

# How Labor Policy in 2001 Influence Taiwanese Birth rate?

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## Abstract

Low birth rate is a concern in many countries, including Taiwan, intend to solve this problem. The reason why the birth rate is declining is due to costs of raising children. Either the costs, such as education expense to bear a children, or the opportunity costs of female, such as their work, are the main reasons why the birth rate is declining. Though the governments have implemented many policies like compensation, those policies did not work well. The problem of raising a child seems to result from lacking time, which is a high opportunity cost compared to lacking money.

To estimate whether the reason why the birth rate is decreasing, this paper estimates how the enforcement of the two-days-off weekend policy, which lengthened the leisure time, influences the number of the children born. Since the policy was enacted in 2001, this paper takes the data from 1996-2000 and 2007-2011 using OLS and Poisson model to estimate the effect of the policy.

The empirical result presents that the labor policy that gives more leisure time to people do boost the birth rate.

## Key words:

Birth rate, Two-days-off weekend, Labor policy, Taiwan

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## 1. Introduction

Birth rate has been a worldwide issue and Taiwan is suffering. The reason why policy makers put much attention to birth rate is that with the decline in both mortality rate and birth rate, the society suffers from aging which is likely to harm the economy “Yang (2016)”.

As Taiwan’s Ministry of Interior estimated, 329,581 children were born in 1995, 205,854 in 2005, and 213,598 in 2015.<sup>4</sup> Each pair of couples in Taiwan reproduce less children in a rapid trend. This has become a concern in Taiwan. If the trend keeps going on, Taiwan’s society is aging rapidly. This trend, as Yang referred to, might harm the economy in Taiwan since there is not enough labor.

To stimulate birth rate, policy makers should understand the costs of raising a child. Hong Li suggests that there are two ways to view the costs of raising children, the direct costs and the indirect one. The direct costs are the spending on children such as education, health care, and entertaining expense. The indirect cost are the opportunity costs of parents, such as the parents’ time and work “Li (2014, 33)”.

There were many policies on stimulating birth rate. Based on the policy history, Taiwan government imposed a lot of different types of allowances on children raising. The result of the policies were insignificant, though. Since these allowances policies are ineffective, the lowering birth rate might result from not having enough time to raise children instead of not having enough money.

Therefore, this paper intends to examine the inference whether the decrease in birth rate is due to the lack of time. The data here contains two period — the first from 1996 to 2000, five years before two-days-off weekend policy implementation, the second from 2007 to 2011, five years lag after the policy implementation.

As stated, one of the reason why people don’t want to give birth is because of the high opportunity cost, including the cost of education. In Taiwan, 9-year compulsory education law imposed in 1968. The influence of this policy is steady in the data we collected. 12-year compulsory education law will put into practice in 2019. Therefore, this policy has not influenced in the study period.

A full scale operation of maternity leave is in 2009. The study collects the birth data from 1996 to 2000 and from 2007 to 2011, indicating that the maternity leave policy

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<sup>4</sup> Ministry of the Interior (內政部)  
<http://statist.moi.gov.tw/micst/stmain.jsp?sys=100>

has little, even no impact on people's decision of delivering a baby during both five-year periods. Moreover, the birth allowances put into effect on 2009 or even later, so these region policies hardly impact the data used in the study.

In conclusion, the important policies related to raising kids, that is, 9-year and 12-year compulsory education, maternity leave and birth allowances scarcely influence the study, since their implementation times are far before or later than the two five-year period that the study examines.

Since the lowering birth rate can be viewed as a harm on economics, most of the government view the trend of aging and decline in birth rate a national problem, but some think this issue is exaggerated.

Luoh discovers that the change in birth rate can be estimated through the difference among different years in married rate and birth rate of married women by looking through the way to count the total birth rate. While women get married later since they are more educated and the opportunity cost to get married in an early age increased, this causes the birth rate to decrease even though the same amount of children are born. Thus, this issue may not be as harmful as stated. However, the issue become more concerned in Taiwan because that the number of fertile women has been decreasing since 2000 "Luoh (2007)".

Though Luoh said that the decline may not be that harmful, most researchers and governments have been more aware of the issue and enacted different policies on birth. In developing countries, such as Uruguay, the government concern more about the health of children rather than the number of children born, and therefore enacted health and compensation policy called Plan de Atención Nacional a la Emergencia Social (PANES), which transfer cash to poor households so that the birth weight increase, meaning having more healthy population. Estimated by fuzzy regression discontinuity using the data in 2003, this policy is considered effective "Verónica Amarante et al. (2014)".

In the developed countries, such as Europe, cash transferring policy is also being applied, though with a different purpose. Guy Larque and Bernard Salanié carrying out from the French labor force data in 1997, 1998, and 1999. Larque and Salanié discovered that with the tax-benefit system, or in other words, cash transfer, the number of first two birth and first three birth increases, especially in the first three birth. The social system carried out in French to increase incentives to give birth can decrease the opportunity cost for participating in labor, thus increase fertility incentives "Guy Larque and Bernard Salanié (2014)".

From the government policies, governments and researchers think that the main reason why the birth rate is declining rapidly and problematic is due to the rise of opportunity cost to raise a child. Therefore, many look deep into wage, labor force participation, and birth rate. Janet Currie and Hannes Schwandt used US birth data from 1975 and 2010 to investigate how the change in unemployment rate will affect the change in birth rate. Their research found out that in the short run, for women who are 20 to 24 years old, the birth rate corresponding to the unemployment rate is the strongest. While in the long run, once a woman experienced unemployment in her 20-24 years old might cut back on higher-order births “Janet Currie and Hannes Schwandt (2014)”. Being employed might be an opportunity cost in conceiving a child so that being unemployed in fertile age can increase birth rate.

Thirunaukarasu Subramaniam, Nanthakumar Loganathan, Evelyn S. Devadason, and Mazlan Majid on the other hand, estimate how birth rate may influence the female labor participation rate. Using Granger causality test, they discover that the relationship between female labor force participation and fertility is bidirectional. Also, any policy aimed to increase female fertility would significantly affect female labor force participation “Thirunaukarasu Subramaniam et al. (2015)”.

Another research conducted by David E. Bloom, David Canning, Günther Fink, and Jocelyn E. Finlay uses data among 97 countries from 1960-2000 and US abortion law as instrument to talk about fertility. The result is that having children reduces female labor participation. Speaking of the opportunity cost, since highly educated women have a higher opportunity cost of childcare, regions whose female are more educated tend to have a higher female labor participation rate and lower birth rate. Also, those families who tend invest in children and are more educated tend to have a lower birth rate. The result is that a birth reduces two years of women’s labor supply “David E. Bloom, et al. (2009)”.

Similar conclusion is given by Yang as mentioned. The main costs of having a child are money and time. If female are more educated, then their opportunity costs to raise a child are higher. Therefore, the birth rate declines “Yang (2016)”.

