Direction des Statistiques Démographiques et Sociales

N° F0802

HOW MUCH DOES IT COST TO STAY AT HOME?
CAREER INTERRUPTIONS AND THE GENDER WAGE GAP IN FRANCE

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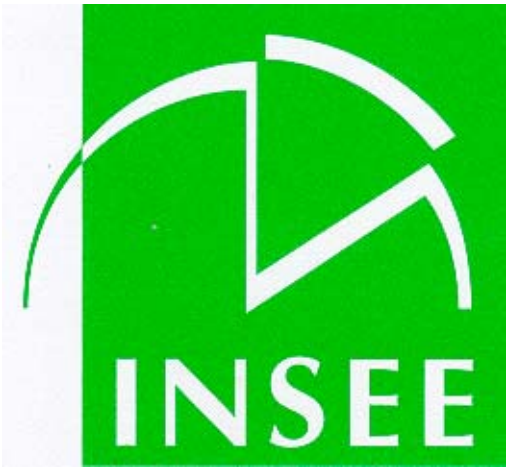
Document de travail



Institut National de la Statistique et des Etudes Economiques

INSTITUT NATIONAL DE LA STATISTIQUE ET DES ÉTUDES ÉCONOMIQUES
Série des Documents de Travail
de la
DIRECTION DES STATISTIQUES DÉMOGRAPHIQUES ET SOCIALES

Département des prix à la consommation,
des ressources et des conditions de vie des ménages

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How much does it cost to stay at home? Career interruptions and the gender wage gap in France.

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Décembre 2008

Abstract

Childbearing and subsequent interruptions are more and more often identified as one of the major causes of the persistence of a gender wage gap. The time spent out of the labour market to raise children may result not only in women accumulating less professional experience than men on average, but also in a pay penalty. Children can also have indirect effects on their mothers' wages by influencing their choice of occupation, or the promotions or positions they are offered, or making them opt for part-time work or more flexible working conditions often associated with less paid jobs. In this paper, we investigate the extent of the direct and indirect effects of children in the gender wage gap in France, with special attention to their impact on the accumulation and composition of human capital. It is generally difficult to measure this impact, because it requires individual data on the composition of experience - including time out of employment - that are rarely available. The new French survey "Families and Employers" (Ined, 2005) provides this information. We first look at men's and women's returns to potential and actual experience, then penalties associated with unemployment and time out of the labour market. We find that once controlled for the jobs' characteristics and selection into employment, there is no gender differential in the returns to work experience, but a penalty attached to time out of the labour market which affects only women. We do not find any direct negative impact of children on women's current hourly wage at the mean. For a sub-sample of men and women aged from 39 to 49, we find that the wage gap between men and women who have never interrupted their participation in the labour force is entirely "unexplained", while the wage gap between women who have never interrupted and women who have had interruptions is entirely "explained".

Keywords: career interruptions, family gap, gender wage gap.
JEL code: J24

Résumé

Les enfants et les interruptions d'activité qui y sont associées sont identifiés parmi les causes principales de la persistance de l'écart des salaires entre les femmes et les hommes. Les épisodes hors du marché du travail pour élever des enfants ont d'abord pour conséquence directe une moindre accumulation d'expérience professionnelle ; les interruptions peuvent aussi avoir en elles-mêmes un effet pénalisant sur les salaires. Les enfants peuvent également avoir un effet indirect sur les salaires de leurs mères en influençant leurs choix d'occupation, ou les postes et les promotions qu'elles se voient proposer, ou encore en les faisant opter pour le temps partiel ou des emplois permettant une meilleure conciliation vie familiale-vie professionnelle, offrant souvent de moindres rémunérations. Dans ce document, nous étudions l'ampleur des effets directs et indirects des enfants sur l'écart des salaires entre les femmes et les hommes en France, en portant spécialement attention à leur impact sur l'accumulation et la composition du capital humain. Cet effet est souvent difficile à appréhender, car les données ne permettent pas, la plupart du temps, de détailler le contenu de l'expérience (y compris les périodes hors de l'emploi). L'enquête « Familles et employeurs » de l'Ined (2004-2005) fournit les informations nécessaires. Nous examinons tout d'abord les rendements de l'expérience potentielle et effective, puis les pénalités associées aux interruptions. On constate alors que si l'on dispose de l'expérience effective et une fois prises en compte les caractéristiques des emplois occupés et la sélection dans l'emploi, il n'y a pas de différence de rendement de l'expérience professionnelle effective entre les femmes et les hommes, mais une pénalité pour les interruptions qui n'affecte que les femmes. Pour une sous-population de femmes et d'hommes âgés de 39 à 49 ans, on constate que l'écart des salaires entre les hommes et les femmes qui n'ont jamais quitté le marché du travail est entièrement « inexpliqué », tandis que l'écart des salaires entre les femmes qui n'ont jamais quitté le marché du travail et celles qui ont interrompu leur carrière est entièrement dû aux différences de caractéristiques entre ces deux groupes.

Mots-clés : interruptions d'activité professionnelles, écart des salaires.
Codes JEL : J24

How much does it cost to stay at home?

Career interruptions and the gender wage gap in France

1. Introduction and background

In this paper, we investigate the extent of the direct and indirect impact of children on the gender wage gap in France. More specifically, we first analyse the direct effect of having children on the current wages, then we explore a way to measure the indirect effect children can have by making one of their parents, usually the mother, withdraw from the labor force, on the gender wage gap.

According to human capital theory, the longer the time spent in education, at work and in training, the higher the wage an individual can expect in the labour market. This is the basis of mincerian-type wage equations. In this framework, the explained part of the gender wage gap is assumed to result from men/women differences in human capital. Now that women's education level is, in several countries, at least equivalent (if not higher) to that of men, the main source of gender differences in human capital lies in the fact that women, on average, spend more time than men out of the labour market, because it is still massively women who take time out to care for young children[1].

There are several reasons why children might influence their mothers' earnings, and in turn women's wages: children can have a direct influence on their mothers' productivity (Becker, 1985) because they (together with the housework) leave mothers with less energy than men or other women. Children can also have an indirect influence: Firstly, mothers are more likely than childless women to have taken some time out of the labour market, and consequently to have accumulated less human capital; it is also possible that employment breaks not only result in foregone experience but in an additional penalty that would be interpreted as the effect of a depreciation of skills (Mincer & Polachek, 1974). Secondly, mothers are also more likely to have been or to be working part-time, which in turn may reduce work opportunities, or to have chosen jobs or enterprises that are more "family-friendly" (or simply closer to home or school) at the cost of a better pay (Filer, 1985). Thirdly, mothers may be discriminated on the labour market (*i.e.* statistical discrimination). Fourthly, being a mother or having a career might be related to some unobservable difference between different types of women – put in other words, women would come in two types: intrinsic mothers and intrinsic workers (Hakim, 2003). This point has been largely studied empirically with various results and no strong evidence was found to support this idea. Some studies have not found a significant heterogeneity bias (Waldfogel, 1998, Albrecht and al, 1999 and Neumark & Korenman, 1994). On the other hand, Budig & England, 2001, Datta Gupta & Smith (2001) and Waldfogel, 1997 suggest that women with lower unobserved earning power are more likely to have children.

The impact of children on wages have been investigated since the mid-1990s in the "family gap" literature – though not much in France – and increasingly under the question of the impact of a family gap in pay as possible explanation for the stagnation of the gender wage gap after a historical trend of fall (Waldfogel, 1997, 1998; Harkness & Waldfogel, 1999; Datta Gupta & Smith, 2001; Davies & Pierre, 2005; Sigle-Rushton & Waldfogel, 2007). Cross-country studies show that the existence and

[1] This point could be extended to dependent parents'care, but it is not our question here.

extent of such a family pay gap – actually mostly a children pay gap - is far from uniform: while it seems especially large in UK, followed by the United-States, Australia, Canada, then Germany, then Finland and Sweden (Harkness & Waldfogel, 1999), it appears to be non significant for the two firstborn children in Belgium, France, Denmark, Portugal or Italy (Davies & Pierre, 2005).

