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DISCUSSION PAPER SERIES

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ABSTRACT

The Impact of Neighbour, Colleague, and Family Peers on Parental Labour Supply*

Child penalties in paid working hours are persistent and widen the gender earnings gap. This paper studies an important mechanism through which working hours are affected: peer effects. Using three unique layers of peer networks: neighbours, colleagues, and family, we analyse peer effects on individuals' paid working hours. We analyse peer effects up to six years after childbirth on individuals who become first-time parents in the period 2014-2018, using Dutch full-population administrative monthly microdata up to September 2024. The identification strategy exploits exogenous variation in peers' working hours through peers-of-peers. Our research is the first to establish long-term statistically significant peer effects on fathers' working hours. The results indicate positive peer effects on fathers and mothers, where colleague peers are more important than neighbour peers and family peers.

JEL Classification: J22, D85, C26

Keywords: family peers, neighbour peers, colleague peers, paid working hours, peers-of-peers

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1 Introduction

In recent decades, there has been a convergence in the economic roles of men and women in society. Governments, through equal employment and pay policies and childcare and parental leave policies, and companies, through diversity and inclusion strategies, have made efforts to narrow the gender gaps in employment and wages (Blau and Kahn, 2017). However, despite efforts to close gender gaps in the labour market, they remain prevalent. The arrival of children is one of the main causes of persistent gender gaps in the labour market (Kleven et al., 2019; Sieppi and Pehkonen, 2019; Goldin et al., 2022). In addition, evidence shows that gender gaps are much larger in societies with less egalitarian gender and social norms, suggesting that slow-moving changes in gender and social norms play a key role (Cortés and Pan, 2023).[1] At present, the mechanisms underlying the importance of these norms, especially for fathers, are poorly understood.

Social network theory posits that an individual's network affects gender role attitudes, which describe or prescribe the roles that men and women in households and society should have, through interactions with peers (Borgatti et al., 2009). Peer effects from role models shape attitudes and may affect parents' decisions on labour supply because of imitation behaviour and conformity preferences (Bramoullé et al., 2020; Cialdini et al., 1990; Bernheim, 1994; Akerlof and Kranton, 2000). Recently, research has shown substantial peer effects on mothers' labour supply (Nicoletti et al., 2018; Welteke and Wrohlich, 2019; Cavapozzi et al., 2021). However, in many households, decisions on how much effort to invest in home production and labour market production, and how much of the housework to outsource, are made by both partners jointly. Therefore, a focus on what determines the labour market decisions of fathers is important, yet is mostly missing in the literature.

In this paper, we analyse effects on the labour supply of first-time parents from peer neighbours, peer colleagues, and peer family. We use monthly linked employer-employee microdata on the entire population from Statistics Netherlands in the period 2009 to 2024. The data up to 2024 are important, considering the changes in gender role attitudes and parental labour supply over the last decades. Our sample contains 267,879 fathers and 315,594 mothers who became a first-time parent between January 2014 and September 2018. Each parent is followed for 24 months before and 72 months after giving birth. A unique feature of the data is the detailed monthly information on actual paid working hours, based on salaried employees' monthly income statements.

We are interested in the impact of three different peer networks: the neighbourhood,

[1] In contrast, the role of biology turns out to be limited (Kleven et al., 2021; Andresen and Nix, 2022).

the firm, and the family. We focus on these three network layers as these are measured for most people (which is different for e.g. sport clubs or friends), are available with little measurement error in the full-population administrative data on working hours, and are likely to be places where people observe each other regularly. Compared to existing network data from small surveys on actual peer links characterised by sample selection and non-response bias, the administrative network data on potential peer links have three advantages: (i) covering all individuals as we use full-population register data (Van der Laan et al., 2023), (ii) containing peers from three different network layers, and (iii) containing information on peers of a peer, i.e. indirect links. We study peer effects by network layer to evaluate which network layer matters the most for each sex group.

Individuals are impacted by their peers through three mechanisms. First, imitation behaviour predicts that individuals who observe that (same gender) peers make labour supply decisions upon parenthood infer information about what is the 'right' or desired way to behave. Second, conformity preferences suggest that individuals get a disutility from deviating from what is normal or the right thing to do. Third, a reduction in labour supply from peers can also have a purely informational value. For instance, receiving information on possibilities to (temporarily) work part time or to take parental leave might be important for individuals' labour supply decisions. Observing peers reducing their labour supply after becoming a parent may cause new parents to do the same.

There are several reasons why peer effects on labour market outcomes may differ between mothers and fathers. A first reason is that the majority of men work full time whereas women tend to have fewer paid working hours (Palladino et al., 2025). In our analysis sample, 86% of fathers work full time and 49% of mothers work full time. Consequently, changes in hours worked by fathers would mainly represent decreases in work hours. Since a decrease in paid working hours typically comes with a negative income effect, it may be harder for fathers to be impacted by peers in terms of choice of work hours. A second reason is related to the findings of Grinza et al. (2022), who show that fathers have more conservative attitudes than mothers (both before and after the arrival of children), but that mothers become more conservative after becoming a (first-time) parent, and fathers are not affected. This suggests that fathers' gender role attitudes may be less malleable than those of mothers, potentially making fathers less susceptible to peer effects in the labour market.

The estimation of peer effects is challenging because of the selection problem and the reflection problem (Manski, 1993; Angrist, 2014). The selection problem refers to endogenous network formation and states that groups are usually formed endogenously,

i.e. people select themselves into certain groups (and not into other groups). The reflection problem is the issue that it is impossible to distinguish empirically between the effect that peers have on an individual and vice versa, i.e. an issue of reverse causality. To quantify peer effects, we follow Nicoletti et al. (2018) and Nicoletti et al. (2023) and apply an instrumental variable (IV) approach based on indirect network links, which is based on the seminal work by Bramoullé et al. (2009) and De Giorgi et al. (2010). Our empirical approach overcomes the key identification challenges of estimating peer effects and allows us to estimate causal neighbour peer effects, colleague peer effects, and family peer effects.

Specifically, we use indirect network links, instrumenting a peer's outcome with the outcomes of the peers of the peer. We define 'homogeneous' peers and peers-of-peers as same-sex individuals with similar educational attainment who became a parent before the focal individual. We control for the instrument at the individual level, i.e. the average working hours of the individual's peers based on the network layer that is used to define peers of peers. Ignoring the instrument at the individual level would cause biased and inconsistent estimates because of unobserved confounders of the IV peer network and because of the exclusion bias (Von Hinke et al., 2019; Caeyers and Fafchamps, 2024).

To give an example, consider the analysis of neighbour peer effects. Through non-random sorting across neighbourhoods, there could be unobserved characteristics that are correlated across peers and the focal individual. In addition, the reflection problem might cause the reverse causality situation where the focal individual affects its peers. We overcome these issues by instrumenting the average working hours of the focal individual's neighbour peers with the average working hours of the colleagues of the focal individual's neighbours. To limit reverse causality issues, we retain a peer who has a child before the focal individual and we retain the peers-of-peer who have a child before the peer. To further limit reverse causality, the peers-of-peers' working hours are time constant and refer to the average hours worked measured 12 months following the birth of each peer-of-peer's child. In this two-stage least squares (2SLS) analysis, we also include the instrument at the individual level which represents the average working hours of the individual's colleagues. Taken together, we have six peers-of-peers dimensions as instruments including, e.g., colleagues of neighbours, and family of colleagues.

Our empirical results show long-term statistically significant peer effects on both fathers and mothers. Colleague peer effects on focal individuals are found to be the strongest, with the effect ranging between 0.5 hours (fathers) to 1.5 hours (mothers) a month of a ten-hour change in the average monthly working hours of colleague peers. The impacts of neighbour peers are slightly smaller, and a ten-hour change in neighbour peers'

working hours affects the focal individual by about 20 to 30 minutes a month. We find no positive family peer effects on parents. The results indicate that for both fathers and mothers, colleague peers are more important than neighbourhood peers and family peers.

The first contribution of our paper is to the literature on peer effects in the labour market, as our paper is the first to analyse fathers and to show statistically significant and long-run colleague and neighbour peer effects on fathers' working hours. In addition, we show that colleague peer effects are largest, and that mothers experience stronger colleague peer effects than fathers. Closest to our work is the paper of Nicoletti et al. (2018), who show positive and statistically significant family peer effects on mothers' paid working hours using the neighbours of family peers as instrument. Their sample of analysis consists of mothers giving birth between 1997 and 2002 in Norway. Importantly, they find no statistically significant neighbour peer effect using the family of neighbour peers as instrument. As Nicoletti et al. (2018) use annual data to construct a measure of weekly working hours in four categories (0, 1-19, 20-29 and 30+ hours), a key strength of our analysis is the complete monthly paid working hours information preventing any (non-)random measurement error bias. In addition, our data up to 2024 enable us to get a better understanding of peer effects in recent times which current peer effects studies based on administrative microdata lack.

A related but distinct literature is on peer effects on parental leave take-up. Carlsson and Reshid (2024), using a similar identification strategy as our IV approach, analyse colleague peers using family of the focal individual's colleagues as instrument. Their sample consists of individuals giving birth between 2003 and 2014 in Sweden, and find positive colleague peer effects on the take-up of paid parental leave for both fathers and mothers.[2] We contribute to the literature on peer effects by showing the importance of each of the three network layers, neighbours, colleagues, and family, for peer effects on fathers and mothers using recent monthly data on paid working hours up to 2024.

The second contribution is to the broad literature on gender inequalities in the labour market. Gender inequalities are important to narrow because of efficiency reasons such as misallocation of (female) talent (Hsieh et al., 2019) and equity reasons considering women's higher poverty rates and higher financial dependence. Parenthood is a main

[2]Other, related research does not use information on peers-of-peers to define the instrument but instead use a parental leave reform to overcome the key identification challenges. Dahl et al. (2014) use a 1993 Norwegian reform affecting fathers and show positive and statistically significant colleague peer effects on parental leave take-up of fathers. Welteke and Wrohlich (2019) use a 2007 German reform as an instrument and show positive and statistically significant colleague peer effects on mothers' parental leave decisions. Casarico et al. (2025) use a 2015 Italian reform and show statistically significant peer effects on coworker fathers' and coworker mothers' parental leave take-up.

driver of gender gaps, explained by traditional gender roles that refer to the gendered division of household production and labour-market production, and causes a so-called child penalty where mothers experience reduced earnings and labour force participation (Angelov et al., 2016; Kleven et al., 2019). Governmental policies on childcare and parental leave have been ineffective in fully closing gaps (Kleven et al., 2024), and they appear to deal with the consequences of persistent gender inequalities instead of addressing root causes. Instead, how long hours are rewarded (Goldin, 2014) and the slow-moving changes in gender and social norms appear to be key reasons for the persistence of gender gaps (Cortés and Pan, 2023). We contribute to this literature by showing the role of peer effects in changes in working hours for both men and women. Peer effects shape gender role attitudes, and our analysis of which network is causing peer effects on working hours is important to better understand the mechanisms underlying how expectations regarding how fathers and mothers should behave are updated.

2 Institutions

The institutional setting in The Netherlands is such that it encourages parents to take leave around the birth of their child. Most of the leave taking stimulus is for the birth giving mother. For the partner there are less generous leave arrangements. The next section describes recent leave policies and changes in these policies over time.

2.1 Parental Leave Policies in the Netherlands

The Netherlands offers a range of leave policies related to the arrival of children, with distinct provisions for mothers who give birth and their partners.

Mothers who give birth are entitled to maternity leave, which is fully paid (100%) and commences 4 to 6 weeks before the expected delivery date. Following childbirth, mothers receive an additional 10 weeks of paid leave, with a potential extension up to 12 weeks if fewer than 6 weeks of pre-birth leave were taken. Of the post-birth leave, 6 weeks must be taken immediately after delivery, while the remaining 4 weeks can be used within 30 weeks post-partum. In total, the mother is eligible for 16 weeks of maternity leave.