Similar to the global trend, in “The Study on The Relationship between Marriage and Fertility in Taiwan”, using the OLS method and data collected in 1998 and 2004 in Taiwan, Chiou estimates how the first marrying age and other factors such as female education, husbands’ education, ethnic group, and generation can influence the birth rate. Chiou discovered that the time between having another children will decrease if the reason why people get married is due to having children or wanting sons. Also, when the female wage is between NT\$ 15,000 and 40,000, the time between having

another children will decrease, while having more or less wage will lead to an opposite result. The reason might be economic concern for female whose wage are below NT\$ 15,000 and a high opportunity cost for those with a wage higher than NT\$ 40,000. Moreover, mainlander (also known as Waishengren) tend to have a longer time period between two births. Considering the historical background and culture in Taiwan, the reason, said by Chiou, might be that most mainlanders are civil servants. The civil servants in Taiwan have social and economic benefits in scholarship, school fee. Thus, this enables the parents to invest more on a certain child resulting in having less children “Chiou (2013)”.

From the previous research, birth rate or birth rate is an important issue since this determines the future economic development. The reason that leads to the decline in birth rate is the high opportunity cost, such as investing in a child, female’s wage and education, and economic status. Previous studies put more focus on the effect of monetary benefits such as tax reduction and health insurance, rather than on the effect of time that is also a key opportunity cost. Similarly, Taiwanese government puts efforts on compensation system that gives money to families with new born kids, but those efforts are in vain. Therefore, this study tries to evaluate another opportunity cost, that is, the time.

Since Taiwan is carrying out labor laws such as two-days-off weekend (compared to one-day-off weekend before the law) policy and one fixed day off and one flexible holiday (yi li yi xiu), lowering the time opportunity cost. This paper is trying to measure if the law enacting in Taiwan is boosting the birth rate.

## **2. Data and Description**

The data used in this paper is from the Report on the Manpower Utilization Survey conducted by Executive Yuan from 1996 to 2000 and 2007 to 2011.

Since the two-days-off weekend was implemented in 2001, and that the data used contains children under 5 years old, the time period of the data tries to fit the children’s age and lag five years in the set of data before and after the policy.

### **2.1. Variables**

The dependent variable is the number of children that the observations gave birth to in the specific year given.

There are two versions of independent variables in this paper.

The first and original version of the independent variables are a year dummy of 2001, a dummy variable of working in public sector, the interaction term of the year dummy and public sectors, age, education years, income and dummies of area. The income is individual.

The second version is similar to the first version, with the difference of merely year dummies and its interaction terms with public sector dummy. The year dummies in this version is dummies from 1997 to 2000 and 2007 to 2011, with the base year 1996.

Then, the independent variables of age, education, and income are modified. Age range is set between 20 and 50, because female are fertile in this age range. The education variable is changed to education dummy of college entry. Income variable is aggregated into household income.

## **2.2. Data Description**

There are in total 593,562 samples in the first version model, about 60,000 samples each year (see appendix Table I.). 26.58% of samples are from the Central region in Taiwan, 4.52% in Eastern Taiwan, 36.58% in the North, and 32.32% in the South (see appendix Table II.). The mean years of education is 10.43 years with a standard deviation of 4.64 years (see appendix Table IV.). 5.44% of our samples work in the public sector (see appendix Table V.) and 94.73% do not have a child (see appendix Table VI.). The mean of age is 42.6 years old, standard deviation 18.07 and a maximum of 105 years old (see appendix Table VII.). The income data is collected individually. Only 269,391 samples have income. Their income has a NT\$35151.07 mean and NT\$23102.45 standard deviation (see appendix Table VIII.).

Then after filtering, there are in total 345,237 observations, with roughly 33,000 observations per year (see appendix Table IX.). The proportion of region is similar to that before filtering. The percentage of government employee increase to 7.39% (see appendix Table XI.). Due to the selection of age, the proportion of people who do not have children decrease to 91.01% (see appendix Table XII.). 34.95% of the observations have college degree or above (see appendix Table XIII.). The age mean now changes to 34.77 with the standard deviation of 8.82 years (see appendix Table XIV.). Compared to the non-selected age mean, it is closer to fertile age. The household income has a NT\$100,192 mean, and standard deviation of NT\$76,614.57 (see appendix Table XV.).

### 3. Model

The estimation in this paper consists of two different models with two versions of data, a total of four different estimations.

In the first estimation, OLS is used, in order to see the scale of the assumption in this paper. The second estimation method will be Poisson method. Since our dependent variable is the number of children that the observations gave birth to, a count data, Poisson distribution seems to fit the assumption better.

### 4. Results

Before filtering the age of observations to 20-50 years old, changing the education variable from continuous to dummy, and switching individual income to household income, the first version of OLS model result shows that under ceteris paribus assumption and with the control of age, education years, individual income, and region dummies, prior to 2001, the number of children born significantly decreases by 0.0422. Government employees have 0.019 more children than non-government employees. After 2001, people who work in public sector significantly give 0.0364  $[(-0.0422+0.019+0.0174)-(-0.0422)]$  more birth to kids. The Poisson model shows similar outcome with the difference of 0.0542  $[(-0.0463+0.0289+0.0253)-(-0.0463)]$  children between public and private sector after 2001. Therefore, the positive interaction sign indicates that more time more children (see Table 1.)!

The second version of non-filtered data gives more delicate results. According to the OLS model, holding other things equal and controlling age, education years, individual income, and region dummies, the significant negative coefficients of year dummies indicate that birth rate decrease year by year. Birth rate of people work in public sector not surprisingly higher than that of people work in private sector. The most important result is that before 2001, the differences of birth rate between government employees and non-government employees are not statistically significant, but that after 2001, the year when the two-days-off weekend policy implemented, the differences not only are statistically significant but also increase by year (see Table 2.).

The Poisson model corrects the problem of count dependent variable and it shows the similar result from OLS, with probably more correct coefficients. The Poisson marginal effect table reflects that the birth rates are decreasing, with -0.002 in 1997, -0.00294 in 1998, -0.00581 in 1999, -0.00909 in 2000, -0.0465 in 2007, -0.0498 in 2008,

-0.052 in 2009, -0.0497 in 2010, and -0.0537 in 2011. Generally, the government employees give 0.0231 more birth than non-government. The interaction term shows that only after 2001, the birth rate differences between government and non-government employees are significant, with 0.0596  $[(-0.0465+0.0231+0.0365)-(-0.0465)]$  in 2007, 0.0494  $[(-0.0498+0.0231+0.0263)-(-0.0498)]$  in 2008, 0.0494  $[(-0.052+0.0231+0.0263)-(-0.052)]$  in 2009, 0.0539  $[(-0.0497+0.0231+0.0308)-(-0.0497)]$  in 2010, 0.0574  $[(-0.0537+0.0231+0.0343)-(-0.0537)]$  in 2011. Those number shows that except for 2007, the year of pig in Chinese zodiac, which represents fertility, birth rate rises by year, similar to OLS result (see Table 2.).

According to the filtered results of the OLS first version, the plainest result show that under *ceteris paribus* assumption, before 2001, the number of children born decreases. Strangely, however, public sector workers had less children than the private sector. After 2001, people in the public sector averagely have 8.6‰  $[(-70.4-33.9+42.5)-(-70.4)]$  more children than those in private sector, which somehow indicates that a two-day- off weekend has positive affect on birth rate (see appendix Table XXII.).