In France, previous studies on the impact of career interruptions on wages were primarily addressing the question in terms of human capital and occupational segregation (Bayet, 1996; Colin, 1999; Le Minez & Roux, 2002), and studies of the gender wage gap did not especially seek to measure a family gap (Meurs & Ponthieux, 2000, 2007). The small number of studies on the family gap in France can partially be explained by the relative high female participation rate and the relatively low gender wage gap compared to the other European countries. However, since the change in the parental leave allowance in 1994[2] has resulted in more interruptions (Picketty, 2005) and longer employment breaks after childbearing (Pailhé & Solaz, 2006), the case of France seems particularly interesting, and the context makes easier to empirically isolate the family gap from other gender gaps.

Studying the family wage gap and the gender wage gap requires appropriate data sets, especially with regards to the information on individuals' work history or experience. Actually, the main French panel on individual's wages (the DADS, based on employers annual declarations) does not provide detailed information other than their work experience (there is no information on the type of time out of employment), is rather poor in terms of individual characteristics, and includes only a limited part of public sector employees. With the exception of occasional surveys (*e.g*. "*Enquête Jeunes et carrières*" in 1997), other data sources (*e.g*. the LFS) which are richer in individual information and include the public sector provide no better information on the actual work experience and the contents of the employment breaks. One well known limitation when information on the actual work experience is lacking is that it may result in misestimating the returns to education or other characteristics (Filer, 1993). Another problem arises if employment breaks not only reduce the amount of work experience, but also lead to skills depreciation (Albrecht et al., 1999; Edin & Gustavsson, 2008). Therefore, not taking into account the composition of total experience means that any period - whether at work or not - is taken at the same value, while studies using detailed work histories show that it is very probably not the case (Light & Ureta, 1995; Green & Ferber, 2008). This also can bias the returns to experience and the estimation of a direct impact of children on wages. It is also important to control as much as possible for the current employment characteristics.

The novelty of the data we are using in this paper, the "*Enquête Familles et Employeurs*", collected by INED in 2004-2005 is that respondents were asked about their activity history since the age of 18, so that we are able to have a more accurate measure of their actual experience (including employment breaks distinguished by reasons) than with other datasets. This information is of central interest if one wants to verify the existence and extent of a family gap, or to measure its impact in the overall gender wage gap, and of course to sort out between various explanations. Its main drawback is that it is a cross section, consequently we have information only on the wage at the time of the interview.

Using these data, we are able to investigate the relative impact of children and time out of work on women's current wages and on the gender wage gap. To do this, we proceed in two steps: firstly, we

[2] It was extended to the second child whereas it was only available from the third child before.

estimate the impact of children on men's and women's current wage, once the actual experience is measured and its composition detailed. Our results suggest that there is no direct impact of children on women's current wages, while we obtain the usual positive impact for men.

Secondly, we propose a methodology aimed at evaluating the influence of a family (children) gap in the overall gender wage gap. It consists in decomposing the overall wage gap into two elements - a gender wage gap between men and women who have never taken time out of the labor market, and an "interruption" wage gap between women without and women with labor market interruptions – each one being decomposed following Oaxaca & Ransom (1994). Applying this decomposition to a sub-sample of workers aged from 39 to 49, we find that the gender wage gap remains "unexplained" while the "interruption wage gap" is entirely due to differences in observed characteristics.

The paper is organized as follows: section 2 gives more details on the dataset and some descriptive statistics, section 3 presents the estimation of the impact of children in the gender wage gap, section 4 presents the decomposition of the gender wage gap and the interruption gap, and section 5 concludes.

2. Data, variables and descriptive statistics

2.1. Data, sample, main variables

The data used for this study is the French "*Enquête Familles et Employeurs*" (Families and Employers Survey, EFE after), conducted by INED in 2004-2005[3]. A sample of 9547 individuals (5107 women and 4440 men) aged from 20 to 49 was interviewed. We are interested in wage workers and potential workers, so we drop those who were either students or retired or self employed at the time of interview. The population of wage workers is restricted to those who work at least 10 hours per week, in order to avoid as much as possible occasional participation in employment; we also drop those who earn less than 250 euros per months, this threshold corresponding to about the minimum wage for one month of work with at least 10 weekly hours. Once restricted to observations with no missing information for the whole set of variables used in the analysis our sample counts 7673 individuals, of whom 6132 were in salaried employment at the time of the survey (3091 women and 3041 men).

2.1.1. Construction of the variables related to experience

The great interest of our dataset is the retrospective information it provides on the individuals' activity status since they turned 18 years old. This information, gathered under the form of a "calendar", is based on the respondents' situations that have lasted at least 6 contiguous months. For each spell having lasted at least 6 months, six situations are possible: employment - distinguishing part-time and full-time work -, unemployment, studies or training, military service, parental leave, other economic inactivity. An additional "status" was taken into account: combination of short spells of employment / training with short spells of unemployment. For each of these seven situations, the respondents were

[3] There are in fact two surveys, one at the individuals level (a household file) and one at the employers level, the employers being those of the individuals employed at the time of the survey. We have only used here the information from the household file and intend to use the matched employer-employee data in a further step.

asked to indicate the corresponding years of occurrence[4]. From this calendar and two other variables (the end year of initial education and the year of entry in the present job) we draw all the variables relating to an individual activity history. Below is a brief description of these variables:

- potential experience: the most basic (but not good, *cf.* Filer 1993) measure of experience as the number of years since the end of initial education; since we know the number of years spent in the current job. In order to distinguish specific from general human capital (Becker, 1985), we have broken down this basic measure into two components: potential experience minus tenure (EXPP) and tenure (ANCI).

- actual experience: the number of years actually spent at work. It is divided into two parts: tenure (ANCI) and work experience previously accumulated (EXPV). Two types of breaks are distinguished: the number of years unemployed (NBCHO) and the number of years out of the labour market (NBINAT). These years out of the labor market (NBINAT) correspond to the time spent at training, parenting and other economic inactivity; they have then somewhat a different composition for men and women, and also between older and younger men: for women, years out of the labour market are mostly periods of parental leave and other economic inactivity, while for men they are mostly periods of training (including for the older in the sample the compulsory year of military service, which was suppressed in 1996). In one specification, work experience is further broken down into full-time and part-time years.

2.1.2 Other main variables of the analysis

The calendar also gives the date of some major life events, such as leaving the parent's home, couple formation, separation, marriage, childbirths, etc. Having information on the dates of childbirth is particularly interesting because it allows to know the number of children a person has had, and not only - as it is the case in many cross-section datasets - the number of children currently living in the household.

The dataset provides also with all the usual socio-demographic information (education, age, household type, region of residence, health status[5], to be an immigrant or not) and for those employed at the time of the survey, information on the job's characteristics (monthly wage, weekly hours, time status, occupations, public/private sector, firm size).

2.2. Sample characteristics

The first inequality related to children between men and women is that among parents, it is mostly women who withdraw from the labor force. In our sample, about 17 % of women are out of the labor force on average, and this percentage increases with the number of children: while almost all childless women are economically active, about one out of ten mothers of 1 child, two out of ten mothers of 2 children and more than three out of ten mothers of 3 children and more are out of the

[4] It can be that more than one situation is identified for a given year: firstly, some situations are not exclusive (for example, studies+unemployment); secondly, a 6 months period starting on year t and ending on year t+1, the interviewers were instructed to tick the two years. When this was the case, we have divided the year by the number of situations identified and imputed to each situation a duration equal to the corresponding fraction of year.

[5] Health status is proxied by a variable indicating whether the person suffered from serious illness in the past or is permanently handicapped.

workforce(table 1). There is absolutely no such effect of children on men's participation in the labor market.

Among the wage earners, there are substantial differences by gender in the average weekly working hours. The gender gap in hours increases with the number of children, since they grow with the number of children for men, when they decrease for women. This gap is in part explained by part-time work, which is female-dominated: on average, 3 % of male wage earners are part-time workers, while this is the case of 27% of female wage earners. Moreover, women's propensity to work part-time increases with the number of children: 15 % of childless female wage earners work part-time, and respectively 20 %, 34 % and 44 % of mothers of one, two and three children and more. Part-time mothers have usually one weekday out of work. Occupational segregation by gender is rather pronounced in France; for instance, the share of women working in the public sector is 33%, and that of men is 22%. The other sample characteristics are shown in appendix 1.