Partners are eligible for two days of partner leave, which includes leave on the day of birth. We study peer effects on individuals who became a parent between 2014 and 2018 in this paper. Only for births since January 2019, partners are eligible for one week of paid partner leave. For births since July 1, 2020, partners are also entitled to 5 weeks of 'extended partner leave' in the first six months after the birth paid at 70% of their salary.

In addition to maternity and partner leave, all parents are eligible for unpaid parental leave totalling 26 weeks per child. This parental leave can be used flexibly within the first eight years of the child's life. Between 2001 and 2022, these weeks were unpaid, and before 2001, no parental leave policy was in place.[3]

3 Data

We use monthly administrative microdata from Statistics Netherlands that cover the universe of employees in the Netherlands in the period January 2009 to September 2024. We analyse peer effects on paid working hours of first-time parents, as the birth of the first child is often the key transition point in parent's flexibility needs and adjustments to their career. The analysis sample contains all individuals aged between 20 and 45 years who became a parent for the first time between January 2014 and September 2018, well before the changes in parental leave policies in the Netherlands. To compute the working hours variables for the peers and peers-of-peers who give birth up to five years before the focal individual as explained below, we use data from 2009 onwards. We use the data up to 2024, as we analyse individuals up to 72 months after giving birth.

The main dataset is the Job and Wages register (Centraal Bureau voor Statistiek, 2024), which contains monthly data on earnings, actual working hours, contract type (permanent, fixed-term or other), type of job (regular or other including flex and pay-rolling), based on income statements of salaried employees. The earnings variables are deflated, expressed in 2015 euro. All earnings and hours variables are winsorized such that outliers are set at the 1th and 99th value of the given variable. We link these data to other datasets that cover individual and household characteristics and firm characteristics.

The data that cover individual and household characteristics include a person's sex, exact birth date, country of birth, educational attainment, marital status (partnered or not) and regional home location. Home location is observed at the neighbourhood level (13,911 unique regions) and at the public employment service (PES) level (35 unique regions). In addition, these data contain information on the partner's characteristics and the presence and exact birth date of children in the household. As the educational attainment information is not observed for all individuals, we computed three groups following the International Standard Classification of Education (ISCED): high educated (ISCED 5-8, tertiary), low- or average-educated individuals (ISCED 1-4, lower and secondary), and

[3]The first nine weeks of paid parental leave were introduced for parents of children born after 2022. The first 9 weeks of this leave are compensated at 70% of the parent's salary, while the remaining 17 weeks are unpaid.

missing educational attainment information. The firm characteristics we use include firm size, and sector code at the two-digit Nomenclature statistique des activités économiques (NACE) Rév. 2 level. We also integrate data that cover the identifiers of all self-employed individuals, and exclude individuals, peers and peers-of-peers for which is observed that they were self-employed in the year before becoming a parent. We impose this restriction as we are interested in paid working hours and working hours are not measured for self-employed workers.

3.1 Defining peers and peers-of-peers

For our identification strategy, we use information on individuals' peers and individuals' peers-of-peers. Peers and peers-of-peers are measured in the year of first childbirth of the focal individual, i.e. January 1st of the given birth year. Consistent with the literature on peer effects (Nicoletti et al., 2018), we consider people to be peers of each other only if they are 'homogeneous', which is defined as the same sex and educational attainment group. To limit issues of reverse causality, peers became a parent one to four years before the individual. Similarly, peers-of-peers became a parent one to four years before the respective individual's peer, and at a maximum of five years before the focal individual. Effectively, this implies peers became a parent one to four years, and peers-of-peers became a parent two to five years, before the focal individual.

We use information from three different network layers: neighbourhoods, firms, and family. Neighbour peers are defined as peers living in the same neighbourhood, where we use the neighbourhood classification of Statistics Netherlands. In the Netherlands, there are about 13,911 unique neighbourhoods, and a neighbourhood consists on average of 1,350 households. Colleague peers are defined as those working in the same firm. Family peers are broadly defined and include siblings, half-siblings, nieces/nephews, aunts/uncles, and family links by marriage such as step-brothers or brothers-in-law.

A similar strategy is used for indirect peers, i.e. peers-of-peers, where we use a cross-layer approach. Importantly, we can observe if an individual and its peers-of-peers share the same neighbourhood or same firm. This situation would cause an identification issue involving overlapping networks as peers-of-peers could influence the individual directly. Hence, we only retain peers-of-peers of individuals who are not employed at the same firm and who do not live in the same neighbourhood as the focal individual.

We define six groups of peers-of-peers. Panels A and B of Table 1 show the number of peers and number of peers-of-peers, on average, for each focal individual by network layer and by sex group. The average peers-of-peers are as follows: colleagues of the

focal individual's neighbours (INC, 703 for men and 660 for women), family of the focal individual's neighbours (INF, 823 for men and 753 for women); neighbours of the focal individual's colleagues (ICN, 1,217 for men and 1,072 for women); family of the focal individual's colleagues (ICF, 1,760 for men and 1,319 for women); neighbours of the focal individual's family (IFN, 74 for men and 66 for women); and colleagues of the focal individual's family (IFC, 105 for men and 85 for women).

3.2 Key variables

Panel C of Table 1 provides information on each of the key variables. The key dependent variable is the focal individual's monthly paid working hours. Paid working hours include all salaried hours including the working overtime hours that are paid at the same pay rate. Paid working hours reduce if a person starts working fewer hours (for example, transitioning from full-time employment to part-time employment) or if the person takes unpaid leave. The number of paid working hours is unaffected by paid leave and holidays.

Figure 1 shows the child penalty in monthly paid working hours estimated with the model specified in levels including zeros for the unemployed, which appears much larger for women than men. For women, the penalty amounts to 31 hours (a 22% decrease compared to the average of 139 hours). For men, this penalty amounts to 10 hours (a 6% decrease compared to the average of 161 hours).

The key independent variables are the peers' monthly working hours, the peers-of-peers' monthly working hours and the 'individual IV'. The peers' working hours variable is time varying and reflects the average working hours of the focal individual's peer network, excluding the focal individual, in a given month of observation since the focal individual became a parent. We compute this variable by network layer and the working hours vary by month since childbirth of the focal individual. Hence, for each individual and each month since the individual's first birth, we have the average working hours of the individual's colleagues, neighbours and family, respectively.

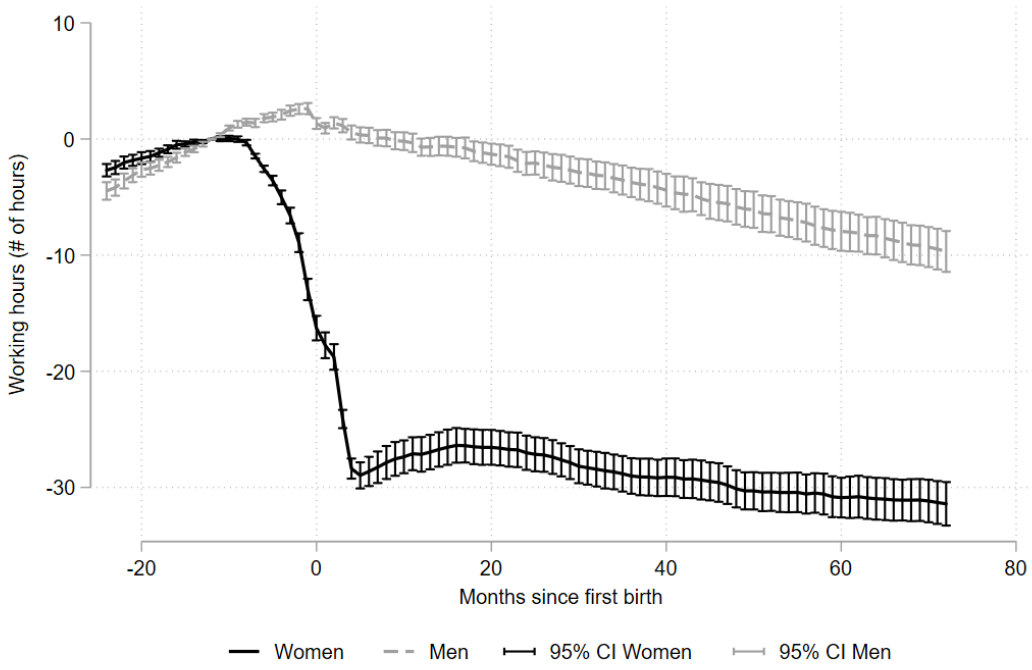
The peers-of-peers' working hours are time constant and measured 12 months after the birth of the given peer-of-peer's oldest child. Similar to Nicoletti et al. (2018), we focus on 12 months after the peer-of-peer's birth to ensure reverse causality is not an issue. Again, we take the average, separately by network layer, as there are multiple peers-of-peers. Hence, each individual has peer-of-peer average working hours which is present for each of the six network-by-network dimensions, the first for example being the average working hours of the colleagues of the focal individual's neighbours (INC) measured based on the working hours of each peer-of-peer 12 months after the peer-of-peer became a parent.

Table 1: Descriptive statistics on peers, peers-of-peers and key variables

	(1) Men Mean	(2) Men St. Dev.	(3) Men N	(4) Women Mean	(5) Women St. Dev.	(6) Women N
A: Peer information						
Number of neighbour peers (IN)	13.089	15.547	255,780	16.015	18.880	304,652
Number of colleague peers (IC)	115.804	325.391	174,153	83.398	163.059	209,872
Number of family peers (IF)	1.387	0.757	77,333	1.463	0.845	100,629
B: Peers-of-peers information						
Number of colleagues of neighbours (INC)	702.771	871.811	252,655	660.138	804.028	302,328
Number of family of neighbours (INF)	823.415	911.861	204,679	752.715	833.243	257,136
Number of neighbours of colleagues (ICN)	1,216.587	3,191.756	173,742	1,072.121	2,044.191	209,622
Number of family of colleagues (ICF)	1,760.384	3,731.709	119,058	1,319.248	2,204.674	169,162
Number of neighbours of family (IFN)	74.500	205.208	74,362	66.315	119.680	96,973
Number of colleagues of family (IFC)	105.033	244.259	51,008	84.805	134.564	71,820
C: Key variables on monthly working hours information						
Hours worked of the individual (dependent variable)	161.096	29.878	235,250	139.244	37.731	264,838
Hours worked of neighbour peers (instrumented variable)	159.347	14.260	254,299	117.613	20.474	301,603
Hours worked of colleague peers (instrumented variable)	159.123	19.415	172,660	118.340	24.396	206,762
Hours worked of family peers (instrumented variable)	160.706	24.923	70,621	114.858	34.006	85,140
Hours worked of colleagues of neighbours (instrument)	157.287	10.352	252,361	117.150	16.104	301,778
Hours worked of family of neighbours (instrument)	159.372	18.540	198,517	112.490	24.372	247,076
Hours worked of neighbours of colleagues (instrument)	158.493	8.722	173,108	116.659	13.580	208,700
Hours worked of family of colleagues (instrument)	159.651	16.041	115,704	113.460	20.167	164,887
Hours worked of neighbours of family (instrument)	158.434	15.582	72,938	113.562	21.067	94,537
Hours worked of colleagues of family (instrument)	158.923	17.399	50,475	114.905	22.258	70,957
Hours worked of neighbour peers (individual IV)	159.055	14.105	254,284	116.152	20.057	301,817
Hours worked of colleague peers (individual IV)	158.847	18.617	172,493	116.992	23.819	206,956
Hours worked of family peers (individual IV)	160.339	25.064	70,757	113.504	33.119	86,100

Notes. The total number of men equals 267,879 and the number of women equals 315,594. Sample means of hours worked are provided for focal individuals conditional on employment, measured 12 months before an individual became a parent. Hours worked of peers and peers-of-peers are provided conditional on peers and peers-of-peers being observed. Hours worked of peers are measured 12 months before the focal individual became a parent. Hours worked of peers-of-peers are measured as the average of hours worked by peers-of-peers in the twelfth month after each peer-of-peer became a parent. The individual IV is measured as the average hours worked by peers 12 months after each peer became a parent.