Controlling age, a dummy of having college education, household income, and dummies of region. The OLS model shows that before 2001, the number of children born also unsurprisingly decreases, but those working in public sector have more children than those in private sector by 12.4‰ children, which now makes sense. Similar to the result above, after 2001, civil servants averagely give more birth to 52.7‰  $[(-48.1+12.4+40.3)-(-48.1)]$  children than non-civil servants (see Table 1.).

Corrected by Poisson model, under age, college education, household income, and living region control, before 2001, the average marginal effect of number of children decreases in 50.3‰. Government employees have 17.2‰ more children than others. The interaction term of 2001 year dummy and government employees dummy is 57.9‰  $[(-50.3+17.2+40.7)-(-50.3)]$ , which also supports the view that leisure time is the key influence on birth rate (see Table 1.).

Estimated with the second version of data, in OLS, other things the same and age, college education controlled, household income, and living region controlled, the result shows that the birth rate significantly decreases by year. Government employees still give more birth to children. However, the differences between public and private sectors are insignificant before the two-days-off weekend policy enforced. After the enforcement, the differences between public and private sectors significantly increase by year.



Again, use Poisson model to correct OLS. The marginal effect of the children number decreases year by year (base year 1996), with -1.88‰ in 1997, -3.86‰ in 1998, -6.72‰ in 1999, -10.6‰ in 2000, -55.5‰ in 2007, -57.1‰ in 2008, -55.8‰ in 2009, -50.8‰ in 2010, -54.8‰ in 2011. The marginal effect of government employee dummy is insignificant. Moreover, before the enforcement of two-days-off weekend policy, the marginal effect of the differences between public and private sector are insignificant. Nevertheless, after the policy implemented, the differences between them are significant and the number of children whose parents are in public sector increases year by year, with 68.2‰ $[(-55.5+59.5+8.65)-(-55.5)]$  in 2007, 49.8‰ in 2008 $[(-57.1+41.1+8.65)-(-57.1)]$ , 49.4‰ in 2009 $[(-55.8+40.7+8.65)-(-55.8)]$ , 59.4‰ in 2010 $[(-50.8+50.7+8.65)-(-50.8)]$ , 61.1‰ in 2011 $[(-54.8+52.4+8.65)-(-54.8)]$ . This thoroughly proves the thought that the key influence on birth rate is the leisure time (see Table 2.).

**Table 1. Comparison with dummy of 2001**

	Non-Filtered	Filtered	Non-Filtered	Filtered
	OLS	OLS	Poisson M.E.	Poisson M.E.
VARIABLES	kids	kids	kids	kids
year	-0.0422*** (0.000951)	-0.0481*** (0.00160)	-0.0463*** (0.000838)	-0.0503*** (0.00140)
isgov	0.0190*** (0.00278)	0.0124*** (0.00395)	0.0289*** (0.00196)	0.0172*** (0.00319)
yearXisgov	0.0174*** (0.00392)	0.0403*** (0.00575)	0.0253*** (0.00294)	0.0407*** (0.00503)
age	-0.00227*** (3.16e-05)	-0.00712*** (9.00e-05)	-0.00261*** (3.23e-05)	-0.00731*** (8.46e-05)
edud	0.00248*** (0.000130)	- -	0.00371*** (0.000119)	- -
income	-8.31e-07*** (1.93e-08)	- -	-1.01e-06*** (2.33e-08)	- -
educol	- -	-0.0758*** (0.00174)	- -	-0.0753*** (0.00153)
totalinc	- -	9.40e-08*** (9.89e-09)	- -	7.64e-08*** (7.37e-09)
nd	0.00192* (0.00108)	0.00954*** (0.00181)	0.00191** (0.000873)	0.00931*** (0.00150)
ed	0.00451** (0.00223)	-0.00115 (0.00386)	0.00518*** (0.00180)	-0.000983 (0.00309)
cd	0.00669*** (0.00116)	0.0102*** (0.00197)	0.00684*** (0.000930)	0.0105*** (0.00159)
Constant	0.177*** (0.00240)	0.407*** (0.00369)	- -	0.180*** (0.00233)
Observations	593,562	345,237	593,562	345,237
R-squared	0.026	0.025	-	-

**Table 2. Comparison with dummy of year 1996-2000, 2007-2011**

VARIABLES	Non-Filtered OLS kids	Filtered OLS kids	Non-Filtered Poisson M.E. kids	Filtered Poisson M.E. kids
D1997	-0.00259 (0.00204)	-0.00298 (0.00339)	-0.00200 (0.00139)	-0.00188 (0.00239)
D1998	-0.00380* (0.00202)	-0.00585* (0.00336)	-0.00294** (0.00139)	-0.00386 (0.00239)
D1999	-0.00757*** (0.00203)	-0.00976*** (0.00337)	-0.00581*** (0.00141)	-0.00672*** (0.00243)
D2000	-0.0117*** (0.00203)	-0.0147*** (0.00338)	-0.00909*** (0.00143)	-0.0106*** (0.00246)
D2007	-0.0454*** (0.00205)	-0.0562*** (0.00347)	-0.0465*** (0.00172)	-0.0555*** (0.00292)
D2008	-0.0472*** (0.00207)	-0.0568*** (0.00351)	-0.0498*** (0.00176)	-0.0571*** (0.00300)
D2009	-0.0487*** (0.00207)	-0.0553*** (0.00354)	-0.0520*** (0.00179)	-0.0558*** (0.00304)
D2010	-0.0468*** (0.00208)	-0.0516*** (0.00355)	-0.0497*** (0.00177)	-0.0508*** (0.00302)
D2011	-0.0491*** (0.00208)	-0.0542*** (0.00357)	-0.0537*** (0.00181)	-0.0548*** (0.00309)
isgov	0.0120** (0.00579)	0.00170 (0.00836)	0.0231*** (0.00396)	0.00865 (0.00669)
isgov1997	-0.00159 (0.00823)	-0.00258 (0.0118)	-0.000890 (0.00564)	-0.00381 (0.00963)
isgov1998	0.0152* (0.00841)	0.0210* (0.0121)	0.0116** (0.00559)	0.0190** (0.00954)
isgov1999	0.0107 (0.00850)	0.0172 (0.0122)	0.00919 (0.00577)	0.0140 (0.00985)
isgov2000	0.0106 (0.00849)	0.0187 (0.0122)	0.00951 (0.00584)	0.0151 (0.00998)
isgov2007	0.0316*** (0.00852)	0.0597*** (0.0124)	0.0365*** (0.00617)	0.0595*** (0.0105)
isgov2008	0.0196** (0.00858)	0.0446*** (0.0126)	0.0263*** (0.00659)	0.0411*** (0.0112)
isgov2009	0.0195** (0.00856)	0.0440*** (0.0127)	0.0263*** (0.00660)	0.0407*** (0.0113)
isgov2010	0.0245*** (0.00854)	0.0522*** (0.0127)	0.0308*** (0.00640)	0.0507*** (0.0109)
isgov2011	0.0258*** (0.00867)	0.0534*** (0.0129)	0.0343*** (0.00657)	0.0524*** (0.0113)
age	-0.00226*** (3.17e-05)	-0.00711*** (9.01e-05)	-0.00260*** (3.23e-05)	-0.00730*** (8.47e-05)
educ	0.00252*** (0.000130)	- -	0.00375*** (0.000119)	- -
income	-8.32e-07*** (1.93e-08)	- -	-1.01e-06*** (2.33e-08)	- -
educol	- -	-0.0756*** (0.00174)	- -	-0.0751*** (0.00153)
totalinc	- -	9.36e-08*** (9.90e-09)	- -	7.60e-08*** (7.37e-09)
nd	0.00190* (0.00108)	0.00953*** (0.00181)	0.00189** (0.000873)	0.00931*** (0.00150)
ed	0.00453** (0.00223)	-0.00110 (0.00386)	0.00524*** (0.00180)	-0.000921 (0.00309)
cd	0.00669*** (0.00116)	0.0102*** (0.00197)	0.00687*** (0.000930)	0.0105*** (0.00159)
Constant	0.181*** (0.00270)	0.413*** (0.00423)	-	-
Observations	593,562	345,237	593,562	345,237
R-squared	0.026	0.025	-	-