The female/male hourly pay ratio varies also a great deal by family status. Childless women do rather well, with an average hourly wage of 97% of that of childless men; mothers' relative pay is always much lower than that of fathers and falls with the number of children, from 89% with one child to 82% with 3 children and more.

Table 1 – Gender inequalities by number of children (%)

	Women						Men					
		Number of children				Total with children		Number of children				Total with children
	Total	0	1	2	3+		Total	0	1	2	3+	
Out of the labour force (%)	16.7	2.5	11.1	18.4	35.0	21.0	0.3	0.4	0.2	0.1	0.7	0.3
Weekly hours	34.0	36.0	34.6	33.2	31.9	33.3	39.3	38.6	39.5	39.7	39.7	39.6
% part-time	27.4	14.8	20.3	33.7	43.5	31.7	3.3	4.9	2.2	3.1	1.6	2.4
Hourly wage	8.9	8.6	8.9	9.1	8.9	9.0	9.8	8.9	9.9	10.2	10.9	10.3
Women's hourly wage / Men's hourly wage	90.4%	96.7%	89.3%	89.0%	82.2%	87.3%						
N	4262	976	898	1482	908	3286	3411	1211	660	983	557	2002
N employed	3091	788	708	1092	503	2303	3041	990	602	942	507	5051

Source: EFE, INED, 2004-2005.

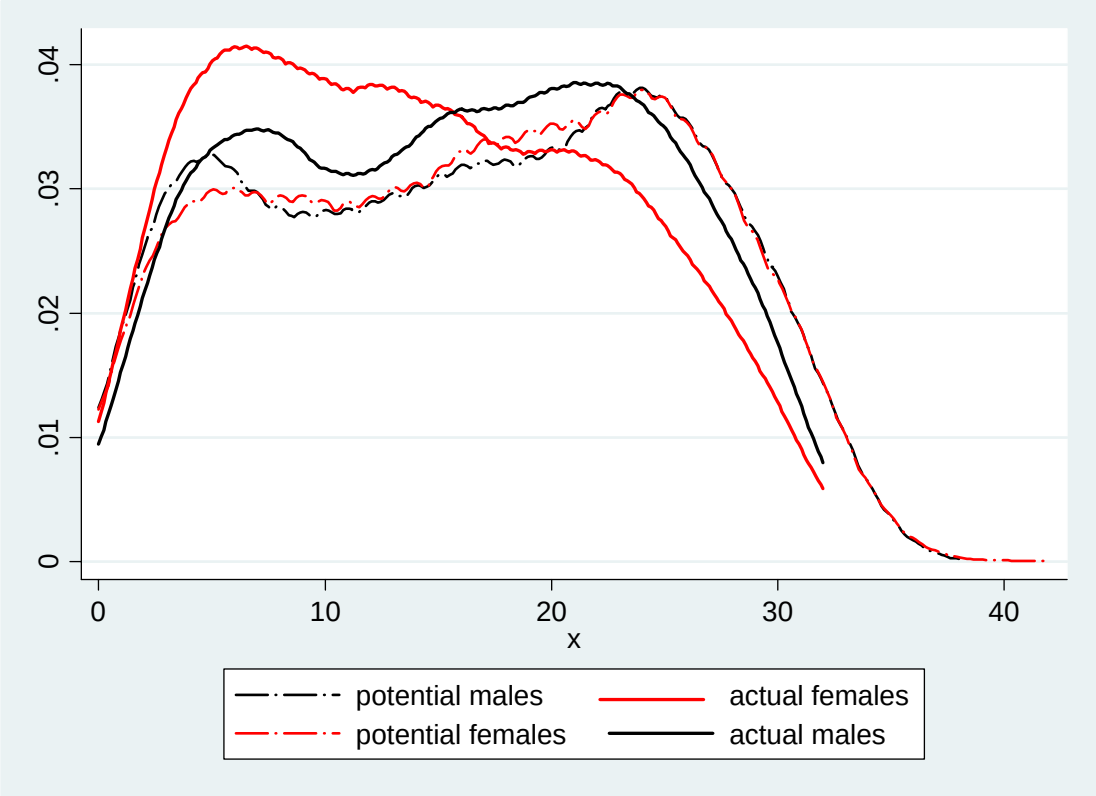
As for the measure of potential experience, it shows no difference by gender (7.7 years for women, 7.5 years for men), but the actual work experience is longer for men (table 2 & graph 1). It is noticeable that tenure is high for both men and women, about 9 years on average, which is more than the experience accumulated before the current job; this reflects the rather low external mobility in France. As expected, the average number of years out of the labour force as well as the number of years in part-time work is higher for women than for men, the gap increasing in both cases with the number of children.

Table 2 – Individual activity history, by gender (average number of years)

	Women						Men					
		Number of children				Total with children		Number of children				Total with children
	Total	0	1	2	3+		Total	0	1	2	3+	
Potential exp (minus tenure)	7.7	3.8	6.9	8.5	12.9	9.0	7.5	5.1	7.5	8.7	10.3	8.7
Actual exp (minus tenure)	5.6	3.8	6.0	6.2	6.9	6.2	6.7	4.7	6.6	7.7	8.8	7.7
Tenure	8.9	5.0	9.1	11.3	9.7	10.2	9.2	5.2	9.5	11.5	12.6	11.2
Unemployment	0.6	0.3	0.5	0.6	0.8	0.6	0.3	0.3	0.3	0.2	0.4	0.3
Out of labour force	2.0	0.5	0.9	2.1	5.4	2.5	0.9	0.6	1.0	1.0	1.2	1.1
Part-time work	2.6	1.0	1.8	3.7	4.1	3.2	0.3	0.3	0.3	0.3	0.3	0.3

Source: EFE, INED, 2004-2005.

Graph 1. Potential and total experience – Wage workers, males and females



3. Is there an impact of children on individuals' current wages?

In this section, we address our first question, which is that of the existence and extent of a direct impact of children on wages. We conduct this empirical investigation by steps: first, in order to re-assess the impact of the measure of experience in a cross-sectional analysis of the gender wage gap, we start with a very basic wage equation, which includes human capital variables (education and various variables related to experience), the number of children and two control variables (region of residence and immigrant status). Then we shift to a less basic specification, by including several

regressors to control for relevant characteristics of the current job. The dependent variable is always the logarithm of the hourly wage (Lwh, computed on the basis of the monthly wage and number of hours usually worked per week). At each step, we examine the impact of children, and the impact of the way experience is measured on the estimated impact of children on wages. The equations are estimated for women and men separately.

3.1 The impact of children with a basic human capital wage equation

In a first step, we test four variants of this "basic" specification, which differ mainly in the way "experience" is measured: in the first one, only the level of initial education, the number of years of potential experience and tenure are included among human capital variables, then we introduce a correction for the selection bias.

$$Lwh = a\,EDUC + b\,EXPPV + c\,ANCI + d\,NBENFT + h\,CONTROL + e \quad (1)$$

with EDUC a set of dummy variables indicating the highest diploma obtained by the individual (5 levels of education, EDUC1 the lowest), NBENFT the number of children, CONTROL a set of two control variables and e the error term. In this specification, and in all what follows, we adopt a quadratic form for variables related to experience and tenure.

Having children at home may have a direct impact on their parents' productivity, while having had children may play on the selection into employment, and can cause adjustments in the type of job (part-time work, public sector – known for being more 'family-friendly', a position with less responsibility, etc.). As women bear the main share of family responsibilities, the effects of children are expected to be quite different for women and for men. In order to correct for this possible selection in employment, we add a regressor (IMR) to our wage equation following Heckman's two-steps procedure (Heckman, 1979):

$$Lwh = a\,EDUC + b\,EXPPV + c\,ANCI + d\,NBENFT + h\,CONTROL + l\,IMR + e \quad (1')$$

IMR (the inverse Mill's ratio) is obtained from a probit equation. The selection equation (estimated only for women[6]) includes**:** six age dummies, education dummies, indicators of past unemployment and past inactivity, the number of children and a dummy if the person has at least 1 child aged under 6, a dummy for living in couple, for home ownership, dummies to control for being an immigrant*,* having had health problem*,* and indicators for the individuals' parents activity status (always at work *vs.* other situations) – which we use with home ownership as the exclusion variables[7].