Figure 1: Child penalty in paid working hours



(a) Within change in paid working hours

Notes. Regression analysis of paid working hours including zeros for the non employed on months since birth dummies and individual fixed effects. Each line represents a different regression. Confidence intervals (CI) are based on standard errors clustered at the PES region. The twelfth month before first birth is the reference month of birth ($\tau = -12$). We use a 25% random sample, and the number of observations equals 7,653,203 for women and 6,512,968 for men. Empirical model: $y_{i\tau t} = \mu_i + \gamma_{\tau t} + \varepsilon_{i\tau t}$

The individual IV controls for the unobserved characteristics of the IV network (Nicoletti et al., 2018; Von Hinke et al., 2019) and removes the exclusion bias (Caeyers and Fafchamps, 2024). For example, using the hours worked of the colleagues of the focal individual's neighbours as the instrumental variable, and where the instrumented variable reflects the average working hours of the focal individual's neighbour peers, the individual IV will be the average monthly working hours of the focal individual's colleagues. The individual IV represents the average working hours of the individual's peers by network layer, based on the working hours of each peer 12 months after the peer became a parent.

Note that all values of the key variables on monthly working hours information in the empirical analysis are set to zero if these data are missing. This data manipulation, consistent with the approach of Nicoletti et al. (2018) and Nicoletti et al. (2023), is justified if these individuals indeed have peers who do not work, or have no peers. We argue that this manipulation is indeed justified given that we have data on the entire population of

salaried employees, and we exclude individuals who were self-employed in the year before giving birth. Consequently, we have almost complete information on all individuals except for those who only have self-employed peers or self-employed peers-of-peers. The latter is highly unlikely given the share of people in self-employment, which is 13% of employed individuals in the Netherlands in 2024, and thus much lower than the share of people in salaried employment.

In turn, this manipulation benefits the empirical analysis in two ways. First, it will increase power because our estimation will not suffer from missing data points for one of the key variables. Second, it removes the issue of sample selection that is caused by selectivity in missing peer information and peer-of-peer information. In a robustness check, we show the results when we do not impose this data manipulation, where we thus trade off potential mismeasurement issues with potential sample selection issues. This approach is consistent with the paper by Carlsson and Reshid (2024) who study co-worker peer effects on parental leave uptake using an IV approach based on information on the use of parental leave by family of the co-worker peers. Specifically, Carlsson and Reshid (2024) exclude focal individuals who do not have co-worker peers or focal individuals whose co-worker peers do not have family peers from the analysis.

The control variables are time constant and measured 12 months before the focal individual becomes a parent to ensure these variables are not affected by the incidence of becoming a parent. Table 2 shows sample means and the standard deviation for most of the control variables. From Table 2 it is clear that there are slightly more women in our sample than men. This observation can be explained by our sample selections on age: employed men tend to be older than employed women when becoming a parent. Another key difference between employed men and employed women in the Netherlands is that the majority of men work full time, whereas the majority of women work part time.

Table 2: Descriptive statistics on control variables

	(1) Men Mean	(2) Men St. Dev.	(3) Women Mean	(4) Women St. Dev.
Female	0	0	1	0
>20 and ≤ 30 year	0.443	0.497	0.625	0.484
>30 and ≤ 35 year	0.361	0.480	0.276	0.447
>35 and ≤ 40 year	0.146	0.353	0.082	0.274

>40 and ≤ 45 year	0.050	0.218	0.016	0.127
Low/average educated	0.526	0.499	0.491	0.500
High educated	0.372	0.483	0.444	0.497
Unobserved education	0.103	0.303	0.064	0.245
Born in the Netherlands	0.848	0.359	0.835	0.371
Partner	0.893	0.309	0.854	0.353
Permanent contract	0.635	0.482	0.596	0.491
Regular employee	0.891	0.311	0.888	0.315
Full-time employed (≥ 35 hours)	0.858	0.349	0.489	0.500
First quantile of firm size	0.231	0.421	0.178	0.383
Second quantile of firm size	0.231	0.421	0.170	0.375
Third quantile of firm size	0.202	0.401	0.197	0.398
Fourth quantile of firm size	0.154	0.361	0.234	0.423
Fifth quantile of firm size	0.183	0.387	0.221	0.415
Birth of first child in 2014	0.229	0.420	0.225	0.418
Birth of first child in 2015	0.215	0.411	0.213	0.409
Birth of first child in 2016	0.209	0.407	0.210	0.408
Birth of first child in 2017	0.201	0.401	0.203	0.402
Birth of first child in 2018	0.146	0.353	0.149	0.356

Notes. All variables are measured 12 months before giving birth. The number of male individuals equals 267,879 and the number of female individuals equals 315,594.

4 Empirical Strategy

We are interested in the impact that peers have on individuals' labour supply. The empirical strategy is to quantify parameter δ of the model showed in 1, i.e. the effect of a focal individual's peers' average working hours ($\bar{y}_{d_1,-i\tau}$) on the focal individual's working hours (y).

$$y_{ibr\tau} = \delta \bar{y}_{d_1,-i\tau} + \eta' X_i + \kappa_b + \alpha_r + \varepsilon_{ibr\tau} \tag{1}$$

where i, b, r and τ represent the focal individual, month of birth, region and month since becoming a parent, respectively. In addition, d represents the network layer used (neigh-

bours, colleagues or family), where d_1 refers to the layer of distance-one links, i.e. the focal individual's peers. Parameter d_2 represents the layer of distance-two, indirect links, i.e. the focal individual's peers-of-peers. X represents the vector of control variables, containing the individual i's characteristics and i's partner characteristics, which are time constant and measured a year before becoming a parent.[4] These covariates control for important factors that might influence working hours, e.g. household-level factors captured by the pre-birth labour market outcomes of the focal individual and its partner, and firm-level factors such as workplace cultures that differ across economic sectors and across firm size groups. κ represents month of birth fixed effects, ranging from January 2014 up to September 2018. α captures PES regional location fixed effects measured a year before becoming a parent. Standard errors ε are clustered at the level of PES regions.

The key identification challenge is that the individual's network formation is endogenous (Bramoullé et al., 2009). An example of this selection problem relates to unobserved characteristics that are correlated between a focal individual and its peers, because of non-random decisions on residential locations and workplaces. Hence, it is not random whether people are peers, and this identification challenge causes a bias in δ of equation 1. To overcome this issue and to quantify causal peer effects, we apply an instrumental variable approach, using indirect network links instrumenting a peer's outcome with the outcomes of peers of peers, in the spirit of Nicoletti et al. (2018). To address reverse causality, peers are required to become parents at least one year before the individual, and peers-of-peers at least one year before the peers.

We apply an IV estimator that instruments the average working hours of the individual's peers ($\bar{y}_{d_1,-i}$) that vary by month of observation with the average working hours of the individual's peers-of-peers ($\bar{y}_{d_2,-i}$) which are constant over time and the average is based on the hours measured 12 months after the birth of the oldest child of each peer-of-peer. The latter ensures that the labour supply of peers-of-peers affects the labour supply of peers, and not the other way around. We use three layers: neighbours, colleagues, and family. The layer used for d_1 and d_2 will not be the same (layer $d_1 \neq$ layer d_2). For example, we will not use the colleagues of the focal individual's colleagues as the instrument.

[4]Specifically, we include control variables for: age groups $((20, 30], (30, 35], (35, 40], (40, 45])$, born in the Netherlands, partnered, permanent contract, regular job, full-time employment, employment status (employed or not), monthly earnings (five groups based on quantiles), firms size (five groups based on quantiles), economic sector (two-digit), and educational attainment (low- or average-educated, high educated, or missing). Similarly, we include covariates for the partner's information for age, born in the Netherlands, partnered, permanent contract, regular job, full-time employment, firm size, employment, wages. All categorical control variables also include two separate categories for missing values because of missing information or because of unemployment, to include all observations in all regressions thereby avoiding sample selection issues.

In this estimator, the individual's peers-of-peers should have an effect on the peers of the focal individual in terms of paid working hours; this is the first-stage regression in the IV framework (and a test of the relevance condition) as showed in equation 2.

The individual IV, $\bar{y}_{d_1|d_2,-i}$, refers to the instrument at the individual level. That is, given the network layer that is used as the layer of the peers-of-peers, d_2, the average of working hours of the individual's peers using this same network, based on the working hours of each peer 12 months after the peer became a parent, is included in the estimation of the first stage and second stage. Effectively, including the individual IV in the model is similar to including a network fixed effect where the observation of the focal individual is not included. An example of this approach would be an estimation of the impact of the individual's neighbour peers on the individual's working hours, where the peers-of-peers represent the colleagues of the individual's neighbours. In this example, the individual IV is based on the individual's colleagues, and functions as a workplace fixed effect.

The first stage of the IV model is:

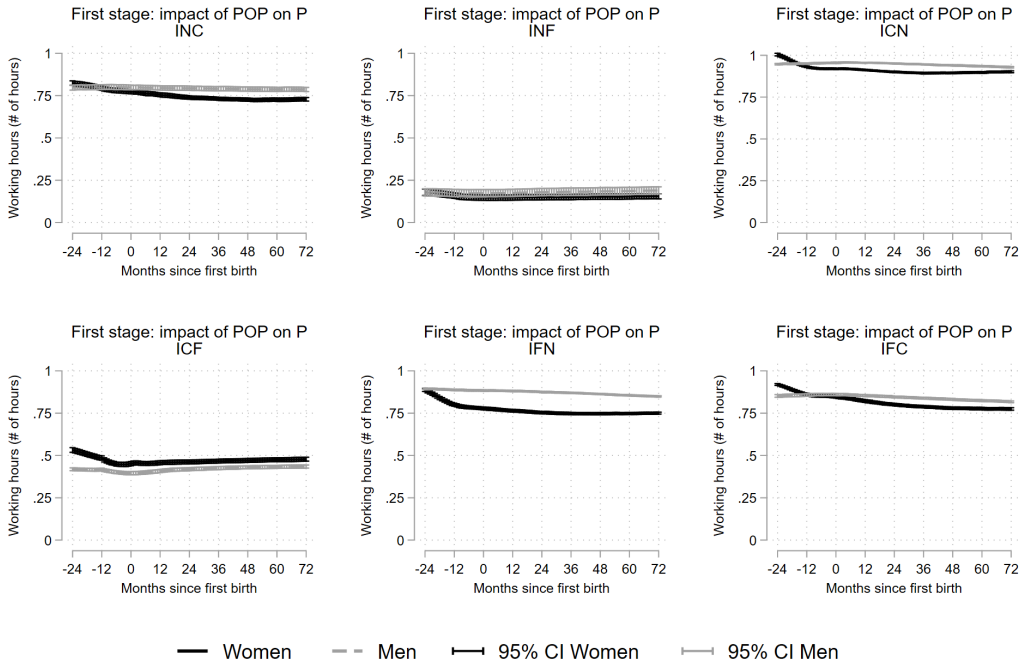
$$\bar{y}_{d_1,-ibr} = \rho \bar{y}_{d_2,-i} + \beta' X_i + \iota_b + \sigma_r + \gamma \bar{y}_{d_1|d_2,-i} + \varepsilon_{ibr} \tag{2}$$

We estimate the first and second stage of the IV model by month since becoming a parent for the first time, and this ranges from 24 months before up to 72 months after the birth month. Standard errors ε are clustered at the level of the PES regions. In addition, we estimate the models by sex group. As we analyse peer effects by all combinations of the three network layers, where the distance-one layer is not the same as the distance-two layer, there are six dimensions of peers-of-peers: colleagues of the individual's neighbours (INC), family of the individual's neighbours (INF); neighbours of the individual's colleagues (ICN); family of the individual's colleagues (ICF); neighbours of the individual's family (IFN); and colleagues of the individual's family (IFC).

