2)
Panel A: women			
Muslim (a)	0.559		0.723
	(0.028)		(0.020)
Non-Muslim (b)	0.656		0.711
	(0.004)		(0.005)
(a)-(b)	-0.096		0.016
	(0.028)		(0.020)
$[(a) - (b)]_t - [(a) - (b)]_{t-1}$		0.113	
P-value		0.001	
Panel B: men			
Muslim (a)	0.495		0.518
	(0.035)		(0.021)
Non-Muslim (b)	0.556		0.605
	(0.004)		(0.005)
(a)-(b)	-0.061		-0.087
	(0.035)		(0.021)
$[(a) - (b)]_t - [(a) - (b)]_{t-1}$		-0.027	
P-value		0.514	

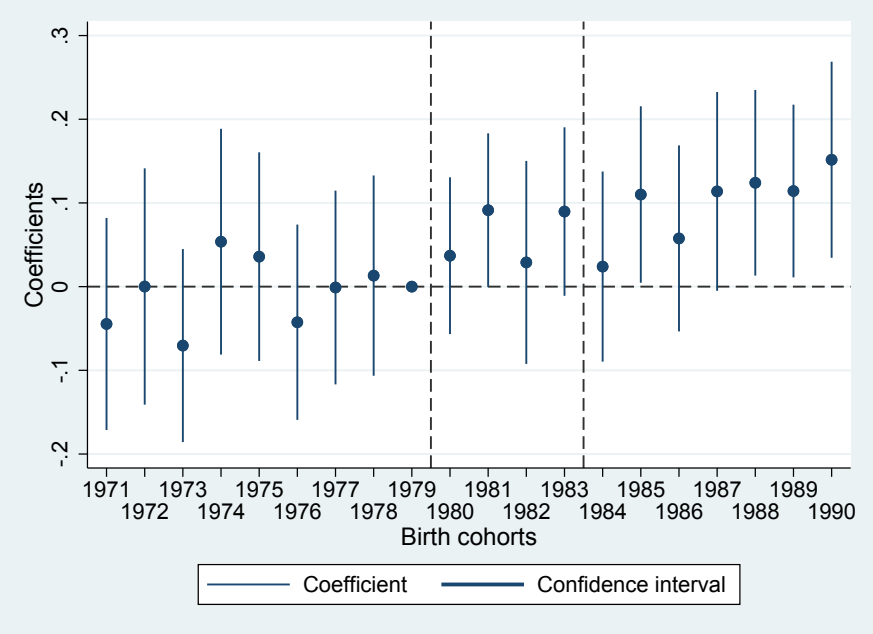
Notes: This table shows the replication of Table 1 using the *Échantillon démographique permanent.*

Table G2: 1994 circular effect on educational outcomes using the *Échantillon démographique permanent*

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: high school graduation				
Muslim × 1{aged ≤ 14 at t_0}	0.017		0.086***	
	(0.021)		(0.020)	
Muslim × dosage		0.029		0.093***
		(0.020)		(0.021)
N	59,597	59,597	59,027	59,027
R2	0.075	0.075	0.064	0.064
Panel B: educational attainment				
Muslim × 1{aged ≤ 14 at t_0}	-0.001		0.238***	
	(0.076)		(0.065)	
Muslim × dosage		0.017		0.246***
		(0.070)		(0.077)
N	47,397	47,397	47,993	47,993
R2	0.099	0.099	0.099	0.099

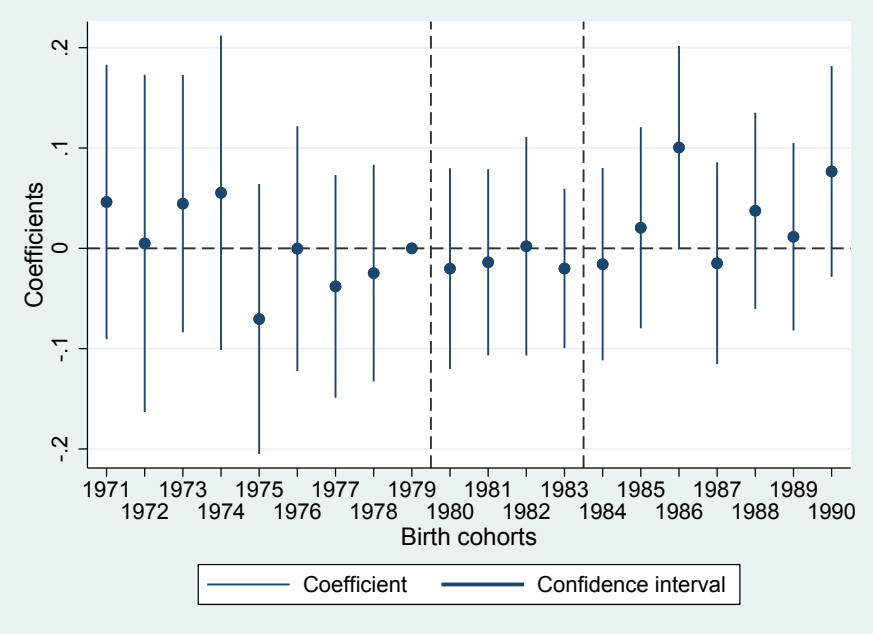
Notes: This table shows the replication of Table 2 using the *Échantillon démographique permanent.*

Figure G1: Estimated difference in high school graduation rates between Muslim and non-Muslim women reaching puberty around the 1994 circular's issue, using the *Échantillon démographique permanent*



Notes: This figure shows the replication of Figure 1B for women in the Muslim and non-Muslim group using the *Échantillon démographique permanent*.

Figure G2: Estimated difference in high school graduation rates between Muslim and non-Muslim men reaching puberty around the 1994 circular's issue, using the *Échantillon démographique permanent*



Notes: This figure shows the replication of Figure C1 for men in the Muslim and non-Muslim group using the *Échantillon démographique permanent*.