In specification 2, potential experience is replaced by actual work experience. In specification 3 we use the detailed components of the experience, including actual work experience, unemployment and inactivity.

$$Lwh = a\,EDUC + b\,EXPV + d\,NBENFT + h\,CONTROL + l\,IMR + e \quad (2)$$

[6] Almost 100 % of men are in the labor force. For the same reason, other studies on the gender wage gap in Europe do not correct for men selection into employment, *cf.* Beblo et al. (2003).

[7] The estimations show the expected effects of children and living in couple (negative and significant). The exclusion variable related to the individual's mother's employment history is significant and has the expected sign: women whose mothers always worked are less likely to be economically inactive. The detailed results are presented in Appendix 2. The sample means are reported in Appendix 1.

$$Lwh = a\,EDUC + b\,EXPV + c\,ANCI + d\,NBCHO + g\,NBINAT + d\,NBENFT + h\,CONTROL + l\,IMR + e \quad (3)$$

For women only, we also test a variant (3') in which, work experience is broken down into full-time work (FTEXPV) and part-time (PTEXPV) work experience.

$$Lwh = a\,EDUC + b1\,FTEXPV + b2\,PTEXPV\ c\,ANCI + d\,NBCHO + g\,NBINAT + d\,NBENFT + h\,CONTROL + l\,IMR + e \quad (3')$$

We expect the returns to EXPV to be higher than to EXPPV, and with specification (3) the existence of a penalty for the periods out of work. We also expect changes in the impact of the number of children when the way experience is measured changes.

The results (see table 3) show, firstly, that the estimation yields higher returns to work experience than to potential experience – as expected – especially for women, while the returns to tenure are comparable. At this step, without controlling for many structural differences, the returns to experience are higher for men than for women. However the gender difference in returns decreases with better measures of experience: once selection into employment taken into account (model 1') men's returns are five times higher than women's, twice higher with model (2), and more than one and a half time higher with model (3). Multiplied by the gender difference in length of experience, this illustrates the scope for overestimating the "unexplained" part of the gap in a decomposition when only the most basic measure of experience is available.

Secondly, there is a penalty for the time spent out of the labour market, but only for women, this resulting from gender differences in the type of inactivity; thirdly, there is a clear penalty on past unemployment, here for men as well as for women, even higher in the case of men. Finally, for women, the periods spent in full time work show slightly higher returns than those in part-time work.

As for the impact of children, it appears, as usually, positive and significant on men's wages with any specification. For women, the picture is somewhat different: it seems that there is no significant impact of children on the current wage as long as the experience is not fully specified including time out of work. Once the components of periods out of work are introduced (model 3), the effect of children on the current wage turns significant and positive, and this result holds once corrected for a selection bias.

Table 3 - Returns to experience and impact of children

	Women					Men		
	(1)	(1')	(2)	(3)	(3')	(1)	(2)	(3)
Anci	0.025***	0.024***	0.026***	0.025***	0.024***	0.023***	0.024***	0.024***
	(10.14)	(9.73)	(10.99)	(10.16)	(10.04)	(9.79)	(10.48)	(10.26)
$Anci^2$	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
	(3.51)	(3.50)	(3.60)	(3.46)	(3.32)	(2.96)	(3.20)	(3.20)
EXPPV	0.003	0.003				0.014***		
	(1.10)	(1.07)				(5.99)		
EXPPV2	0.000	-0.000				-0.000***		
	(0.13)	(0.05)				(2.82)		
EXPV			0.008***	0.011***			0.015***	0.017***
			(2.72)	(3.82)			(5.88)	(6.50)
EXPV2			0.000	-0.000			-0.000**	-0.000***
			(0.46)	(0.71)			(2.21)	(2.79)
NBCHO				-0.042***	-0.043***			-0.067***
				(5.00)	(5.13)			(5.71)
NBCHO2				0.003***	0.003***			0.007***
				(3.12)	(3.22)			(3.56)
NBINAT				-0.011***	-0.011***			0.014*
				(2.73)	(2.79)			(1.93)
NBINAT2				0.000	0.000			-0.001
				(1.56)	(1.60)			(1.07)
HANDIC				-0.027	-0.026			-0.047***
				(1.63)	(1.60)			(2.95)
PTEXP					0.011*			
					(1.76)			
PTEXP2					-0.001			
					(1.05)			
FTEXPC					0.014***			
					(4.85)			
FTEXP2					-0.000*			
					(1.79)			
NBENFT	0.005	0.015**	0.005	0.014**	0.015**	0.029***	0.027***	0.026***
	(0.85)	(2.12)	(0.73)	(2.01)	(2.05)	(5.66)	(5.24)	(5.01)
LAMBC		-0.072**	-0.009	0.023	0.023			
		(2.50)	(0.31)	(0.73)	(0.73)			
Observations	3091	3091	3091	3091	3091	3041	3041	3041
R-squared	0.35	0.35	0.36	0.37	0.38	0.34	0.34	0.35

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Controlled for education level, region of residence and immigrant status.

3.2 Impact of children with an extended specification

The next step consists in adding to model (3) a set of variables which describe the current job: we take into account the time status (4 dummies: TPD1=full-time work, TPD2="long" part-time *i.e.* at least 80 % of a full-time work, TPD3= half-time and TPD4="short" part-time *i.e.* less than 15 hours per week), a dummy for working in the public sector (PUBLIC), the occupational status (4 dummies from CS2, the highest level, to CS5 the lowest), and whether the person is in a position of responsibility (RESP). We also include controls for the enterprise size (7 dummies). These variables are grouped under the name JOBset in the model below.

$$Lwh = a\,EDUC + b\,EXPV + c\,ANCI + d\,NBCHO + g\,NBINAT + d\,NBENFT + j\,JOBSET + l\,IMR + e \qquad (4)$$

With this specification, we want to control whether some jobs characteristics could capture some indirect effects of children. We report in Table 4 below the results obtained with this augmented specification for variables of interest (detailed results are in Appendix 3). Since it seems that there is no selection bias (the IMR estimate is not significant), we estimate also that model without correction for the selection in employment (specification 4').

Table 4 – Returns to experience and impact of children - II

	Women		Men
	(4)	(4')	(4')
ANCI	0.020***	0.019***	0.017***
	(8.66)	(8.65)	(7.94)
ANCI2	-0.000***	-0.000***	-0.000**
	(2.96)	(2.97)	(2.52)
EXPV	0.011***	0.011***	0.013***
	(4.11)	(4.07)	(5.33)
EXPV2	-0.000	-0.000	-0.000**
	(1.23)	(1.21)	(2.37)
NBCHO	-0.035***	-0.035***	-0.056***
	(4.45)	(4.48)	(5.12)
NBCHO2	0.002***	0.002***	0.005***
	(2.74)	(2.74)	(3.20)
NBINAT	-0.008**	-0.007*	0.008
	(2.01)	(1.93)	(1.19)
NBINAT2	0.000	0.000	-0.000
	(0.93)	(0.79)	(0.65)
HANDIC	-0.022	-0.021	-0.042***
	(1.40)	(1.35)	(2.84)
NBENFT	0.005	0.007	0.020***
	(0.75)	(1.17)	(4.14)
IMR	0.017		
	(0.58)		
	3091	3091	3041
	0.47	0.47	0.46

The information added about the current job characteristics results in a reduction of the returns to tenure and experience. The penalty associated to unemployment is also lower. The inclusion of this information appears to have a different impact for women and for men: in the case of women, the

largest impact is the change in returns to children, which turn non significant while it was positive. In the case of men, the main impact is the decrease in returns to experience, by about one quarter, and to tenure, by about one third.