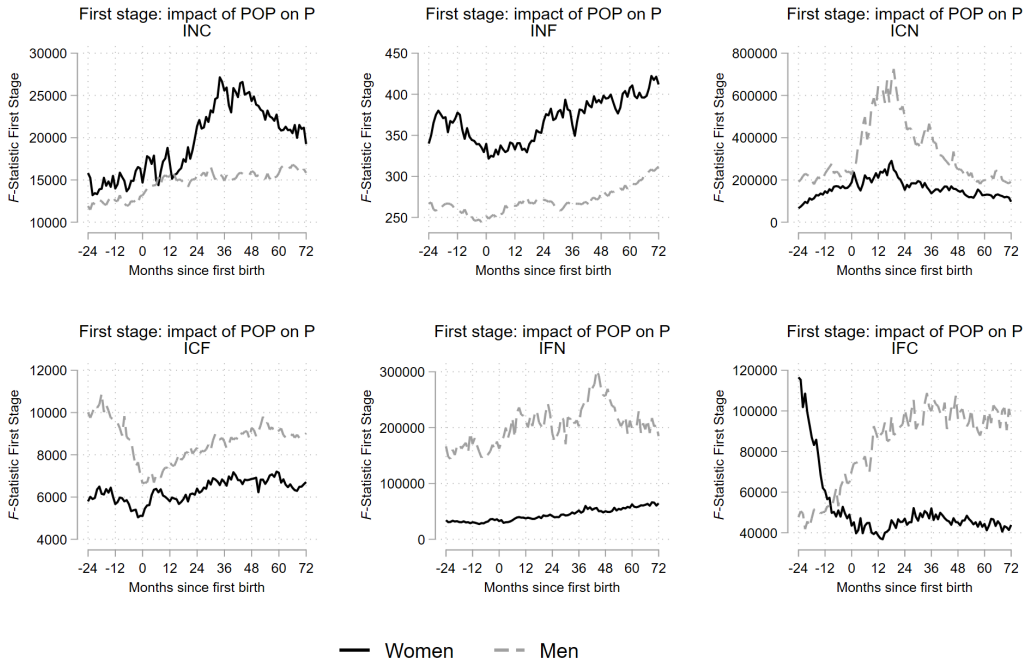
4.1 Instrument relevance

Figure 2 shows the impact of the instrument, i.e. the average working hours of the peers-of-peers, on the instrumented variable which is the average working hours of the peers. Subfigure 2a shows the impact in parameter estimates in levels, whereas subfigure 2b shows the F-Statistic of the test whether the coefficient of the instrument equals 0. We run a separate regression for each month since first birth by sex group and by peers-of-peers dimension. The information in this figure is important to evaluate the first stage and relevance condition of our IV strategy.

Figure 2: Impact of average hours of peers-of-peers (POP) on average hours of peers (P), First stage coefficients and F-Statistics



(a) First stage coefficients, with 95% confidence interval



(b) First stage F-Statistic

Notes. Analysis of the relevance condition (equation 2). Separate regressions by peers-of-peers network layer, by sex group, and by month since birth. The F-statistic is based on the test that the coefficient of the instrument is equal to 0. Balanced panel, with sample size: 315,594 women and 267,879 men.

Figure 2 shows that the relevance condition is satisfied for both men and women in all six dimensions of peers-of-peers, as F is well above the threshold of 104.7 for a single instrument IV model as identified and set by Lee et al. (2022). The instrument based on family peers-of-peers (INF and ICF) have the weakest correlation with the instrumented variable. Overall, for the six sets of indirect links based on network-by-network interactions, the coefficients indicate a strong correlation between the instrumented variable and the instrument. For example, for the INC subgraph, if the average working hours of the colleagues of the focal individual's neighbours increase by one, the focal individual's neighbours experience an increase of about .75 hours for women and .8 hours for men, in month 72 after the focal individual's first birth.[5] The reduction in coefficients over time since first birth is caused by the within variation in peers' working hours as this variable is time-varying whereas the peers-of-peers hours variable is time-constant. The majority of this variation occurs in the period where the peers could become a parent for the first time, which occurs between 24 and 12 months before the focal individual gives birth.

4.2 Instrument exogeneity

The validity of our IV approach relies on the exogeneity assumption. The exclusion restriction is that the working hours of peers-of-peers affect the focal individual's working hours not directly but only indirectly through the focal individual's peers. In this regard, the average working hours of the peers-of-peers should be uncorrelated to unobserved variables that affect the individual's working hours.

In our analysis, we analyse the peer effect controlling for many observables and including several fixed effects. We include the individual IV, which represents the hours worked of the peers of an individual where the network layer of these peers are defined as the distance-two layer through which peers-of-peers are defined. This variable captures any unobserved correlation between the individual's network layer and the peer's network layer. For example, for the analysis of neighbour peer effects using the working hours of the colleagues of the individual's neighbours as the instrument, controlling for individuals' colleagues' average working hours controls for common unobservables that affect the working hours of the individual's colleagues and the colleagues of the individual's neighbours. In addition, reverse causality issues are taken care of by (i) ensuring that peers become a

[5]Instrument monotonicity is satisfied if the instrument affects the instrumented variable in a similar direction for different subgroups of the population. Figures A1 to A4 in Appendix A show instrument monotonicity, as we find similar first-stage results for the subgroups of the population that vary by gender group and educational attainment group.

parent at least one year before the individual and peers-of-peers become a parent at least one year before peers, and (ii) applying the IV approach where the instrument is a time constant variable measured 12 months after the birth of each peer-of-peer's first child.

A common strategy to evaluate the exogeneity condition is to assess the correlation between the instrument and observable individual characteristics. The underlying idea is that if the instrument is uncorrelated to observed characteristics, it is also uncorrelated to unobserved characteristics. We apply this test at the level at which the instrument is computed, i.e. by sex group and education category. Table 3 shows that the majority of individual characteristics is not statistically significantly correlated to the instrument, or only weakly in economic terms as compared to the sample means. In addition, the F-Statistics that measure the joint significance of the individuals' and individuals' partners' characteristics are relatively low, for example as compared to the F-Statistics provided in Figure 2. We control for these observed characteristics in our empirical analyses.

Table 3: Regression of instrument on control variables

	(1) INC	(2) INF	(3) ICN	(4) ICF	(5) IFN	(6) IFC
Panel A: Low/average educated men						
>30 and ≤ 35 year	-0.0088	0.0463	0.2166**	-0.0970	0.0828	0.0713
	(0.1561)	(0.2434)	(0.1055)	(0.1370)	(0.1614)	(0.1213)
>35 and ≤ 40 year	-0.4671**	-0.6335	0.3608**	-0.1899	0.3598*	-0.0067
	(0.1955)	(0.4490)	(0.1544)	(0.2197)	(0.1910)	(0.1292)
>40 and ≤ 45 year	0.0282	-1.2082*	0.3878	0.1078	0.3749*	-0.0433
	(0.3580)	(0.6226)	(0.2907)	(0.3546)	(0.2075)	(0.1638)
Born in the Netherlands	3.3843***	3.4998***	1.3638***	0.6710***	0.3435**	-0.0474
	(0.3879)	(0.6734)	(0.1604)	(0.1763)	(0.1448)	(0.1022)
Permanent contract	0.7510***	0.3159	0.3131**	-0.1150	0.2087*	0.1069
	(0.1619)	(0.2905)	(0.1357)	(0.1649)	(0.1214)	(0.1016)
Regular employee	0.3760*	0.8706*	1.1208***	2.0849***	0.2008	0.2767
	(0.2224)	(0.4875)	(0.2459)	(0.3367)	(0.2349)	(0.1779)
Full-time employed (≥ 35 hours)	0.0491	0.1809	0.4624**	0.6479*	0.2861	0.2482
	(0.2589)	(0.3910)	(0.1739)	(0.3605)	(0.1737)	(0.1591)
Observations	140,783	140,783	140,783	140,783	140,783	140,783
F-Statistic	37.28	31.59	139.2	46.72	9.416	15.96
Panel B: High educated men						
>30 and ≤ 35 year	-0.0386	0.0972	-0.0056	0.0123	0.0086	0.0190
	(0.1140)	(0.2591)	(0.0710)	(0.1524)	(0.1024)	(0.0832)
>35 and ≤ 40 year	-0.2461	0.0579	0.0385	0.1794	0.0236	-0.1363
	(0.1655)	(0.3752)	(0.1224)	(0.1893)	(0.1461)	(0.1077)
>40 and ≤ 45 year	-0.3435	-0.2330	-0.0095	0.5726*	-0.2063	0.0417
	(0.2586)	(0.4384)	(0.1724)	(0.3101)	(0.2306)	(0.1430)
Born in the Netherlands	0.6819***	0.4067	0.3093**	0.0287	-0.0150	0.1125
	(0.1369)	(0.5243)	(0.1302)	(0.2153)	(0.1191)	(0.0854)
Permanent contract	0.1307	0.0210	0.1596	0.6096***	-0.1734*	-0.0694
	(0.0887)	(0.2255)	(0.1228)	(0.1675)	(0.0961)	(0.0571)

Regular employee	-0.1652	-0.0478	0.3478**	-0.3186	-0.0097	0.0312
	(0.2154)	(0.5204)	(0.1599)	(0.3177)	(0.2549)	(0.1131)
Full-time employed ($\geq$ 35 hours)	0.2220*	-0.4166	0.1327	0.5722**	0.2292	0.2425
	(0.1156)	(0.4189)	(0.2238)	(0.2429)	(0.1718)	(0.1573)
Observations	99,616	99,616	99,616	99,616	99,616	99,616
F-Statistic	29.92	9.652	14.89	16.74	7.624	8.055
Panel C: Low/average educated women						
$>$ 30 and $\leq$ 35 year	0.0211	0.0730	0.0419	0.0437	0.2904**	0.0982
	(0.1562)	(0.1764)	(0.0780)	(0.1643)	(0.1081)	(0.1032)
$>$ 35 and $\leq$ 40 year	0.4518	-0.5309	0.0158	-0.2082	0.2021	-0.1494
	(0.2779)	(0.4215)	(0.1287)	(0.2342)	(0.1918)	(0.1225)
$>$ 40 and $\leq$ 45 year	-0.6524*	0.0476	-0.1538	-0.5155	-0.1754	-0.2753
	(0.3740)	(0.5983)	(0.1475)	(0.4075)	(0.2336)	(0.1837)
Born in the Netherlands	1.4980***	0.9643***	0.5479***	0.1520	0.0229	0.1074
	(0.2419)	(0.3394)	(0.1137)	(0.1410)	(0.1317)	(0.0728)
Permanent contract	-0.0495	-0.0420	0.0213	0.0784	-0.0836	0.1400*
	(0.1478)	(0.1670)	(0.0748)	(0.1216)	(0.1074)	(0.0737)
Regular employee	0.7151***	0.2874	0.7662***	0.2414	0.1829	0.1126
	(0.1629)	(0.2509)	(0.1000)	(0.2313)	(0.1636)	(0.1267)
Full-time employed ($\geq$ 35 hours)	-0.4387***	0.4692	0.0996	0.1404	0.2360**	0.0251
	(0.1150)	(0.2988)	(0.1245)	(0.1453)	(0.1089)	(0.0979)
Observations	155,071	155,071	155,071	155,071	155,071	155,071
F-Statistic	96.01	21.28	49.85	13.85	28.97	18.81
Panel D: High educated women						
$>$ 30 and $\leq$ 35 year	0.4716***	0.2785	0.1765***	0.1287	0.4918***	0.2324***
	(0.0825)	(0.2094)	(0.0575)	(0.1248)	(0.1139)	(0.0740)
$>$ 35 and $\leq$ 40 year	0.6266***	0.4226	0.0396	-0.1850	0.2997	0.2365*
	(0.1503)	(0.3268)	(0.1174)	(0.1868)	(0.2039)	(0.1399)
$>$ 40 and $\leq$ 45 year	0.9399***	0.2290	-0.1530	-0.5425	0.0471	0.0289
	(0.3305)	(0.7723)	(0.3876)	(0.3638)	(0.2694)	(0.1798)
Born in the Netherlands	-0.0414	0.0572	0.1864	-0.1121	0.0403	0.1113
	(0.1167)	(0.3366)	(0.1194)	(0.1851)	(0.1127)	(0.1129)
Permanent contract	-0.1627*	-0.1113	-0.0019	-0.1621	-0.3358***	0.0024
	(0.0923)	(0.1401)	(0.0705)	(0.1536)	(0.1222)	(0.0677)
Regular employee	0.4037**	0.4343	0.4072***	-0.0778	-0.0514	-0.1357
	(0.1811)	(0.3910)	(0.1342)	(0.3739)	(0.1559)	(0.1276)
Full-time employed ($\geq$ 35 hours)	-0.0668	0.0972	0.1580*	0.3023*	-0.0905	0.1187
	(0.0898)	(0.1873)	(0.0780)	(0.1716)	(0.1004)	(0.0879)
Observations	140,234	140,234	140,234	140,234	140,234	140,234
F-Statistic	95.52	18.06	29.17	16.42	21.81	13.59