## 5. Conclusion

This study aims to assess the influence of leisure time on people's willingness to have children. The two-days-off weekend policy in 2001 tremendously affect Taiwanese life balance which gives great opportunity to evaluate the assumption that leisure time is key to family planning.

From the filtered and non-filtered data, 2001 dummy (first version) and year dummies (second version), the birth rate trend demonstrated is consistent. That is, the total birth rate goes down by year. But, government employees give more birth to children than non-government employees. Most important of all, this difference between them is only significant after the year of 2001.

## 6. Suggestion

The study explores how two-days-off weekend policy influences birth rate, making the powerful suggestion for policy makers who dedicate to boosting Taiwanese birth rate. According to the conclusion, to enhance Taiwanese, policy makers should take not only monetary benefits but also leisure time seriously. But, to make more delicate evaluation, this model need further modification.

First, in addition to shifting out the age that women are able to deliver a baby, sex should be controlled since whether the female or male is government employees may influence the decision about the number of children born.

Second, household total income should exclude collateral consanguinity because people generally are more likely to spend the income of direct relatives.

Third, whether to be a civil servant may be influenced by many aspects such as personalities, whether your family members are civil servants, and your relatives' education. As a result, the choice that whether to be a public sector employee is an endogenous variable.

Furthermore, the interaction term of sex variable and whether to be a government employee is omitted.

Also, the data only displayed the number of children below five years old that the observation had. However, to make this study more accurate, the moment, including year, month, and date, that baby was born should be accessible.

Last but not least, the time span of the collected data last too long. There are too many uncontrollable events that can influence the fluctuation of birth rate. For more accurately examining the immediate effect of two-days-off weekend policy on birth rate, the span of data should narrow down to the time around October 2001.

## Appendix

### 1. Data description

Table I. Non-Filtered observations in each year

<b>year</b>	<b>Freq.</b>
<b>1996</b>	60,371
<b>1997</b>	60,044
<b>1998</b>	61,142
<b>1999</b>	60,619
<b>2000</b>	60,857
<b>2007</b>	59,445
<b>2008</b>	58,208
<b>2009</b>	57,743
<b>2010</b>	57,770
<b>2011</b>	57,363
<b>Total</b>	593,562

Table II. Districts of Non-Filtered observations

<b>countyD</b>	<b>Freq.</b>	<b>Percent</b>
<b>C</b>	157,750	26.58
<b>E</b>	26,857	4.52
<b>N</b>	217,109	36.58
<b>S</b>	191,846	32.32
<b>Total</b>	593,562	100

Table III. Years of education of Non-Filtered observations

<b>eduD</b>	<b>Freq.</b>	<b>Percent</b>
<b>0</b>	40,512	6.83
<b>3</b>	6,990	1.18
<b>6</b>	119,005	20.05
<b>9</b>	96,362	16.23
<b>12</b>	183,745	30.96
<b>16</b>	134,107	22.59
<b>18</b>	11,327	1.91
<b>22</b>	1,514	0.26
<b>Total</b>	593,562	100

Table IV. Central Tendency of years of education of Non-Filtered observations

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>Min</b>	<b>Max</b>
<b>edud</b>	593,562	10.42874	4.642122	0	22

Table V. Distribution of whether the Non-Filtered observations are public servant.

<b>isGov</b>	<b>Freq.</b>	<b>Percent</b>
<b>0</b>	561,249	94.56
<b>1</b>	32,313	5.44
<b>Total</b>	593,562	100

Table VI. Number of Kids that the Non-Filtered Observations have.

<b>kids</b>	<b>Freq.</b>	<b>Percent</b>
<b>0</b>	562,269	94.73
<b>1</b>	19,408	3.27
<b>2</b>	10,476	1.76
<b>3</b>	1,328	0.22
<b>4</b>	72	0.01
<b>5</b>	7	0
<b>6</b>	1	0
<b>7</b>	1	0
<b>Total</b>	593,562	100

Table VII. Central Tendency of age of Non-Filtered Observations

Variable	Obs	Mean	Std.Dev.	Min	Max
age	593,562	42.60014	18.06919	15	105

Table VIII. Central Tendency of personal income of Non-Filtered Observations

Variable	Obs	Mean	Std.Dev.	Min	Max
incomed	269,391	35151.07	23102.45	500	900000

Table IX. Filtered observations in each year

year	Freq.
1996	36,786
1997	36,776
1998	37,623
1999	37,095
2000	36,688
2007	33,965
2008	32,506
2009	31,696
2010	31,428
2011	30,674
Total	345,237

Table X. Districts of Filtered observations

countyD	Freq.	Percent
C	91,680	26.56
E	14,805	4.29
N	128,106	37.11
S	110,646	32.05
Total	345,237	100

Table XI. Distribution of whether the observations are public servant.

isGov	Freq.	Percent
0	319,726	92.61
1	25,511	7.39
Total	345,237	100



Table XII. Number of Kids that the Filtered Observations have

<b>kids</b>	<b>Freq.</b>	<b>Percent</b>
<b>0</b>	314,209	91.01
<b>1</b>	19,197	5.56
<b>2</b>	10,424	3.02
<b>3</b>	1,326	0.38
<b>4</b>	72	0.02
<b>5</b>	7	0
<b>6</b>	1	0
<b>7</b>	1	0
<b>Total</b>	345,237	100

Table XIII. Distribution of whether the Filtered Observations possess Bachelor's degree or above

<b>educol</b>	<b>Freq.</b>	<b>Percent</b>
<b>0</b>	224,590	65.05
<b>1</b>	120,647	34.95
<b>Total</b>	345,237	100

Table XIV. Central Tendency of age of Filtered Observations

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>Min</b>	<b>Max</b>
<b>age</b>	345,237	34.77392	8.819216	20	50

Table XV. Central Tendency of household income of Filtered Observations

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>Min</b>	<b>Max</b>
<b>totalinc</b>	345,237	100192	76614.57	0	2160998