In the end, it seems that there is almost no more gender differential in returns to work experience with model (4). The main gender differences are in the penalty for time out, non existent for men, small but significant in the case of women, in the penalty for unemployment (higher for men), in the returns to tenure, higher for women, and in the size of the impact of children, non significant for women while positive and high for men. Finally, the actual experience taken into account and job characteristics controlled for, children do not have a direct effect on female earnings. But children have an indirect effect on their earnings through mothers' time out.

4. The gender wage gap and the "interruption gap"

In this last section of the paper, we go beyond basic comparisons between men and women, and turn to a decomposition of the gender wage gap in which we seek to isolate the component due to a family gap in pay. As already mentioned, a direct penalty of children on wages does not seem to exist in France, but some of our former results (and results in other French studies) suggest strongly that children are not neutral on the employment gap, and on the wage differential between men and women.

The notion of family gap refers usually to wage differences among women that are caused by their family status, *i.e*. whether they are married/cohabiting and whether they have children or not. We focus in what follows on the effect of having children or not.

The problem with cross-sectional data is that it makes no sense to compare women with or without children, because those who do not have children can be either women who have not already had the children they will have, or women who will never have children. The solution adopted here is to restrict the sample to the oldest women of our dataset, that is women aged between 39 and 49 years, in order to keep only women for whom it is likely that they have already had all the children they'll have in their life[8].

4.1. Characteristics of individuals between 39 and 49 years

Tables 5 and 6 present some descriptive statistics about the population aged from 39 to 49 by the number of children. Few of them are childless: 10% of women, 13% of men[9]. Not surprisingly the proportion of women out of labour force and the proportion of those who work part-time increase with the number of children, while the number of hours per week declines. Childless women appear to have a shorter actual experience than other women, but this is due to latter entrance into the labour market, as they are more educated. Accordingly they have the highest average wage among women.

[8] In 2004, the total period fertility rate, i.e. the number of children per 100 women was 6.4% for women aged 40 and over, against 64.3% for women aged 25-29 and 60.4% for those aged 30-34 [Insee, Bilan démographique].

[9] French women distinguish themselves from women from others countries because they are less numerous to be childless and more numerous to give birth to two children. For instance the proportion of women without child has remained very low: only 11% of women born in 1970 will remain childless (Prioux, 2005).

Men's working characteristics do not vary with the number of children, except for childless men. They are more often out of labour market (1% *vs*. 0.3% for fathers), part-time workers (6% *vs*. 2% for fathers), and their hourly wage is the lowest among men in this age group. The relatively high proportion of part-timers is related to the fact that they are more often employed in subsidized jobs than on average among men.

A result of these characteristics of men and women aged 39 and more is that the raw gender wage gap widens with the number of children. Men and women without child earn the same wage and the raw wage gap is maximal (20%), when compared to women and men with 3 children and more.

Table 5 – Gender inequalities by number of children, population aged 39-49 (%)

	Women						Men					
		Number of children				Total with children		Number of children				Total with children
	Total	0	1	2	3+		Total	0	1	2	3+	
Out of the labour force (%)	15.9	5.2	10.7	12.1	26.6	16.9	0.4	1.0	0.4	0.2	0.5	0.3
Weekly hours	33.7	36.8	34.7	33.6	32.1	33.4	39.4	38.0	39.2	39.8	39.8	39.7
% part-time	30.0%	12.9%	19.9%	31.6%	41.2%	31.8%	3.0%	6.4%	2.8%	2.9%	1.6%	2.4%
Hourly wage	9.4	10.2	9.4	9.4	9.0	9.3	10.8	10.1	10.9	10.8	11.2	11.0
Women's hourly wage / Men's hourly wage	86.3%	100.2%	86.0%	87.1%	80.3%	84.7%						
N	1786	154	326	743	563	1632	1424	206	268	542	408	1218
N employed	1362	132	271	602	357	1230	1317	173	248	520	376	1144

Source: EFE, INED, 2004-2005.

Table 6 – Individual activity history, by gender (average number of years)

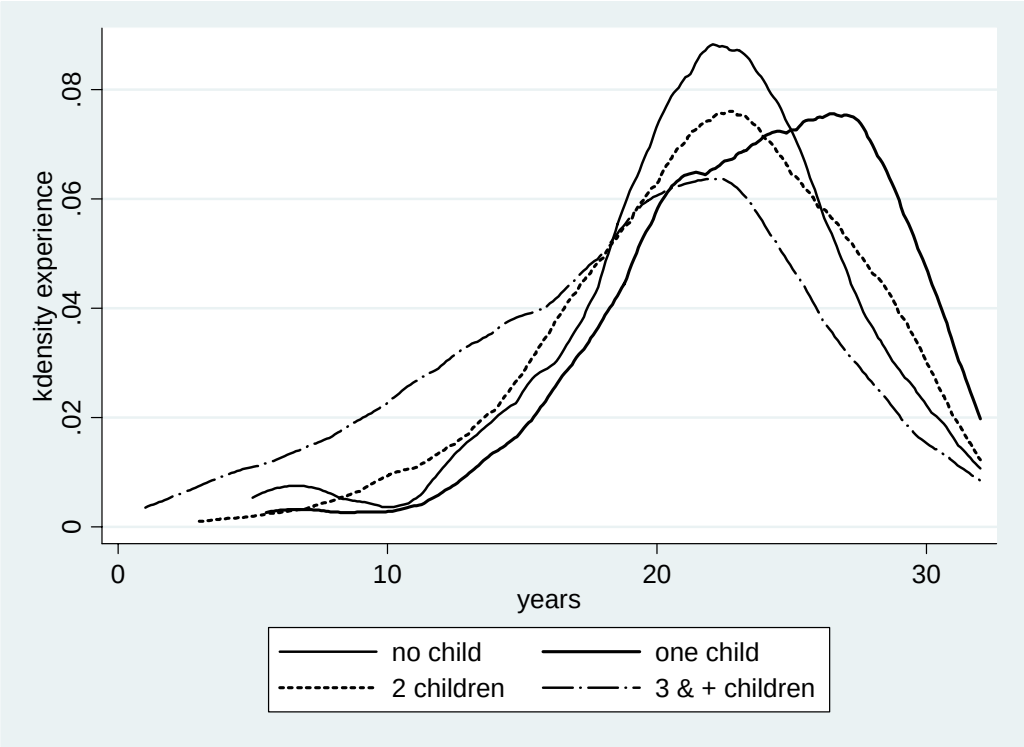
	Women						Men					
		Number of children				Total with children		Number of children				Total with children
	Total	0	1	2	3+		Total	0	1	2	3+	
Potential exp (minus tenure)	11.3	8.5	10.1	10.3	14.7	11.6	10.6	12.5	9.4	10.4	10.9	10.3
Actual exp (minus tenure)	7.7	6.9	8.4	7.4	7.9	7.8	9.2	10.4	8.2	9.3	9.3	9.0
Tenure	13.6	14.7	15.1	14.5	10.7	13.5	14.4	12.9	15.4	14.6	14.3	14.7
Unemployment	0.7	0.9	0.6	0.7	0.8	0.7	0.4	0.7	0.4	0.2	0.4	0.3
Out of labour force	3.1	1.3	1.3	2.5	6.1	3.3	1.2	1.3	1.2	1.1	1.3	1.2
Part-time work	4.0	2.0	2.5	4.6	4.6	4.2	0.4	0.6	0.5	0.3	0.3	0.3

Source: EFE, INED, 2004-2005.

We depart from a traditional analysis of the family gap for several reasons. First, this line of analysis results in contrasting a very small group of childless women who in addition are "special" in their individual characteristics (often highly educated, they also tend to have specific family histories – see Robert-Bobée, 2006) to a large group of "mothers". One other reticence about this option is that since children do not seem to have a direct impact on their mothers' current wages, it seems more interesting to focus on the indirect effects they may have, one of them being that children make some

– not all – mothers interrupt their careers. This effect is self-evident in the following graph, which represents 39 to 49 years old women's actual work experience by number of children (graph 2).