Notes. Estimates of a regression of the instrument, i.e. the average hours worked of peers-of-peers, on the focal individual's characteristics and the focal individual's partner's characteristics, measured in the twelfth month before the individual became a parent. Each panel and each column gives the parameters of a separate regression. The F-statistic measures the joint significance of the individual characteristics and individuals' partners' characteristics. The reference categories for the variables displayed are: $>$ 20 and $\leq$ 30 year, born outside of the Netherlands, temporary contract, non-regular employee, and part-time employed. Fixed effects included are: month of birth, home location (PES areas), 2-digit sector codes, firm size quantiles and an indicator variable whether the peers-of-peers information is missing or whether an individual characteristic variable is missing. Standard errors are clustered at the PES area level.

Similar to Nicoletti et al. (2018), we acknowledge that our approach cannot overcome the identification issue which involves a situation where a peer-of-peer influences the individual through the individual's peer, but where the peer did not change behaviour in terms of paid working hours. An identification issue thus would occur if results are caused by unobserved shocks that are occurring at the network layer level of peers-of-peers and affect the hours worked of the individual. As we exclude peers-of-peers who are employed at the same firm as the individual or peers-of-peers who live in the same neighbourhood as the individual in all of our analyses, the key mechanism through which this problem could occur is taken care of.

5 Results: Peer effects on fathers and mothers

5.1 Main analysis

Figure 3 shows the impact of the average monthly working hours of the focal individual's peers on the monthly working hours of the focal individual, across the six dimensions of peers-of-peers (separate subfigures), by the month since first birth (x-axis) and by the individual's sex (solid black line for women and dashed grey line for men). Parameter estimates are calculated using a separate regression for each sex group and by month since birth. We are interested in: (i) how strong are peer effects on men, (ii) which peer network is most important for men; and (iii) to what extent this is different compared to peer effects on women.

We control for individual characteristics, the individual's partner characteristics, and include various fixed effects including those for month of birth, PES regional location, and firm sector. In addition, to overcome the endogeneity bias caused by non-random neighbourhood location and non-random employer outcomes, we include the instrument at the individual level. That is, the individual IV, which controls for the average working hours of the individual's peers measured for the twelfth month after each peer became a parent, for the network layer that is used as the network layer of the peers-of-peers. For example, for the analysis of neighbour peer effects through colleagues of the focal individual's neighbours (INC of Figure 3), we also include the average working hours of the focal individual's colleagues. On the y-axis, the peer effect on the individual's working hours is shown, but note the difference in magnitudes on the y-axis across the six network-by-network dimensions.

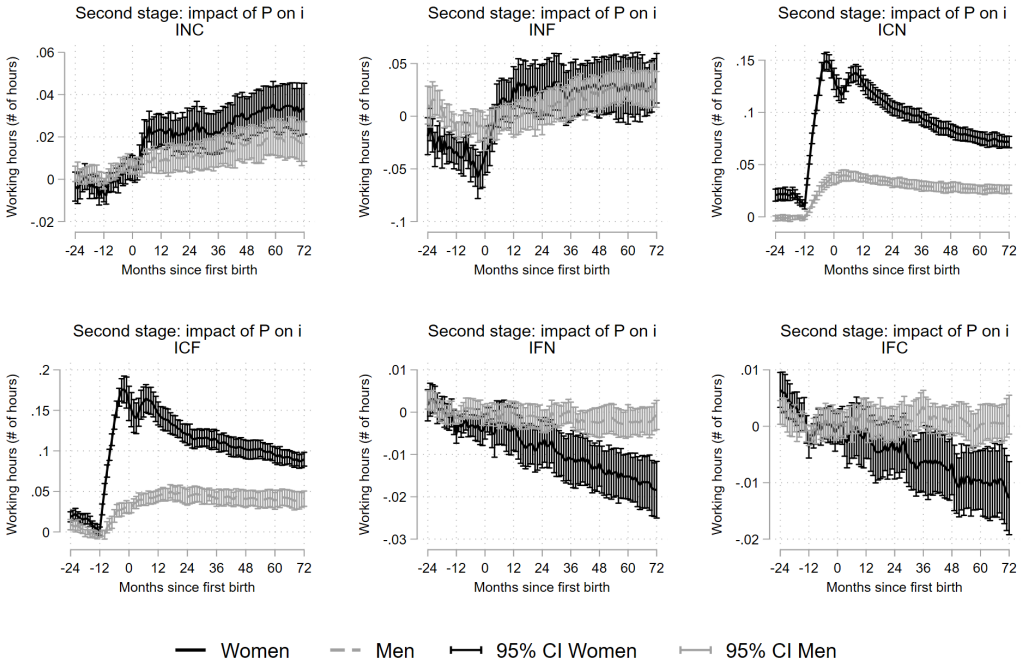
Figure 3 shows statistically significant neighbour peer effects on men identified using the working hours of colleagues of the focal individual's neighbours as instrument (INC). Specifically, the results indicate that a one-hour increase (decrease) in neighbour peers' monthly working hours causes a 0.01 to 0.02 hour (about one minute) increase (decrease) in the individual's monthly working hours. Using the family of the focal individual's neighbours as instrument (INF), we find similar effects on men. In addition, we find larger statistically significant peer effects on fathers from colleagues (ICN and ICF), which range between 0.03 and 0.05 of an hour per month after a one-hour increase in peers' monthly working hours. Importantly, we do not find statistically significant family peer effects on fathers (IFN and IFC). Overall, colleague peer effects of 0.05 of an hour on fathers imply that if colleague peers reduce their labour supply by an eight-hour working day a week, which equals 34.4 working hours per month (eight hours multiplied by 4.3 weeks per month), a focal individual works 1.72 hours per month less.

The results for women are also shown in Figure 3. The results for women show statistically significant peer effects based on neighbour peers (0.02 to 0.03 hours, for INC). The neighbour peer effect on women using the instrument based on the working hours of family of the focal individual's neighbours provides less consistent statistically significant results (INF). Colleague peer effects on women are found to be much larger (0.07 to 0.17, ICN and ICF) than colleague peer effects on men (0.03 to 0.05), and these peer effects appear to peak around the month of birth and gradually decrease over the months since birth. Interestingly, we find a negative family peer effect on women (IFN and IFC), which increases over the time since giving birth up to about -0.02 of an hour. This latter effect suggests some women reduce (increase) their labour supply if they observe their peers to increase (reduce) labour supply.

The closest paper to our study is by Nicoletti et al. (2018), who analyse peer effects on mothers' weekly working hours in two ways. First, they find statistically significant family peer effects ranging between 0.35 and 0.45 in the period from two years up to six years since childbirth, using the weekly hours worked of neighbours of the focal individual's family as instrument. Related to this evidence, we do find a statistically significant family peer effect (IFN - women), although, in contrast, our estimate of the family peer effect is -0.02 by six years after childbirth. The difference in results could be explained by various reasons, including the relatively few family peers observed in our data. Second, Nicoletti et al. (2018) do not find significant neighbour peer effects using the family of the focal individual's neighbours as the instrument. Our results are consistent with this finding (INF - women), as the confidence intervals overlap with the null line. In contrast, we do

statistically significant observe neighbour peer effects on women using colleagues as the distance-two network layer (INC).

Figure 3: IV results - Peer effects on the individual's working hours, Second stage coefficients



Notes. IV analysis coefficient estimates. Separate regressions by peers-of-peers network layer, by sex group, and by month since first birth. Standard errors are clustered by PES region. Balanced panel, with sample size: 315,594 women and 267,879 men.

Other reasons why the results might differ include a different geographic context with different institutions and norms (Norway instead of the Netherlands), a different time period (individuals becoming a parent between 1997 and 2002 instead of between 2014 and 2018) and different working hours data (weekly discrete working hours in four categories instead of monthly continuous working hours as used in this paper). Note, however, that we do not only find a small negative statistically significant family peer effect using neighbours as the distance-two network layer (IFN), but also of about -0.01 of an hour using colleagues as the distance-two network layer (IFC). Hence, the finding of negative family peer effects on mothers' paid working hours is small but arguably robust.

Taken together, we identify statistically significant neighbour peer effects and colleague peer effects on men, while family peer effects unimportant to men. The statistical and economical significance of neighbour peer effects on mothers is comparable to that of neighbour peer effects on fathers. In terms of magnitudes, colleague peer effects are

stronger for women than men. Overall, colleague peer effects are largest, followed by neighbour peer effects, and then family peer effects.

5.2 Drivers of peer effects

We analyse heterogeneity effects in peer effects to show how effects differ by subpopulation, which gives insights in the underlying drivers of peer effects. We analyse neighbour peer effects, colleague peer effects, and family peer effects separately by sex, year since first birth, and subpopulation. The years since first birth range from –2 to 6, with zero not included. Specifically, -2 years since first birth represents 24 months until 13 months before becoming a parent, -1 represents 12 months until 1 month before becoming a parent, and 1 represents the month of birth until 12 months after becoming a parent. Similar periods hold for 2 (months 13 until 24 after becoming a parent), 3 (months 25 until 36), 4 (months 37 until 48), 5 (months 49 until 60) and 6 (months 61 until 72) years since birth. The subpopulations we consider vary by age, educational attainment, whether they are born in the Netherlands, type of contract, full-time/part-time status, firm size, and year of first born; all these characteristics are measured 12 months before the focal individual becomes a parent.

Tables A2 and A3 show the heterogeneity effects in neighbour peer effects. For both men and women, neighbour peer effects are strongest for individuals born in the Netherlands. For men, neighbour peer effects are relatively strong for the low and average educated and not present for the high educated, whereas for women this difference in peer effects by education group is not observed. Overall, there is only limited heterogeneity in neighbour peer effects.