## 2. Model results

Table XVI. Comparison with dummy of 2001

VARIABLES	Non-Filtered	Filtered	Non-Filtered	Filtered
	OLS	OLS	Poisson M.E.	Poisson M.E.
	kids	kids	kids	kids
year	-0.0422*** (0.000951)	-0.0481*** (0.00160)	-0.0463*** (0.000838)	-0.0503*** (0.00140)
isgov	0.0190*** (0.00278)	0.0124*** (0.00395)	0.0289*** (0.00196)	0.0172*** (0.00319)
yearXisgov	0.0174*** (0.00392)	0.0403*** (0.00575)	0.0253*** (0.00294)	0.0407*** (0.00503)
age	-0.00227*** (3.16e-05)	-0.00712*** (9.00e-05)	-0.00261*** (3.23e-05)	-0.00731*** (8.46e-05)
edud	0.00248*** (0.000130)	- -	0.00371*** (0.000119)	- -
income	-8.31e-07*** (1.93e-08)	- -	-1.01e-06*** (2.33e-08)	- -
educol	- -	-0.0758*** (0.00174)	- -	-0.0753*** (0.00153)
totalinc	- -	9.40e-08*** (9.89e-09)	- -	7.64e-08*** (7.37e-09)
nd	0.00192* (0.00108)	0.00954*** (0.00181)	0.00191** (0.000873)	0.00931*** (0.00150)
ed	0.00451** (0.00223)	-0.00115 (0.00386)	0.00518*** (0.00180)	-0.000983 (0.00309)
cd	0.00669*** (0.00116)	0.0102*** (0.00197)	0.00684*** (0.000930)	0.0105*** (0.00159)
Constant	0.177*** (0.00240)	0.407*** (0.00369)	- -	0.180*** (0.00233)
Observations	593,562	345,237	593,562	345,237
R-squared	0.026	0.025	-	-

Table XVII. Comparison with dummy of year 1996-2000, 2007-2011

VARIABLES	Non-Filtered	Filtered	Non-Filtered	Filtered
	OLS kids	OLS kids	Poisson M.E. kids	Poisson M.E. kids
D1997	-0.00259 (0.00204)	-0.00298 (0.00339)	-0.00200 (0.00139)	-0.00188 (0.00239)
D1998	-0.00380* (0.00202)	-0.00585* (0.00336)	-0.00294** (0.00139)	-0.00386 (0.00239)
D1999	-0.00757*** (0.00203)	-0.00976*** (0.00337)	-0.00581*** (0.00141)	-0.00672*** (0.00243)
D2000	-0.0117*** (0.00203)	-0.0147*** (0.00338)	-0.00909*** (0.00143)	-0.0106*** (0.00246)
D2007	-0.0454*** (0.00205)	-0.0562*** (0.00347)	-0.0465*** (0.00172)	-0.0555*** (0.00292)
D2008	-0.0472*** (0.00207)	-0.0568*** (0.00351)	-0.0498*** (0.00176)	-0.0571*** (0.00300)
D2009	-0.0487*** (0.00207)	-0.0553*** (0.00354)	-0.0520*** (0.00179)	-0.0558*** (0.00304)
D2010	-0.0468*** (0.00208)	-0.0516*** (0.00355)	-0.0497*** (0.00177)	-0.0508*** (0.00302)
D2011	-0.0491*** (0.00208)	-0.0542*** (0.00357)	-0.0537*** (0.00181)	-0.0548*** (0.00309)
isgov	0.0120** (0.00579)	0.00170 (0.00836)	0.0231*** (0.00396)	0.00865 (0.00669)
isgov1997	-0.00159 (0.00823)	-0.00258 (0.0118)	-0.000890 (0.00564)	-0.00381 (0.00963)
isgov1998	0.0152* (0.00841)	0.0210* (0.0121)	0.0116** (0.00559)	0.0190** (0.00954)
isgov1999	0.0107 (0.00850)	0.0172 (0.0122)	0.00919 (0.00577)	0.0140 (0.00985)
isgov2000	0.0106 (0.00849)	0.0187 (0.0122)	0.00951 (0.00584)	0.0151 (0.00998)
isgov2007	0.0316*** (0.00852)	0.0597*** (0.0124)	0.0365*** (0.00617)	0.0595*** (0.0105)
isgov2008	0.0196** (0.00858)	0.0446*** (0.0126)	0.0263*** (0.00659)	0.0411*** (0.0112)
isgov2009	0.0195**	0.0440***	0.0263***	0.0407***

	(0.00856)	(0.0127)	(0.00660)	(0.0113)
isgov2010	0.0245***	0.0522***	0.0308***	0.0507***
	(0.00854)	(0.0127)	(0.00640)	(0.0109)
isgov2011	0.0258***	0.0534***	0.0343***	0.0524***
	(0.00867)	(0.0129)	(0.00657)	(0.0113)
age	-0.00226***	-0.00711***	-0.00260***	-0.00730***
	(3.17e-05)	(9.01e-05)	(3.23e-05)	(8.47e-05)
edud	0.00252***	-	0.00375***	-
	(0.000130)	-	(0.000119)	-
income	-8.32e-07***	-	-1.01e-06***	-
	(1.93e-08)	-	(2.33e-08)	-
educol	-	-0.0756***	-	-0.0751***
	-	(0.00174)	-	(0.00153)
totalinc	-	9.36e-08***	-	7.60e-08***
	-	(9.90e-09)	-	(7.37e-09)
nd	0.00190*	0.00953***	0.00189**	0.00931***
	(0.00108)	(0.00181)	(0.000873)	(0.00150)
ed	0.00453**	-0.00110	0.00524***	-0.000921
	(0.00223)	(0.00386)	(0.00180)	(0.00309)
cd	0.00669***	0.0102***	0.00687***	0.0105***
	(0.00116)	(0.00197)	(0.000930)	(0.00159)
Constant	0.181***	0.413***	-	
	(0.00270)	(0.00423)		
Observations	593,562	345,237	593,562	345,237
R-squared	0.026	0.025	-	-

Table XVIII. Non-filtered OLS model with dummy of 2001

	(1)	(2)	(3)	(4)	(5)
	OLS1_1	OLS1_2	OLS1_3	OLS1_4	OLS1_5
VARIABLES	kids	kids	kids	kids	kids
year	-0.0482*** (0.000923)	-0.0382*** (0.000920)	-0.0402*** (0.000950)	-0.0422*** (0.000950)	-0.0422*** (0.000951)
isgov	0.00730*** (0.00273)	0.00586** (0.00271)	0.00155 (0.00275)	0.0188*** (0.00278)	0.0190*** (0.00278)
yearXisgov	0.0189*** (0.00396)	0.0142*** (0.00393)	0.0148*** (0.00393)	0.0175*** (0.00392)	0.0174*** (0.00392)
age		-0.00257*** (2.48e-05)	-0.00240*** (3.15e-05)	-0.00228*** (3.16e-05)	-0.00227*** (3.16e-05)
edud			0.00105*** (0.000126)	0.00245*** (0.000130)	0.00248*** (0.000130)
income				-8.31e-07*** (1.93e-08)	-8.31e-07*** (1.93e-08)
nd					0.00192* (0.00108)
ed					0.00451** (0.00223)
cd					0.00669*** (0.00116)
Constant	0.0980*** (0.000647)	0.203*** (0.00120)	0.186*** (0.00233)	0.180*** (0.00233)	0.177*** (0.00240)
Observations	593,562	593,562	593,562	593,562	593,562
R-squared	0.005	0.022	0.023	0.026	0.026