Graph 2 – Actual work experience of women aged 39-49 in paid employment



So we restrict our analysis to a subsample of women aged between 39 and 49, but instead of opposing mothers to non mothers, we oppose those who have spent time out of the labour market to those who have never interrupted their participation in the labour force (at work or unemployed).

This subsample is composed of 1362 working women, of which 528 have never interrupted their activity, and 834 have spent some time out of the labour market. Table 7 below indicates how those currently at work are distributed by number of children and labour market interruptions. The relationship between children and interruptions appears clearly (93 % of women who have spent some time out of the labor market have had at least one child), but we see also that a large majority (85 %) of those who have never interrupted their activity also have had at least one child and that a meaningful proportion (37%) of women who have had at least one child have never interrupted their labour force participation. The big difference between those who have interrupted their participation to the labour market and those who have not is in the number of children they have had: at one end, only 7 % of those who have spent time out of the labour market are childless, *vs*. 15 % of those without interruption; at the other end, respectively 34 % *vs*. 11 % have had more than two children.

Table 7 – Children and career interruptions among women aged 39-49 in paid employment (%).

	Total	Number of children				Total with children
		0	1	2	3+	
Interruption	100.0	6.7	15.2	42.6	35.5	93.3
	61.2	42.4	46.9	59.0	82.9	63.3
No interrruption		14.4	27.3	46.8	11.6	85.6
	38.8	57.6	53.1	41.0	17.1	36.8
Total	100.0	9.7	19.9	44.2	26.2	90.3
	100.0	100.0	100.0	100.0	100.0	100.0

Source: EFE, INED, 2004-2005.

4.2. Decomposition of the gender wage gap

In this final step, we want to measure the articulation of the pay differential between these two groups of women and the gender wage gap. To investigate this articulation, we consider that the gender wage gap is made of two gaps: a first gap between the two groups of women as defined above, and a second gap between the group of women who have had no interruption and men. Of course, consistency requires that we restrict the men's sample to those of the same age group as women (39-49). This could cause the gender wage gap to be smaller than on average, because men's and women's wage evolutions are different over the working life cycle; they tend to be more favourable to young men than to young women, but from 30 years old on, it is the contrary (even though it is not enough for women's wages to catch up – *cf*. Dupray & Moullet, 2005).

In order to write our decomposition, we start by writing the "interruption" wage gap as follows:

$\overline{W}_f = (1\text{-}k)\ \overline{W}_{f1} + k\ \overline{W}_{f2}$ *(i)*

where f_1 and f_2 are respectively the women without and with an interruption, and k is the share of women who have had an interruption,

then we replace $\overline{W}_f$ in the expression of the gender wage gap:

$\overline{W}_m - \overline{W}_f = \overline{W}_m$ - [(1-*k*) $\overline{W}_{f1} + k\ \overline{W}_{f2}$],

which is equivalent to $\overline{W}_m - \overline{W}_f = \overline{W}_m$ - $\overline{W}_{f1}$ + *k* ($\overline{W}_{f1}$ - $\overline{W}_{f2}$) *(ii)*

On this basis, we decompose ($\overline{W}_m$ - $\overline{W}_{f1}$) and ($\overline{W}_{f1}$ - $\overline{W}_{f2}$) using the standard Oaxaca-Ransom method (Oaxaca & Ransom, 1994). For each differential, the estimated average wage gap is as follows:

$$\overline{W}_{g1} - \overline{W}_{g2} = \overline{X}'_{g1}(\hat{\beta}_{g1} - \hat{\beta}) + \overline{X}'_{g2}(\hat{\beta} - \hat{\beta}_{g2}) + \hat{\beta}(\overline{X}_{g1} - \overline{X}_{g2})' \quad \textit{(iii)}$$

where $g1$ and $g2$ stand for any pair of groups - their value is respectively (*m*, *f1*), then (*f1*, *f2*), $\overline{X}\,g_i$ are the average characteristics of each group and $\hat{\beta}\,g_i$ their estimated returns.

The two first terms in *(iii)* correspond to the so-called "unexplained" gap, that is the differential between the returns of each group ($\hat{\beta}\,g_i$) and the returns of a "norm" ($\hat{\beta}$).The first term in corresponds to the "advantage" of group 1, the second term to the "disadvantage" of group 2 and their addition accounts

for the "unexplained" part of the wage gap. ($\hat{\beta}$) is obtained from the wage equation of the pooled sample. The last term in *(iii)* is the explained gap, that results from differences in characteristics between the two groups, these differences being valued at the returns to the norm.

The set of covariates is basically that of model (3) above, (education, actual experience, spells of unemployment, spell of inactivity, number of children, and control variables), then that of model (4), with the occupation dummies and job characteristics[10] The detailed results of the regression are reported in appendix 4a and 4b.

Firstly, we examine the composition of the "interruption" gap, *i.e*. the wage differential between f_1-women and f_2-women, which amounts to 11 %. The f_2-women represent 61,2 % of the subsample of women. We use successively specifications (3), (4). The main result of the decomposition is that the differences in characteristics explain all the gap and even more (table 8). According to their characteristics, women without interruption at work should earn 14% to 15% more than women with career interruption. If we go into the detail of the "explained" gap, the differences in human capital account for at least 73% of it (model 4), up to more than 94 % when occupations are not controlled for (with model 3). The differences in interruptions account for 46% of the total wage differential when occupations are not controlled for (model 3), 36 % when they are taken into account (model 4).

Secondly, we decompose the gender wage gap as described in *(ii)*. The total gender wage gap ($\overline{W}_m$ - $\overline{W}_{f1}$) amounts to 15,9 %, and is composed of

1/ a "gender" wage gap, which amounts to 9.2 %, between men and women who have no interruption (the f_1-women),

2/ an "interruption" gap ($\overline{W}_{f1}$ - $\overline{W}_{f2}$) decomposed as above, of 11.0 %. We verify that once the interruption gap is weighted by k=0.612, the addition gives the total wage gap.

The results (table 9) are strikingly contrasted when we look at the composition of the two gaps: the wage gap between men and women it is entirely "unexplained", while as we've seen above, it is entirely "explained" between women without and with interruptions. In other words, women who have never interrupted their activity do not get higher returns of their productive characteristics on the labor market than women who have spend time out of the labor market.

[10] Ideally we should have included a third specification with a correction for selectivity in employment, as done in section 3, and estimated the decomposition taking into account the selection effect (see the method proposed by Neuman and Oaxaca (1998)). However after having tried several exclusion variables in the selection equation we found that none was significant at the conventional level (see Appendix 3). In particular, the mothers' activity status does not seem to influence the probability of women to be employed in this age group. One possible explanation is that this group of women is partly composed of women who have followed their mother's model and taken a parental leave earlier, and then came back to the labour market once their children were grown up. As we did not find a variable that affects labor force participation without affecting the wage offer, we prefer not to introduce a Mills' ratio in our specification to avoid severe problems of collinearity.

Table 8 - Decomposition of the “interruption” wage gap between women aged 39-49 (1)

Model:	(3)		(4)	
Raw differential (Lwh)	0.110		0.110	
Nobs	1362		1362	
a. Components of the total wage gap		*%*		*%*
Explained	0.153	*138.8*	0.142	*128.9*
Standard error	*0.0175*		*0.0181*	
Unexplained	-0.043	*-38,8*	-0.032	*-28.9*
Standard error	*0.0145*		*0.0135*	
Total	0.110	*100*	0.11	*100*
Standard error	*0.0227*		*0.0227*	
b. Composition of the explained part		*%*		*%*
Education	0.012	7.8	0.007	*4.2*
Standard error	*0.0102*		*0.0048*	
Experience. Tenure. Unemployment	0.062	41.2	0.045	
Standard error	*0.0100*		*0.0087*	
Interruptions	0.072	46.4	0.051	*35.9*
Standard error	*0.0140*		*0.0127*	
Sub-total Human Capital	0.146	95.4	0.103	*72.5*
Standard error	*0.0176*		*0.0128*	
Number of children	-0.010	-6.5	-0.004	*-2.8*
Standard error	*0.0041*		*0.0034*	
Other	0.018	11.1	0.043	*30.3*
Standard error	*0.0047*		*0.0102*	
Total Explained	0.154	100	0.142	*100*