Tables A4 and A5 show the heterogeneity effects in colleague peer effects. While neighbour peer effects were stronger for individuals born in the Netherlands, colleague peer effects are stronger for individuals born outside of the Netherlands. Besides this, colleague peer effects do not differ much by individual characteristic such as age and educational attainment. In contrast, colleague peer effects tend to vary more by job characteristic: colleague peer effects are relatively strong for individuals on a temporary contract, individuals on a part-time contract, and individuals employed at larger firms.

Tables A6 and A7 show that the negative family peer effects on women observed in Figure 3 are driven by individuals aged between 20 and 30 years or 40 and 45 years, individuals who are low-educated, and individuals born in the Netherlands. We find no robust positive family peer effects for male subpopulations and also not for female

subpopulations.[6]

5.3 Robustness checks

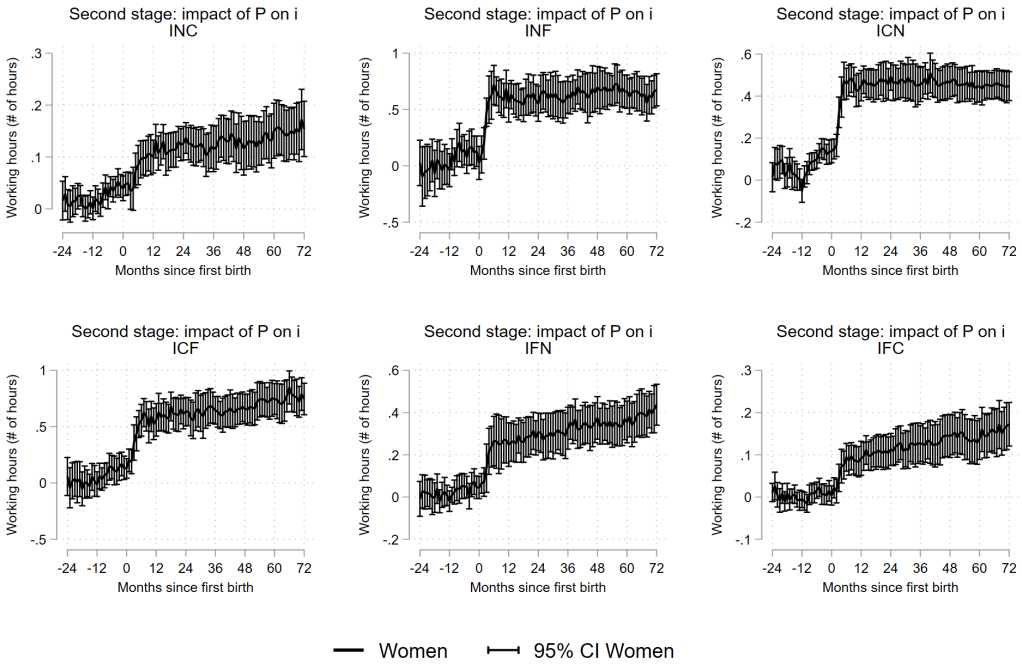
We estimate the neighbour peer effects, the colleague peer effects and the family peer effects using three instead of six separate regression models in which we use two instruments per peer network instead of one instrument per network. A benefit of doing this is increased efficiency of the IV estimator. There are also two individual IVs included in each model. The results are shown in Figure A5, and our conclusions based on the results of our main analysis are robust.

In addition, we assess the importance of missing values because of unobserved working hours information for our results and conclusions. Table 1 shows that we do not observe peers and/or peers-of-peers for a subset of individuals. An important analysis is to examine to what extent these individuals are driving our results. In this robustness check, we depart from Nicoletti et al. (2018) and Nicoletti et al. (2023) and set the key variables to missing for individuals who have missing (peer-of-peer) information. Note that this data manipulation is indeed justified if these individuals have peers who are mismeasured, which seems unlikely given our data and sample selections as discussed in the data section (i.e., full-population monthly data and excluding individuals, peers and peers-of-peers who were observed to be self-employed 12 months before giving birth). Figure 4 shows the results of this robustness check. The first stage of this analysis is provided in Figure A6.

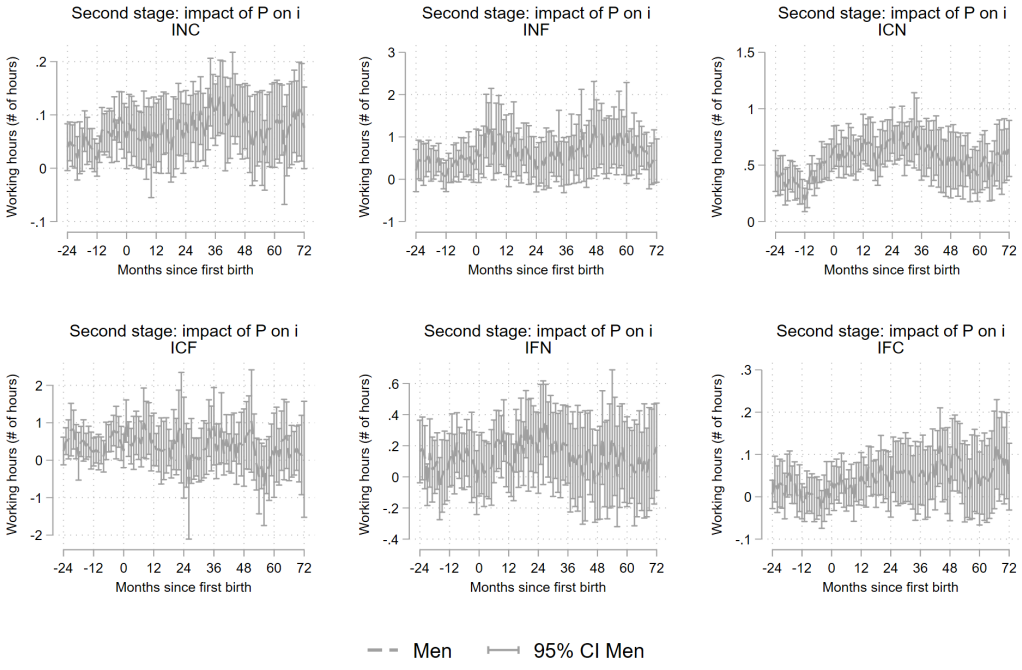
Figure 4 shows much larger point estimates than our main analysis evidence provided in Figure 3. However, consistent with smaller sample sizes, the figure shows a decrease in power of the analysis that widens the confidence intervals as compared to our main analysis evidence, especially for men and analyses in which the family layer is used. Peer effects range between 0 and 1, and these effect sizes are much more in line with the results of Nicoletti et al. (2018). Specifically, the family peer effect on women we find of about 0.25 to 0.45, using the neighbour network layer to operationalise the instrument (IFN), are close to the range of 0.35 to 0.45 in the analysis of Nicoletti et al. (2018). However, positive family peer effects are in contrast with our earlier findings presented in Figure 3 that showed negative family peer effects on women. In addition, we find statistically significant neighbour peer effects on women of around 0.1 to 0.7 (INC and INF) as well as statistically significant colleague peer effects of around 0.5 to 0.7 (ICN and ICF).

[6]See Appendix A.2 for results of dynamic heterogeneity effects in peer effects by educational attainment and for full-time employed workers.

Figure 4: Peer effects excluding zeros for missing key variables, Second stage coefficients



(a) Women



(b) Men

Notes. Sample size by network-by-network dimension in the twelfth month before giving birth, for women: 186,478 (INC), 64,004 (INF), 186,596 (ICN), 49,975 (ICF), 68,888 (IFN), and 47,722 (IFC); for men: 151,705 (INC), 50,291 (INF), 152,362 (ICN), 31,369 (ICF), 56,790 (IFN), and 31,546 (IFC). See Figure 3 for other notes.

For men, the results are less convincing, although peer effects estimates are larger than those in our default models. Specifically, we find weakly significant neighbour peer effects of about 0.05 to 0.1 (INC), and robust colleague peer effects of about 0.5 to 0.75 (ICN). Family peer effects are statistically insignificant in the majority of months since first birth.

Overall we find statistically significant neighbour peer effects and colleague peer effects for both men and women. Consistent with the evidence from our main analysis, colleague peer effects tend to be stronger than neighbour peer effects for men and women. In addition, peer effects on women are more pronounced than peer effects on men.

6 Conclusion

Building on a substantial literature on gender inequalities and peer effects in the labour market, this paper analyses peer effects on individuals' monthly working hours using full-population administrative network data. We examine peer effects from neighbours, colleagues, and family for individuals who become a parent between 2014 and 2018 for a period of six years after childbirth. Our analysis is the first to show peer effects on fathers' paid working hours. In addition, a methodological contribution is to integrate three network layers in one paper, for both fathers and mothers, which allows us to evaluate which of the network layers is most relevant to peer effects on working hours.

Our main findings show statistically significant long-term positive neighbour peer effects and colleague peer effects on fathers and mothers. We find that peer effects from colleagues are strongest, and equal to about 30 minutes for fathers and 90 minutes for mothers after a ten-hour change in average working hours of the colleague peers. Similarly, a ten-hour change in neighbour peers' working hours leads to a change of 20 to 30 minutes in the working hours of the focal individual, and neighbour peer effects are found to be comparable between mothers and fathers. Overall, the results of our analysis suggest that the colleague network matters most for fathers' and mothers' labour supply.

We find statistically significant family peer effects, but only on mothers with low or average educational attainment and those who are born in the Netherlands, and these peer effects are found to be negative. The latter result suggests that the information mechanism is important, as the individuals do not imitate and do not conform, and update their beliefs following outcomes of family peers potentially on what does not work.

Our analysis of heterogeneity effects also gives other interesting insights in the underlying drivers of peer effects. We provide evidence that neighbour peer effects are stronger

for male individuals with low to average educational attainment. Another important observation is that positive neighbour peer effects are more pronounced for individuals born outside of the Netherlands whereas positive colleague peer effects are more pronounced for individuals born in the Netherlands. This evidence suggests that these subpopulations tend to conform and imitate their peers more. While individual characteristics matter most and job characteristics matter least for neighbour peer effects, the opposite is found for colleague peer effects. Specifically, colleague peer effects are positive and more pronounced for individuals in non-standard employment and individuals employed at larger firms. Importantly, the heterogeneity analysis by age suggests that the stronger colleague peer effects for individuals in non-standard employment are not explained by the age of these individuals. Hence, it suggests that individuals in part-time employment or those who are employed at larger firms are more susceptible to change.

In terms of governmental policies, and firm diversity and inclusion strategies, our research emphasises the role of social multiplier effects in eliciting change in terms of attitudes on the number of paid working hours. We show that peer effects on working hours from colleagues are stronger than peer effects from neighbours and family. Hence, it is clear that there is an important role for firms in narrowing gender gaps in paid working hours to reduce the gender earnings gap. Promising avenues for future research involve the analysis of peer effects on other labour market outcomes that approximate job flexibility, that study other countries reflecting on cross-country differences in institutions (e.g., laws on the amount and duration of unemployment benefits and maternity/parental leave) and norms (e.g., norms driving a tendency to work full time or part time), and that study other time periods considering changes in gender role attitudes over the last decades.