Table XIX. Non-filtered Poisson marginal effect with dummy of 2001

	(1)	(2)	(3)	(4)	(5)
	Poisson_ME_1_1	Poisson_ME_1_2	Poisson_ME_1_3	Poisson_ME_1_4	Poisson_ME_1_5
VARIABLES	y1	y1	y1	y1	y1
year	-0.0509*** (0.000821)	-0.0405*** (0.000810)	-0.0441*** (0.000835)	-0.0462*** (0.000837)	-0.0463*** (0.000838)
isgov	0.00541*** (0.00184)	0.0158*** (0.00184)	0.00758*** (0.00189)	0.0288*** (0.00196)	0.0289*** (0.00196)
yearXisgov	0.0264*** (0.00294)	0.0226*** (0.00294)	0.0235*** (0.00294)	0.0255*** (0.00294)	0.0253*** (0.00294)
age		-0.00332*** (3.07e-05)	-0.00304*** (3.32e-05)	-0.00262*** (3.23e-05)	-0.00261*** (3.23e-05)
educ			0.00228*** (0.000114)	0.00368*** (0.000118)	0.00371*** (0.000119)
income				-1.01e-06*** (2.33e-08)	-1.01e-06*** (2.33e-08)
nd					0.00191** (0.000873)
ed					0.00518*** (0.00180)
cd					0.00684*** (0.000930)
Observations	593,562	593,562	593,562	593,562	593,562

Table XX. Non-filtered OLS model with dummy of year 1996-2000, 2007-2011

	(1)	(2)	(3)	(4)	(5)
	OLS2_1	OLS2_2	OLS2_3	OLS2_4	OLS2_5
VARIABLES	kids	kids	kids	kids	kids
D1997	-0.00307 (0.00206)	-0.00237 (0.00204)	-0.00254 (0.00204)	-0.00259 (0.00204)	-0.00259 (0.00204)
D1998	-0.00535*** (0.00204)	-0.00407** (0.00203)	-0.00438** (0.00203)	-0.00379* (0.00202)	-0.00380* (0.00202)
D1999	-0.00987*** (0.00205)	-0.00739*** (0.00203)	-0.00782*** (0.00203)	-0.00757*** (0.00203)	-0.00757*** (0.00203)
D2000	-0.0151*** (0.00205)	-0.0114*** (0.00203)	-0.0119*** (0.00203)	-0.0117*** (0.00203)	-0.0117*** (0.00203)
D2007	-0.0519*** (0.00206)	-0.0422*** (0.00204)	-0.0443*** (0.00206)	-0.0454*** (0.00205)	-0.0454*** (0.00205)
D2008	-0.0546*** (0.00207)	-0.0437*** (0.00205)	-0.0459*** (0.00207)	-0.0472*** (0.00207)	-0.0472*** (0.00207)
D2009	-0.0558*** (0.00207)	-0.0437*** (0.00206)	-0.0461*** (0.00208)	-0.0487*** (0.00207)	-0.0487*** (0.00207)
D2010	-0.0547*** (0.00207)	-0.0421*** (0.00206)	-0.0447*** (0.00208)	-0.0467*** (0.00208)	-0.0468*** (0.00208)
D2011	-0.0576*** (0.00208)	-0.0446*** (0.00206)	-0.0473*** (0.00208)	-0.0490*** (0.00208)	-0.0491*** (0.00208)
isgov	0.000786 (0.00582)	0.000462 (0.00577)	-0.00393 (0.00579)	0.0119** (0.00579)	0.0120** (0.00579)
isgov1997	-0.00177 (0.00831)	-0.00256 (0.00824)	-0.00265 (0.00824)	-0.00168 (0.00823)	-0.00159 (0.00823)
isgov1998	0.0148* (0.00850)	0.0138 (0.00843)	0.0137 (0.00843)	0.0151* (0.00841)	0.0152* (0.00841)
isgov1999	0.00971 (0.00859)	0.00819 (0.00851)	0.00813 (0.00851)	0.0106 (0.00850)	0.0107 (0.00850)
isgov2000	0.00984 (0.00858)	0.00786 (0.00850)	0.00782 (0.00850)	0.0106 (0.00849)	0.0106 (0.00849)
isgov2007	0.0327*** (0.00861)	0.0273*** (0.00853)	0.0278*** (0.00853)	0.0317*** (0.00852)	0.0316*** (0.00852)
isgov2008	0.0203** (0.00867)	0.0147* (0.00860)	0.0152* (0.00860)	0.0197** (0.00858)	0.0196** (0.00858)
isgov2009	0.0203**	0.0145*	0.0151*	0.0196**	0.0195**

	(0.00865)	(0.00857)	(0.00857)	(0.00856)	(0.00856)
isgov2010	0.0265***	0.0202**	0.0210**	0.0246***	0.0245***
	(0.00863)	(0.00856)	(0.00856)	(0.00854)	(0.00854)
isgov2011	0.0271***	0.0209**	0.0216**	0.0259***	0.0258***
	(0.00877)	(0.00869)	(0.00869)	(0.00867)	(0.00867)
age		-0.00256***	-0.00239***	-0.00227***	-0.00226***
		(2.48e-05)	(3.15e-05)	(3.16e-05)	(3.17e-05)
edud			0.00109***	0.00249***	0.00252***
			(0.000126)	(0.000130)	(0.000130)
income				-8.32e-07***	-8.32e-07***
				(1.93e-08)	(1.93e-08)
nd					0.00190*
					(0.00108)
ed					0.00453**
					(0.00223)
cd					0.00669***
					(0.00116)
Constant	0.105***	0.208***	0.191***	0.184***	0.181***
	(0.00145)	(0.00175)	(0.00263)	(0.00263)	(0.00270)
Observations	593,562	593,562	593,562	593,562	593,562
R-squared	0.005	0.023	0.023	0.026	0.026

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Table XXI. Non-filtered Poisson marginal effect with dummy of year 1996-2000, 2007-2011