(1) Standard errors are estimated by bootstraps (1000 replications)

Table 9 - Decomposition of the gender wage gap in the population aged 39-49.(1)

Model	(3)				(4)			
	M vs. *f1*-W		f1-W vs. f2-W		M vs. *f1*-W		f1-W vs. f2-W	
Raw differential*	0.092		0.110		0.092		0.110	
Nobs	1845		1362		1845		1362	
		%		*%*		*%*		*%*
Explained	-0.054	*-58.5*	0.153	*138.8*	0.002	*1.7*	0.142	*128.9*
Standard error	*0.0131*		*0.0175*		*0.015*		*0.0181*	
Unexplained	0.147	*158.5*	-0.043	*-38,8*	0.091	*98.3*	-0.032	*-28.9*
Standard error	*0.0156*		*0.0145*		*0.0137*		*0.0135*	
total	0.092	*100*	0.110	*100*	0.092	*100*	0.11	*100*
Standard error	*0.0202*		*0.0227*		*0.0202*		*0.0227*	

(1) Standard errors are estimated by bootstraps (1000 replications)

* In the table above. we have not weighted the *f1-f2* estimated differentials. It is easy to verify that once they are. we retrieve the total gender wage gap.

4. Conclusion

Children and subsequent interruptions have from a long time been cited as one of the major causes of the gender wage gap. The time spent out of the labour market to raise children may result not only in women accumulating less professional experience than men on average, but also in a pay penalty, while children can have other indirect effects on their mothers' wages by influencing their choice of occupation, or the promotions or positions they're offered, or making them opt for part-time work or more flexible working conditions often not associated with the best paid jobs.

In this paper, we start an investigation of the extent to which children have direct and indirect effects in the gender wage gap in France, with special attention to their impact on the accumulation and composition of individuals' human capital. It is generally difficult to measure this impact, because it requires individual data on the composition of experience - including time out of employment - that are rarely available. The new French survey "Families and Employers" (Ined, 2005) provides this information.

We first look at men's and women's returns to potential and actual experience, then penalties associated to unemployment and time out of the labour market. We find that once controlled for the jobs' characteristics and selection into employment, there is no gender differential in the returns to work experience, but a penalty attached to time out of the labour market which affects only women. Our second interest was the question of the existence of a significant family wage gap in France. Using various specifications, we do not find any direct negative impact of children on women's current hourly wage.

The first finding on the absence of a direct negative impact of children may result from the possibility for women to combine concretely work and family. Several subsidized types of daycare are available for children under 3 and all children aged 3 and more attend nursery schools. The good quality of those services and their extended opening hours - from 7 a.m. to 19 a.m. - allow the French mothers to be active.

The second finding, resulting from a decomposition for a sub-sample of men and women aged from 39 to 49 of the gender wage gap is that the wage gap between men and women who have never interrupted their participation in the labor market is entirely "unexplained", while the wage gap between women who have never interrupted and women who have had interruptions is entirely "explained". In other terms, the wage penalty associated to the "interruption" gap (between women) corresponds exactly to a lower accumulation of human capital. Women without any career break do not get a specific advantage of their uninterrupted participation in the labor market. Conversely these women are disadvantaged in term of returns to their productive characteristics when compared with men. This suggests that these women who have never interrupted their participation in the labor force did not find the possibility to convey a credible signal to their employers of their long-term commitment to work; consequently their wages are determined "as if" they were likely to interrupt their careers.This supports an interpretation of the gender wage gap in terms of a statistical-type discrimination.

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Appendix 1. Descriptive statistics

	Women		Men		Women inactive	
Variables	Mean	Std	Mean	Std	Mean	Std
exppv	7.66	7.89	7.54	7.45	17.78	8.27
expv	5.63	5.94	6.68	6.74	6.22	5.80
expr	14.52	8.11	15.90	8.33	6.30	5.83
nbcho	0.56	1.40	0.30	0.88	0.96	2.14
nbina	1.91	3.73	0.93	1.25	10.40	8.36
nbtp	2.63	4.51	0.32	1.57	1.10	2.27
ptexp	0.64	1.98	0.12	0.69	1.09	2.26
ftexpc	4.99	5.52	6.57	6.70	5.13	5.47
dina	0.51	0.50	0.65	0.48	0.97	0.17
dcho	0.30	0.46	0.21	0.41	0.38	0.48
<25 years	0.08	0.27	0.09	0.29	0.07	0.25
25 – 29 years	0.14	0.35	0.14	0.35	0.13	0.34
30 – 34 years	0.18	0.39	0.18	0.38	0.20	0.40
35 – 39 years	0.20	0.40	0.21	0.41	0.24	0.43
40 – 45 years	0.21	0.41	0.20	0.40	0.19	0.39
45 + years	0.19	0.39	0.18	0.39	0.17	0.38
More than 2 yrs higher education	0.23	0.42	0.17	0.38	0.10	0.31
Up to 2 yrs higher education	0.16	0.36	0.11	0.32	0.07	0.25
Secondary education	0.19	0.40	0.16	0.37	0.15	0.35
Vocational diploma	0.24	0.43	0.36	0.48	0.27	0.44
Unqualified	0.18	0.38	0.20	0.40	0.42	0.49
Immi	0.06	0.24	0.07	0.25	0.19	0.39
Nbenft	1.47	1.13	1.37	1.20	2.53	1.28
Petit	0.26	0.44	0.31	0.46	0.57	0.50
Handic	0.13	0.33	0.12	0.33	0.15	0.35
Couple	0.77	0.42	0.78	0.42	0.90	0.30
Actm	0.40	0.49	0.39	0.49	0.28	0.45
Actp	0.90	0.31	0.91	0.28	0.86	0.35
Propri	0.59	0.49	0.57	0.50	0.51	0.50
Idf	0.19	0.39	0.18	0.38	0.16	0.37
Public Management and professionals	0.12	0.32	0.17	0.37		
Middle management and technicians	0.28	0.45	0.27	0.44		
Clerks	0.50	0.50	0.14	0.35		
Workers	0.10	0.30	0.42	0.49		
Resp	0.16	0.37	0.32	0.47		
firm size: 0-19	0.36	0.48	0.29	0.45		
Firm size: 20-49	0.15	0.35	0.14	0.35		
Firm size:50-199	0.21	0.41	0.24	0.43		
Firm size:						

200-499					
Firm size: 500-999	0.06	0.24	0.07	0.26	
Firm size : 1000 & +	0.10	0.29	0.12	0.32	
Full time	0.73	0.45	0.97	0.18	
Part-time > 50%	0.17	0.38	0.02	0.13	
Part-time = 50%	0.09	0.28	0.01	0.11	
Part time<50%	0.01	0.12	0.00	0.05	
Anci	8.89	8.04	9.22	8.17	
whor	8.89	3.82	9.84	4.05	
nbh	34.02	8.26	39.29	7.54	
Obs.	3091		3041		716

Appendix 2. Probit equation

Dependant variable: 1: Wage earners ; 0: Inactive

	All women	Women aged 39-49
25 – 30 years	0.525***	
	(3.29)	
30 – 35 years	0.912***	
	(5.87)	
35 – 40 years	0.911***	
	(5.82)	
40 – 45 years	0.911***	
	(5.61)	
45 years & +	0.886***	-0.008
	(5.27)	(0.08)
dina	-1.516***	-1.943***
	(14.21)	(7.34)
dcho	0.027	0.036
	(0.44)	(0.39)
immi	-0.346***	-0.249*
	(3.75)	(1.82)
nbenft	-0.243***	-0.126***
	(8.30)	(3.36)
petit	-0.679***	-0.671***
	(9.11)	(5.09)
handic	-0.118	-0.136
	(1.45)	(1.24)
More than 2 yrs higher education	0.698***	0.476***
	(7.32)	(3.55)
Up to 2 yrs higher education	0.759***	0.801***
	(6.86)	(4.49)
Secondary education	0.476***	0.642***
	(5.29)	(4.78)
Vocational diploma	0.351***	0.497***
	(4.54)	(4.36)
couple	-0.375***	-0.517***
	(4.11)	(3.81)
actm	0.126**	0.118
	(2.05)	(1.25)
actp	-0.005	-0.035
	(0.06)	(0.24)
propri	0.107*	0.014
	(1.67)	(0.14)
Constant	1.936***	3.145***
	(10.70)	(9.44)
Observations	3784	1632