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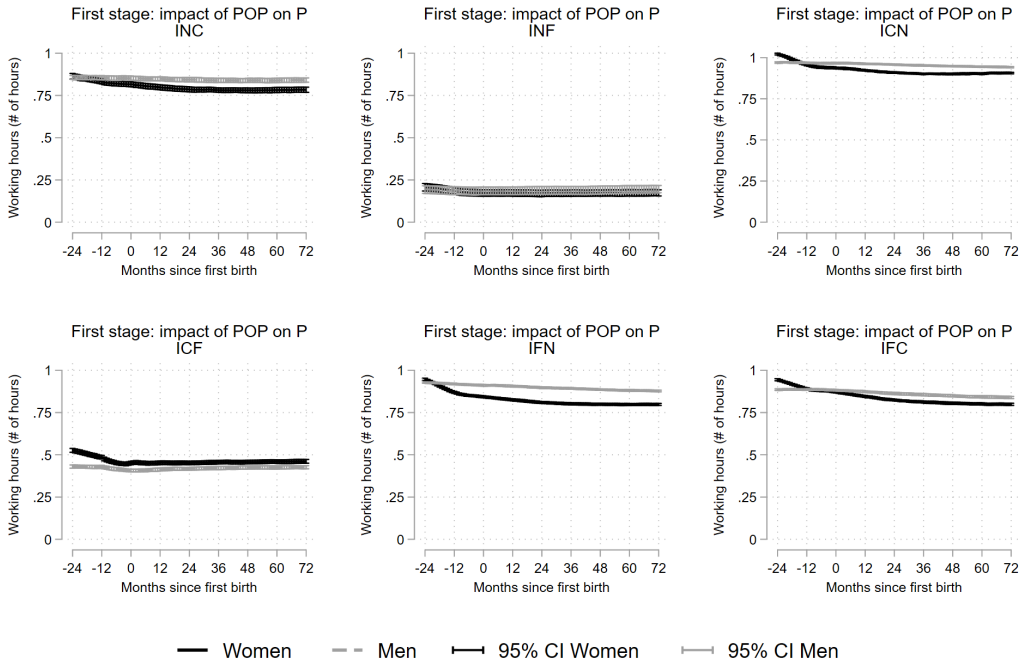
A Appendix: Additional analyses

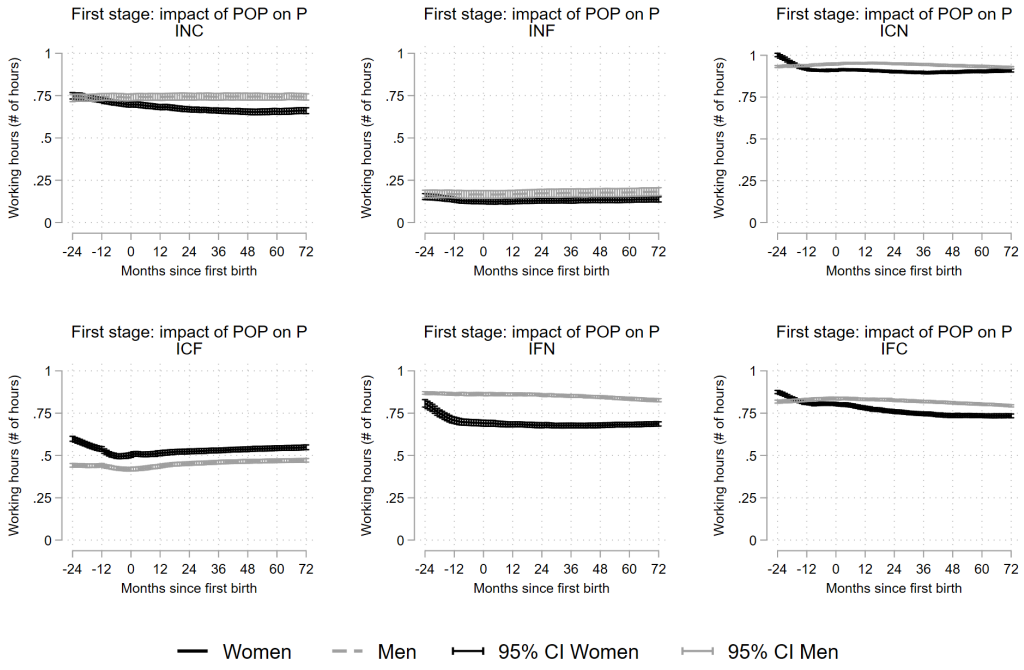
A.1 Additional figures and tables

Figure A1: Sample of high-educated individuals, First stage coefficients



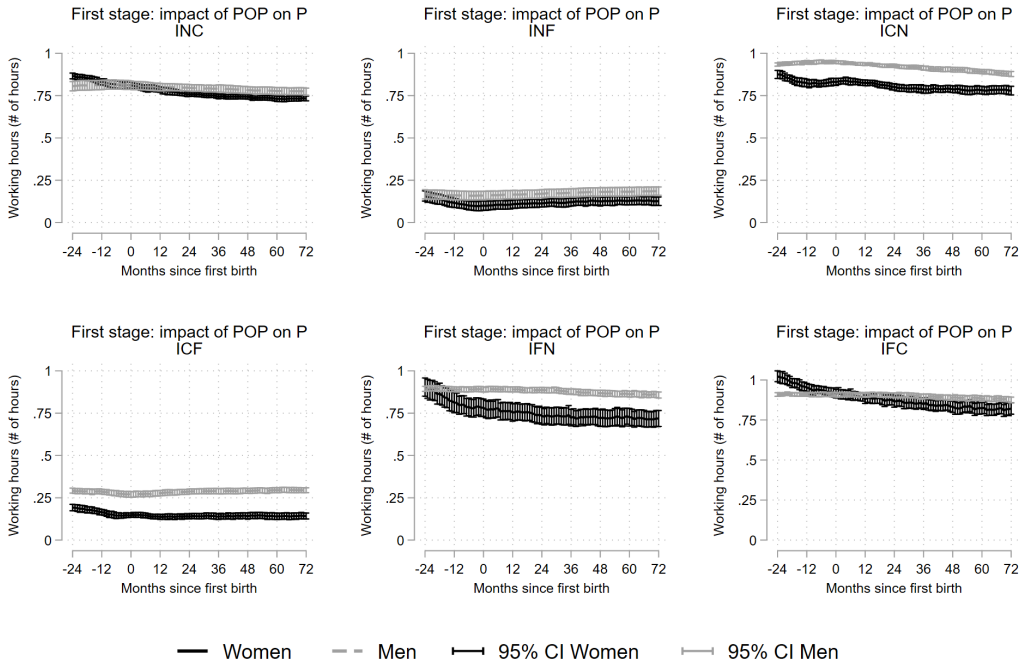
Notes. Impact of average hours of peers-of-peers (POP) on average hours of peers (P). Analysis of the relevance condition (equation 2). Separate regressions by sex group, by peer-of-peers network layers, and by month since birth. Sample size: 140,234 women and 99,616 men.

Figure A2: Sample of low-educated individuals and average-educated individuals, First stage coefficients



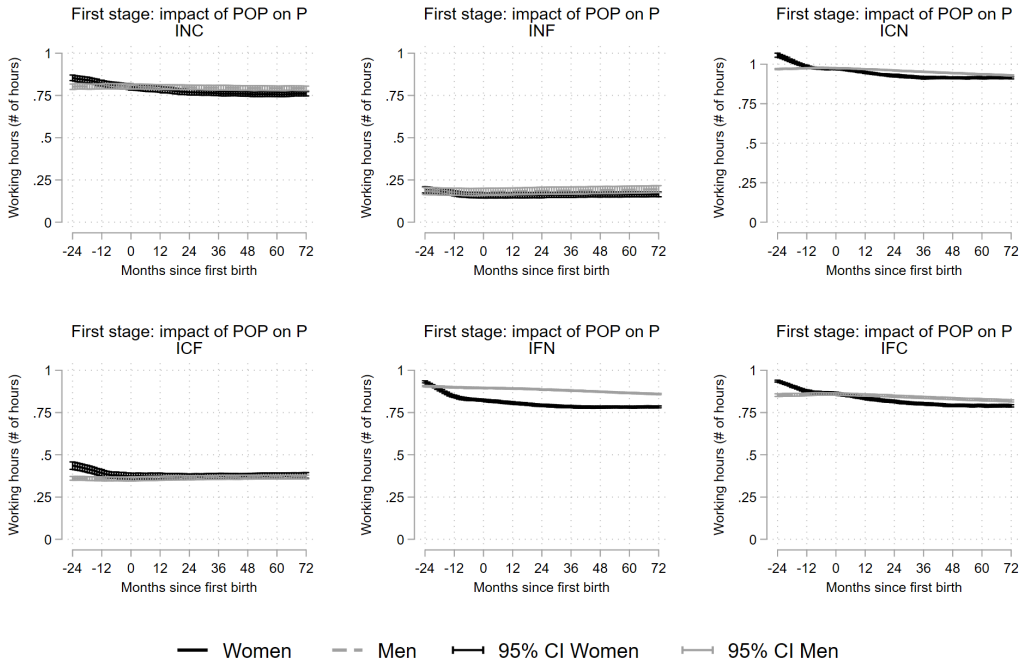
Notes. Impact of average hours of peers-of-peers (POP) on average hours of peers (P). Analysis of the relevance condition (equation 2). Separate regressions by sex group, by peer-of-peers network layers, and by month since birth. Sample size: 155,071 women and 140,783 men.

Figure A3: Sample of individuals with missing educational information, First stage coefficients



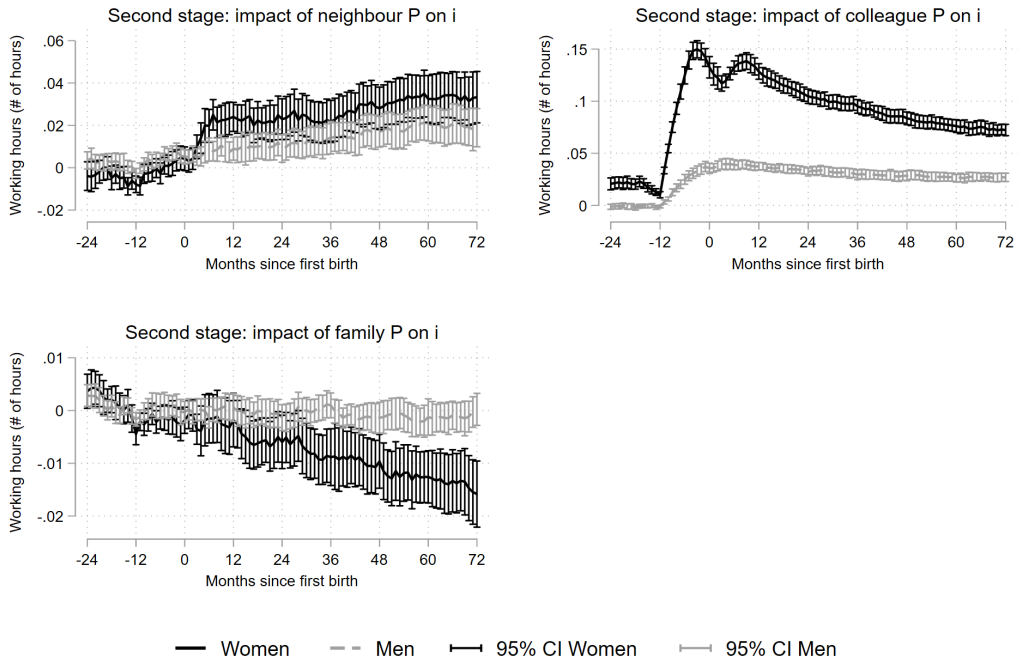
Notes. Impact of average hours of peers-of-peers (POP) on average hours of peers (P). Analysis of the relevance condition (equation 2). Separate regressions by sex group, by peer-of-peers network layers, and by month since birth. Sample size: 20,286 women and 27,480 men.