	(1)	(2)	(3)	(4)	(5)
	Poisson_ME_2_1	Poisson_ME_2_2	Poisson_ME_2_3	Poisson_ME_2_4	Poisson_ME_2_5
VARIABLES	y1	y1	y1	y1	y1
D1997	-0.00224 (0.00139)	-0.00161 (0.00139)	-0.00195 (0.00139)	-0.00200 (0.00139)	-0.00200 (0.00139)
D1998	-0.00395*** (0.00139)	-0.00262* (0.00139)	-0.00331** (0.00139)	-0.00292** (0.00139)	-0.00294** (0.00139)
D1999	-0.00745*** (0.00141)	-0.00484*** (0.00141)	-0.00583*** (0.00141)	-0.00579*** (0.00141)	-0.00581*** (0.00141)
D2000	-0.0117*** (0.00143)	-0.00799*** (0.00143)	-0.00925*** (0.00143)	-0.00904*** (0.00143)	-0.00909*** (0.00143)
D2007	-0.0515*** (0.00171)	-0.0412*** (0.00170)	-0.0451*** (0.00172)	-0.0464*** (0.00172)	-0.0465*** (0.00172)
D2008	-0.0555*** (0.00175)	-0.0442*** (0.00175)	-0.0483*** (0.00176)	-0.0497*** (0.00176)	-0.0498*** (0.00176)
D2009	-0.0573*** (0.00177)	-0.0448*** (0.00177)	-0.0492*** (0.00178)	-0.0519*** (0.00179)	-0.0520*** (0.00179)
D2010	-0.0557*** (0.00176)	-0.0425*** (0.00175)	-0.0472*** (0.00177)	-0.0496*** (0.00177)	-0.0497*** (0.00177)
D2011	-0.0601*** (0.00180)	-0.0467*** (0.00179)	-0.0516*** (0.00181)	-0.0536*** (0.00181)	-0.0537*** (0.00181)
isgov	0.000563 (0.00390)	0.0118*** (0.00391)	0.00341 (0.00393)	0.0230*** (0.00396)	0.0231*** (0.00396)
isgov1997	-0.00129 (0.00564)	-0.00200 (0.00564)	-0.00214 (0.00564)	-0.000981 (0.00564)	-0.000890 (0.00564)
isgov1998	0.0104* (0.00559)	0.00969* (0.00559)	0.00945* (0.00559)	0.0115** (0.00559)	0.0116** (0.00559)
isgov1999	0.00734 (0.00577)	0.00624 (0.00577)	0.00624 (0.00577)	0.00909 (0.00577)	0.00919 (0.00577)
isgov2000	0.00788 (0.00584)	0.00669 (0.00584)	0.00668 (0.00584)	0.00948 (0.00584)	0.00951 (0.00584)
isgov2007	0.0364*** (0.00617)	0.0322*** (0.00617)	0.0329*** (0.00617)	0.0367*** (0.00617)	0.0365*** (0.00617)
isgov2008	0.0259*** (0.00659)	0.0217*** (0.00659)	0.0224*** (0.00659)	0.0264*** (0.00659)	0.0263*** (0.00659)

isgov2009	0.0265*** (0.00660)	0.0218*** (0.00660)	0.0227*** (0.00660)	0.0264*** (0.00660)	0.0263*** (0.00660)
isgov2010	0.0322*** (0.00640)	0.0270*** (0.00640)	0.0282*** (0.00640)	0.0309*** (0.00640)	0.0308*** (0.00640)
isgov2011	0.0345*** (0.00657)	0.0296*** (0.00657)	0.0306*** (0.00657)	0.0344*** (0.00657)	0.0343*** (0.00657)
age		-0.00331*** (3.07e-05)	-0.00303*** (3.32e-05)	-0.00261*** (3.23e-05)	-0.00260*** (3.23e-05)
edud			0.00233*** (0.000114)	0.00372*** (0.000118)	0.00375*** (0.000119)
income				-1.01e-06*** (2.33e-08)	-1.01e-06*** (2.33e-08)
nd					0.00189** (0.000873)
ed					0.00524*** (0.00180)
cd					0.00687*** (0.000930)
Observations	593,562	593,562	593,562	593,562	593,562

Table XXII. Filtered OLS model with dummy of 2001

	(1)	(2)	(3)	(4)	(5)
	OLS1_1	OLS1_2	OLS1_3	OLS1_4	OLS1_5
VARIABLES	kids	kids	kids	kids	kids
year	-0.0704*** (0.00158)	-0.0641*** (0.00157)	-0.0493*** (0.00160)	-0.0483*** (0.00160)	-0.0481*** (0.00160)
isgov	-0.0339*** (0.00391)	-0.0171*** (0.00389)	0.0129*** (0.00395)	0.0116*** (0.00395)	0.0124*** (0.00395)
yearXisgov	0.0425*** (0.00580)	0.0429*** (0.00576)	0.0410*** (0.00575)	0.0403*** (0.00575)	0.0403*** (0.00575)
age		-0.00594*** (8.56e-05)	-0.00713*** (8.98e-05)	-0.00710*** (8.99e-05)	-0.00712*** (9.00e-05)
educol			-0.0735*** (0.00172)	-0.0751*** (0.00172)	-0.0758*** (0.00174)
totalinc				9.61e-08*** (9.88e-09)	9.40e-08*** (9.89e-09)
nd					0.00954*** (0.00181)
ed					-0.00115 (0.00386)
cd					0.0102*** (0.00197)
Constant	0.162*** (0.00107)	0.365*** (0.00311)	0.423*** (0.00338)	0.412*** (0.00355)	0.407*** (0.00369)
Observations	345,237	345,237	345,237	345,237	345,237
R-squared	0.006	0.020	0.025	0.025	0.025

Table XXIII. Filtered Poisson marginal effect with dummy of 2001

	(1)	(2)	(3)	(4)	(5)
	Poisson_ME_1_1	Poisson_ME_1_2	Poisson_ME_1_3	Poisson_ME_1_4	Poisson_ME_1_5
VARIABLES	y1	y1	y1	y1	y1
year	-0.0731*** (0.00139)	-0.0672*** (0.00138)	-0.0512*** (0.00140)	-0.0504*** (0.00140)	-0.0503*** (0.00140)
isgov	-0.0301*** (0.00314)	-0.0106*** (0.00314)	0.0175*** (0.00319)	0.0164*** (0.00319)	0.0172*** (0.00319)
yearXisgov	0.0416*** (0.00503)	0.0426*** (0.00503)	0.0414*** (0.00503)	0.0408*** (0.00503)	0.0407*** (0.00503)
age		-0.00623*** (7.96e-05)	-0.00733*** (8.45e-05)	-0.00729*** (8.45e-05)	-0.00731*** (8.46e-05)
educol			-0.0737*** (0.00151)	-0.0747*** (0.00152)	-0.0753*** (0.00153)
totalinc				7.83e-08*** (7.34e-09)	7.64e-08*** (7.37e-09)
nd					0.00931*** (0.00150)
ed					-0.000983 (0.00309)
cd					0.0105*** (0.00159)
Observations	345,237	345,237	345,237	345,237	345,237