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Appendix 3. OLS equation

	Women (4)	Men (4')
More than 2 yrs higher education	0.275*** (11.99)	0.211*** (9.87)
Up to 2 yrs higher education	0.215*** (9.87)	0.119*** (5.76)
Secondary education	0.137*** (7.16)	0.101*** (5.75)
Vocational diploma	0.070*** (4.17)	0.033** (2.43)
expv	0.011*** (4.11)	0.013*** (5.33)
expv2	-0.000 (1.23)	-0.000** (2.37)
anci	0.020*** (8.66)	0.017*** (7.94)
anci2	-0.000*** (2.96)	-0.000** (2.52)
nbcho	-0.035*** (4.45)	-0.056*** (5.12)
nbcho2	0.002*** (2.74)	0.005*** (3.20)
nbinat	-0.008** (2.01)	0.008 (1.19)
nbinat2	0.000 (0.93)	-0.000 (0.65)
handic	-0.022 (1.40)	-0.042*** (2.84)
nbenft	0.005 (0.75)	0.020*** (4.14)
Part-time > 50%	0.042*** (2.99)	0.006 (0.16)
Part-time = 50%	0.015 (0.81)	0.014 (0.31)
Part-time < 50%	0.039 (0.88)	0.078 (0.88)
public	0.066*** (5.58)	0.049*** (3.82)
Management and professionnals	0.370*** (13.71)	0.348*** (17.38)
Middle management and technicians	0.186*** (8.55)	0.126*** (9.12)
Clerks	-0.003 (0.16)	-0.037** (2.35)
resp	0.036** (2.46)	0.032*** (2.85)
Firm size: 20-49	0.058*** (3.68)	0.048*** (3.08)
Firm size: 50-199	0.074*** (5.19)	0.080*** (5.92)
Firm size: 200-499	0.060*** (3.54)	0.088*** (5.53)
Firm size: 500-999	0.086*** (3.77)	0.130*** (6.48)

Firm size: 1000 & +	0.131***	0.147***
	(6.75)	(8.56)
idf	0.081***	0.081***
	(5.95)	(6.07)
immi	0.003	-0.025
	(0.12)	(1.25)
imr	0.017	
	(0.58)	
Constant	3.065***	3.214***
	(111.52)	(159.53)
Observations	3091	3041
R-squared	0.47	0.46

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Appendix 4a. OLS equation, robust. Individuals aged 39-49

	Women aged 39-49, no interruption	Women aged 39-49, with nterruption	Men aged 39-49
More than 2 yrs higher education	0.602**	0.570**	0.495**
	(9.70)	(14.43)	(12.90)
Up to 2 yrs higher education	0.447**	0.359**	0.309**
	(9.26)	(10.48)	(9.10)
Secondary education	0.294**	0.225**	0.232**
	(6.89)	(6.41)	(7.70)
Vocational diploma	0.127**	0.106**	0.057**
	(3.15)	(3.58)	(2.66)
expv	0.000	0.001	0.005
	(0.00)	(0.27)	(1.11)
expv2	-0.000	0.000	-0.000
	(0.06)	(0.30)	(1.18)
anci	0.002	0.014*	0.009
	(0.16)	(2.27)	(1.55)
anci2	0.000	-0.000	-0.000
	(0.42)	(0.53)	(0.37)
nbcho	-0.091**	-0.045**	-0.085**
	(2.80)	(3.40)	(5.30)
nbcho2	0.006*	0.004**	0.007**
	(2.03)	(3.41)	(3.03)
nbinat	0.000	-0.017*	-0.003
	(.)	(2.31)	(0.28)
nbinat2	0.000	0.000	0.000
	(.)	(1.27)	(0.17)
nbenft	0.024	0.002	0.016
	(1.52)	(0.22)	(1.85)
Part-time > 50%	0.029	0.012	0.010
	(0.77)	(0.44)	(0.14)
Part-time = 50%	-0.018	-0.046	0.048
	(0.24)	(1.33)	(0.50)
Part-time < 50%	0.003	0.083	0.391**
	(0.02)	(0.98)	(2.95)
idf	0.088*	0.129**	0.105**
	(2.04)	(3.78)	(4.42)
immi	0.042	-0.101*	-0.099*
	(0.41)	(2.56)	(2.43)
handic	-0.012	-0.015	-0.039
	(0.36)	(0.53)	(1.61)
Constant	3.342**	3.286**	3.497**
	(22.26)	(36.25)	(41.78)
Observations	528	834	1317
R-squared	0.37	0.43	0.32

Appendix 4b. OLS equation, robust. Complete specification. Individuals aged 39-49

	Women aged 39-49, no interruption	Women aged 39-49, with interruption	Men aged 39-49
More than 2 yrs higher education	0.385**	0.270**	0.215**
	(5.18)	(6.17)	(5.05)
Up to 2 yrs higher education	0.292**	0.170**	0.116**
	(5.10)	(4.29)	(3.37)
Secondary education	0.205**	0.137**	0.090**
	(4.49)	(3.76)	(3.00)
Vocational diploma	0.099*	0.080**	0.047*
	(2.44)	(2.83)	(2.41)
expv	0.003	0.003	0.006
	(0.41)	(0.59)	(1.31)
expv2	-0.000	0.000	-0.000
	(0.13)	(0.00)	(1.44)
Anci	0.006	0.013*	0.005
	(0.52)	(2.32)	(1.08)
anci2	0.000	-0.000	-0.000
	(0.20)	(1.07)	(0.26)
Nbcho	-0.081*	-0.031**	-0.060**
	(2.49)	(2.59)	(4.28)
nbcho2	0.006*	0.003*	0.005*
	(2.10)	(2.50)	(2.39)
Nbinat	0.000	-0.013	-0.005
	(.)	(1.93)	(0.57)
nbinat2	0.000	0.000	0.000
	(.)	(0.96)	(0.51)
Nbenft	0.007	-0.006	0.009
	(0.51)	(0.53)	(1.20)
Part-time > 50%	0.055	0.039	0.006
	(1.45)	(1.50)	(0.10)
Part-time = 50%	0.019	0.013	0.099
	(0.27)	(0.40)	(1.00)
Part-time < 50%	0.119	0.097	0.334*
	(0.87)	(1.19)	(2.08)
Idf	0.019	0.096**	0.066**
	(0.47)	(2.94)	(2.86)
Immi	0.058	-0.050	-0.053
	(0.70)	(1.43)	(1.61)
Handic	-0.023	-0.013	-0.026
	(0.67)	(0.45)	(1.14)
Public	0.014	0.077**	0.064**
	(0.46)	(3.58)	(3.22)
Management and professionals	0.356**	0.432**	0.386**
	(5.21)	(8.16)	(10.73)
Middle management and technicians	0.225**	0.240**	0.182**
	(4.44)	(6.44)	(8.95)
Clerks	0.036	0.036	0.016
	(0.95)	(1.24)	(0.65)
Resp	0.043	0.033	0.023
	(0.99)	(1.16)	(1.31)
Firm size: 20-49	0.115**	0.083**	0.081**
	(2.66)	(2.66)	(2.92)
Firm size: 50-199	0.041	0.122**	0.099**
	(1.06)	(4.67)	(4.67)
Firm size: 200-499	0.056	0.143**	0.107**
	(1.39)	(4.58)	(4.05)
Firm size: 500-999	0.164**	0.126**	0.162**
	(3.55)	(3.01)	(4.83)
Firm size: 1000 & +	0.169*	0.142**	0.177**
	(2.37)	(3.39)	(7.21)
Constant	3.178**	3.153**	3.383**
	(21.89)	(35.51)	(42.18)
Observations	528	834	1317
R-squared	0.45	0.52	0.45