Table XXIV. Filtered OLS model with dummy of year 1996-2000, 2007-2011

	(1)	(2)	(3)	(4)	(5)
	OLS2_1	OLS2_2	OLS2_3	OLS2_4	OLS2_5
VARIABLES	kids	kids	kids	kids	kids
D1997	-0.00560 (0.00342)	-0.00431 (0.00339)	-0.00295 (0.00339)	-0.00300 (0.00339)	-0.00298 (0.00339)
D1998	-0.0109*** (0.00339)	-0.00815** (0.00337)	-0.00567* (0.00336)	-0.00592* (0.00336)	-0.00585* (0.00336)
D1999	-0.0173*** (0.00340)	-0.0135*** (0.00338)	-0.0101*** (0.00337)	-0.00979*** (0.00337)	-0.00976*** (0.00337)
D2000	-0.0234*** (0.00341)	-0.0194*** (0.00339)	-0.0149*** (0.00338)	-0.0147*** (0.00338)	-0.0147*** (0.00338)
D2007	-0.0795*** (0.00348)	-0.0721*** (0.00346)	-0.0574*** (0.00347)	-0.0564*** (0.00347)	-0.0562*** (0.00347)
D2008	-0.0826*** (0.00352)	-0.0738*** (0.00350)	-0.0579*** (0.00351)	-0.0571*** (0.00351)	-0.0568*** (0.00351)
D2009	-0.0831*** (0.00354)	-0.0737*** (0.00352)	-0.0565*** (0.00354)	-0.0555*** (0.00354)	-0.0553*** (0.00354)
D2010	-0.0804*** (0.00355)	-0.0712*** (0.00353)	-0.0527*** (0.00355)	-0.0517*** (0.00355)	-0.0516*** (0.00355)
D2011	-0.0840*** (0.00357)	-0.0752*** (0.00355)	-0.0557*** (0.00357)	-0.0544*** (0.00357)	-0.0542*** (0.00357)
isgov	-0.0434*** (0.00841)	-0.0266*** (0.00835)	0.00233 (0.00836)	0.00109 (0.00836)	0.00170 (0.00836)
isgov1997	-0.00256 (0.0120)	-0.00296 (0.0119)	-0.00241 (0.0118)	-0.00268 (0.0118)	-0.00258 (0.0118)
isgov1998	0.0195 (0.0122)	0.0190 (0.0121)	0.0208* (0.0121)	0.0208* (0.0121)	0.0210* (0.0121)
isgov1999	0.0148 (0.0123)	0.0153 (0.0123)	0.0166 (0.0122)	0.0168 (0.0122)	0.0172 (0.0122)
isgov2000	0.0152 (0.0123)	0.0168 (0.0123)	0.0186 (0.0122)	0.0184 (0.0122)	0.0187 (0.0122)
isgov2007	0.0580*** (0.0125)	0.0601*** (0.0124)	0.0604*** (0.0124)	0.0596*** (0.0124)	0.0597*** (0.0124)
isgov2008	0.0452*** (0.0127)	0.0460*** (0.0126)	0.0454*** (0.0126)	0.0447*** (0.0126)	0.0446*** (0.0126)
isgov2009	0.0469***	0.0463***	0.0452***	0.0439***	0.0440***

	(0.0128)	(0.0127)	(0.0127)	(0.0127)	(0.0127)
isgov2010	0.0549***	0.0542***	0.0523***	0.0518***	0.0522***
	(0.0128)	(0.0127)	(0.0127)	(0.0127)	(0.0127)
isgov2011	0.0544***	0.0548***	0.0538***	0.0532***	0.0534***
	(0.0130)	(0.0129)	(0.0129)	(0.0129)	(0.0129)
age		-0.00593***	-0.00712***	-0.00709***	-0.00711***
		(8.56e-05)	(8.99e-05)	(8.99e-05)	(9.01e-05)
educol			-0.0733***	-0.0749***	-0.0756***
			(0.00172)	(0.00173)	(0.00174)
totalinc				9.58e-08***	9.36e-08***
				(9.88e-09)	(9.90e-09)
nd					0.00953***
					(0.00181)
ed					-0.00110
					(0.00386)
cd					0.0102***
					(0.00197)
Constant	0.174***	0.373***	0.429***	0.419***	0.413***
	(0.00242)	(0.00375)	(0.00396)	(0.00411)	(0.00423)
Observations	345,237	345,237	345,237	345,237	345,237
R-squared	0.006	0.020	0.025	0.025	0.025

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Table XXV. Filtered Poisson marginal effect with dummy of year 1996-2000, 2007-2011

	(1)	(2)	(3)	(4)	(5)
	Poisson_ME_2_1	Poisson_ME_2_2	Poisson_ME_2_3	Poisson_ME_2_4	Poisson_ME_2_5
VARIABLES	y1	y1	y1	y1	y1
D1997	-0.00421* (0.00239)	-0.00324 (0.00239)	-0.00188 (0.00239)	-0.00187 (0.00239)	-0.00188 (0.00239)
D1998	-0.00835*** (0.00239)	-0.00605** (0.00239)	-0.00374 (0.00239)	-0.00390 (0.00239)	-0.00386 (0.00239)
D1999	-0.0134*** (0.00242)	-0.0102*** (0.00242)	-0.00699*** (0.00242)	-0.00671*** (0.00243)	-0.00672*** (0.00243)
D2000	-0.0185*** (0.00246)	-0.0153*** (0.00246)	-0.0108*** (0.00246)	-0.0106*** (0.00246)	-0.0106*** (0.00246)
D2007	-0.0786*** (0.00292)	-0.0721*** (0.00292)	-0.0564*** (0.00292)	-0.0556*** (0.00292)	-0.0555*** (0.00292)
D2008	-0.0829*** (0.00300)	-0.0750*** (0.00299)	-0.0580*** (0.00300)	-0.0573*** (0.00300)	-0.0571*** (0.00300)
D2009	-0.0836*** (0.00303)	-0.0751*** (0.00302)	-0.0569*** (0.00304)	-0.0559*** (0.00304)	-0.0558*** (0.00304)
D2010	-0.0798*** (0.00300)	-0.0715*** (0.00300)	-0.0517*** (0.00302)	-0.0509*** (0.00302)	-0.0508*** (0.00302)
D2011	-0.0849*** (0.00307)	-0.0769*** (0.00307)	-0.0561*** (0.00308)	-0.0549*** (0.00308)	-0.0548*** (0.00309)
isgov	-0.0369*** (0.00667)	-0.0177*** (0.00667)	0.00904 (0.00669)	0.00797 (0.00669)	0.00865 (0.00669)
isgov1997	-0.00409 (0.00963)	-0.00448 (0.00963)	-0.00376 (0.00963)	-0.00394 (0.00963)	-0.00381 (0.00963)
isgov1998	0.0165* (0.00954)	0.0164* (0.00954)	0.0188** (0.00954)	0.0188** (0.00954)	0.0190** (0.00954)
isgov1999	0.0110 (0.00985)	0.0120 (0.00985)	0.0135 (0.00985)	0.0137 (0.00985)	0.0140 (0.00985)
isgov2000	0.0103 (0.00998)	0.0125 (0.00998)	0.0151 (0.00998)	0.0149 (0.00998)	0.0151 (0.00998)
isgov2007	0.0554*** (0.0105)	0.0585*** (0.0105)	0.0600*** (0.0105)	0.0594*** (0.0105)	0.0595*** (0.0105)
isgov2008	0.0394*** (0.0112)	0.0412*** (0.0112)	0.0417*** (0.0112)	0.0411*** (0.0112)	0.0411*** (0.0112)

isgov2009	0.0418*** (0.0113)	0.0418*** (0.0113)	0.0418*** (0.0113)	0.0407*** (0.0113)	0.0407*** (0.0113)
isgov2010	0.0518*** (0.0109)	0.0521*** (0.0109)	0.0509*** (0.0109)	0.0504*** (0.0109)	0.0507*** (0.0109)
isgov2011	0.0518*** (0.0113)	0.0532*** (0.0113)	0.0527*** (0.0113)	0.0522*** (0.0113)	0.0524*** (0.0113)
age		-0.00622*** (7.96e-05)	-0.00732*** (8.46e-05)	-0.00729*** (8.45e-05)	-0.00730*** (8.47e-05)
educol			-0.0735*** (0.00152)	-0.0745*** (0.00152)	-0.0751*** (0.00153)
totalinc				7.79e-08*** (7.34e-09)	7.60e-08*** (7.37e-09)
nd					0.00931*** (0.00150)
ed					-0.000921 (0.00309)
cd					0.0105*** (0.00159)
Observations	345,237	345,237	345,237	345,237	345,237

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