Figure A4: Sample of full-time employed individuals, First stage coefficients



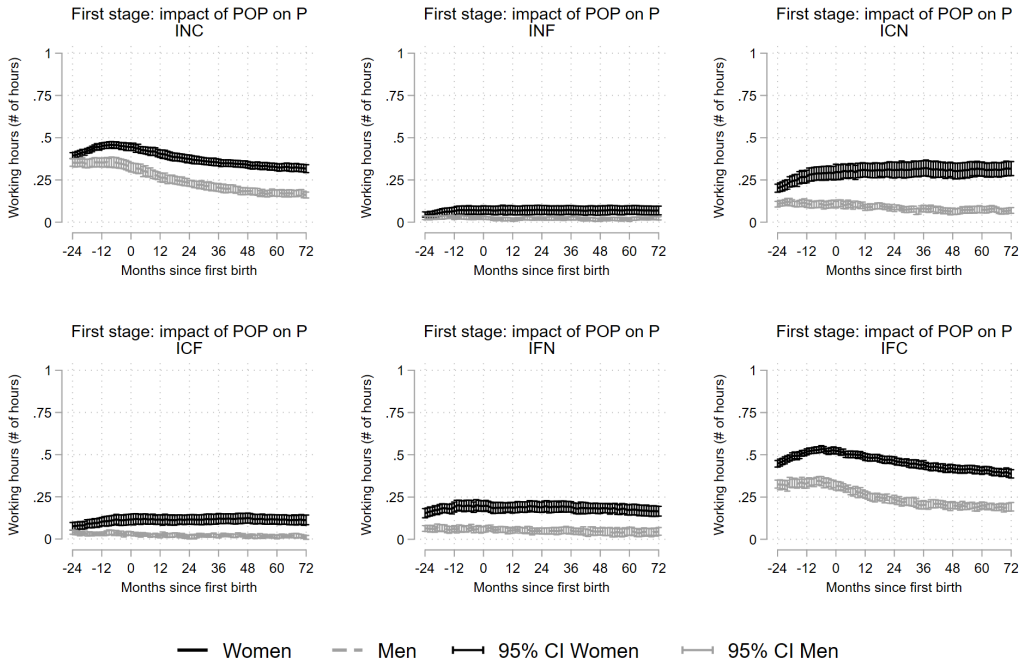
Notes. Impact of average hours of peers-of-peers (POP) on average hours of peers (P). Analysis of the relevance condition (equation 2). Separate regressions by sex group, by peer-of-peers network layers, and by month since birth. Sample size: 129,518 women and 201,856 men.

Figure A5: IV results - Using two instruments per peer network, Second stage coefficients



Notes. See Figure 3.

Figure A6: Peer effects excluding zeros for missing key variables, First stage coefficients



Notes. Impact of average hours of peers-of-peers (POP) on average hours of peers (P). Analysis of the relevance condition (equation 2). Separate regressions by sex group, by peer-of-peers network layers, and by month since birth. See Figure 4 for other notes.

Table A1: Regression of instrument on control variables for individuals without education observed

	(1)	(2)	(3)	(4)	(5)	(6)
	INC	INF	ICN	ICF	IFN	IFC
Panel A: Unobserved education men						
$>$ 30 and $\leq$ 35 year	0.2653	0.6156	0.6995**	0.0448	-0.0066	-0.0349
	(0.3072)	(0.6807)	(0.2786)	(0.3180)	(0.1273)	(0.0623)
$>$ 35 and $\leq$ 40 year	0.0559	0.4892	0.6773	0.1500	0.0648	-0.0104
	(0.3687)	(0.7576)	(0.4398)	(0.3586)	(0.1868)	(0.0533)
$>$ 40 and $\leq$ 45 year	-0.3130	0.2951	0.9387	-0.2204	0.0801	-0.0305
	(0.3958)	(0.9841)	(0.6375)	(0.6016)	(0.2744)	(0.0783)
Born in the Netherlands	1.2409***	-0.1065	0.9687**	0.2811	-0.0881	0.0687
	(0.2516)	(0.6712)	(0.3558)	(0.3715)	(0.1771)	(0.0435)
Permanent contract	-0.2507	1.1501**	0.3676	0.6721***	0.2501	-0.0393
	(0.2295)	(0.4931)	(0.3343)	(0.2443)	(0.1953)	(0.0489)
Regular employee	0.1498	-1.3975	-0.1304	-2.7663***	-0.3897	-0.0991
	(0.4040)	(1.0197)	(0.5719)	(0.8608)	(0.2754)	(0.0636)
Full-time employed ($\geq$ 35 hours)	0.4991	0.1078	-0.2930	1.0486	0.2660	-0.1014
	(0.3303)	(0.7466)	(0.4951)	(0.8708)	(0.2132)	(0.1048)
Observations	27,480	27,480	27,480	27,480	27,480	27,480
F-Statistic	8.518	4.128	9.547	11.12	5.959	4.297
Panel B: Unobserved education women						
$>$ 30 and $\leq$ 35 year	2.4621***	0.2757	0.7989**	0.3847**	0.1322	-0.0131
	(0.5762)	(0.3442)	(0.3607)	(0.1727)	(0.1032)	(0.0441)
$>$ 35 and $\leq$ 40 year	2.9531***	0.4495	0.6175	0.7337**	0.1495	-0.0738
	(0.9217)	(0.4285)	(0.4553)	(0.3449)	(0.1688)	(0.0854)
$>$ 40 and $\leq$ 45 year	2.4724**	-0.8629	-0.1478	-0.3255	0.0607	0.0170
	(1.0364)	(0.6475)	(0.6635)	(0.4764)	(0.2569)	(0.0520)
Born in the Netherlands	-2.4514***	-0.2726	1.1860***	-0.0073	0.1033	-0.0915*
	(0.5898)	(0.5005)	(0.4126)	(0.3558)	(0.1752)	(0.0534)
Permanent contract	-0.2395	-0.5338	0.4191	0.3242	0.0473	0.0836
	(0.5826)	(0.3873)	(0.4213)	(0.2294)	(0.1706)	(0.0889)
Regular employee	0.3656	1.1552*	2.2413**	-0.3973	0.0361	-0.0154
	(1.1882)	(0.6296)	(1.0729)	(0.2967)	(0.2880)	(0.0994)
Full-time employed ($\geq$ 35 hours)	-0.5562	-0.5458	0.4863	-0.3790	0.0666	-0.0439
	(0.7548)	(0.4359)	(0.4713)	(0.4099)	(0.2202)	(0.1011)
Observations	20,286	20,286	20,286	20,286	20,286	20,286
F-Statistic	58.79	11.89	15.56	6.433	5.956	7.143

Notes. See Table 3.

Table A2: Heterogeneity effects in neighbour peer effects (INC)

	Men								Women							
	Years since first birth								Years since first birth							
	-2	-1	1	2	3	4	5	6	-2	-1	1	2	3	4	5	6
$>$ 20 and $\leq$ 30 year	0.001	0.005**	0.007**	0.010**	0.014***	0.020***	0.024***	0.026***	-0.004	-0.004*	0.014***	0.025***	0.026***	0.032***	0.038***	0.039***
	(0.003)	(0.003)	(0.003)	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)	(0.004)	(0.002)	(0.005)	(0.006)	(0.007)	(0.007)	(0.007)	(0.008)
$>$ 30 and $\leq$ 35 year	0.004**	0.006***	0.011***	0.017***	0.019***	0.021***	0.022***	0.021***	-0.002	0.010***	0.024***	0.022***	0.020***	0.031***	0.035***	0.038***
	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.003)	(0.005)	(0.006)	(0.007)	(0.008)	(0.009)	(0.011)
$>$ 35 and $\leq$ 40 year	-0.004	-0.002	-0.001	-0.006	-0.007	-0.007	-0.005	-0.005	0.006	0.005	0.017**	0.016**	0.022**	0.007	0.004	0.002
	(0.004)	(0.003)	(0.004)	(0.006)	(0.009)	(0.010)	(0.010)	(0.009)	(0.006)	(0.006)	(0.007)	(0.008)	(0.010)	(0.010)	(0.011)	(0.010)
$>$ 40 and $\leq$ 45 year	0.003	-0.002	0.009	0.006	-0.001	-0.001	0.011	0.020	-0.004	-0.006	0.018	0.002	0.023	0.008	0.018	-0.002
	(0.007)	(0.005)	(0.012)	(0.012)	(0.010)	(0.010)	(0.012)	(0.013)	(0.017)	(0.013)	(0.023)	(0.022)	(0.020)	(0.021)	(0.025)	(0.026)
Low/average educated	0.004	0.006**	0.012***	0.024***	0.026***	0.035***	0.036***	0.039***	0.000	0.007**	0.024***	0.032***	0.036***	0.039***	0.043***	0.042***
	(0.002)	(0.003)	(0.003)	(0.004)	(0.005)	(0.006)	(0.007)	(0.007)	(0.004)	(0.004)	(0.005)	(0.007)	(0.009)	(0.009)	(0.008)	(0.008)
High educated	0.000	0.004*	0.005	0.003	0.006	0.005	0.008*	0.007	0.000	-0.001	0.013**	0.023***	0.025***	0.033***	0.037***	0.044***
	(0.003)	(0.002)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.003)	(0.002)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)
Unobserved education	0.001	0.002	0.003	-0.003	-0.004	-0.005	0.001	0.001	0.002	0.007*	0.011	0.004	-0.002	-0.003	0.003	-0.004
	(0.003)	(0.002)	(0.004)	(0.006)	(0.007)	(0.006)	(0.007)	(0.007)	(0.004)	(0.004)	(0.008)	(0.008)	(0.010)	(0.008)	(0.010)	(0.010)
Not born in NL	0.000	0.003	-0.005	-0.014*	-0.016*	-0.010	-0.008	-0.009	0.006	0.004	0.012	0.006	0.005	0.005	0.015*	0.009
	(0.005)	(0.003)	(0.004)	(0.007)	(0.009)	(0.009)	(0.011)	(0.011)	(0.006)	(0.005)	(0.007)	(0.010)	(0.012)	(0.010)	(0.009)	(0.010)
Born in NL	0.003**	0.005***	0.010***	0.015***	0.017***	0.020***	0.023***	0.023***	-0.002	0.001	0.017***	0.027***	0.029***	0.033***	0.037***	0.039***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.002)	(0.002)	(0.003)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
Temporary contract	0.000	0.004	0.003	0.002	0.004	0.007	0.008	0.010	-0.013***	-0.003	0.011	0.019**	0.022***	0.029***	0.039***	0.038***
	(0.004)	(0.003)	(0.004)	(0.006)	(0.007)	(0.008)	(0.009)	(0.009)	(0.004)	(0.005)	(0.007)	(0.008)	(0.008)	(0.010)	(0.010)	(0.011)
Permanent contract	0.000	0.003***	0.009***	0.013***	0.015***	0.017***	0.022***	0.022***	-0.004*	0.000	0.020***	0.024***	0.024***	0.027***	0.029***	0.033***
	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.002)	(0.002)	(0.004)	(0.005)	(0.006)	(0.005)	(0.006)	(0.006)
Part-time employed	0.015*	0.016**	0.023**	0.030**	0.036***	0.044***	0.049***	0.048***	-0.010***	-0.002	0.014***	0.025***	0.032***	0.036***	0.042***	0.044***
	(0.007)	(0.007)	(0.009)	(0.013)	(0.012)	(0.013)	(0.014)	(0.015)	(0.003)	(0.003)	(0.004)	(0.006)	(0.006)	(0.008)	(0.009)	(0.009)
Full-time employed	-0.002	0.002	0.006***	0.007**	0.008**	0.010***	0.013***	0.014***	-0.001	0.005*	0.022***	0.022***	0.016**	0.021***	0.025***	0.028***
	(0.002)	(0.001)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.002)	(0.002)	(0.005)	(0.006)	(0.007)	(0.007)	(0.007)	(0.009)
Q1 of firm size	-0.004	0.003	0.008*	0.014*	0.023**	0.025***	0.019**	0.024***	-0.005	0.005	0.023*	0.023*	0.023*	0.034**	0.043***	0.059***
	(0.004)	(0.004)	(0.004)	(0.007)	(0.009)	(0.009)	(0.008)	(0.008)	(0.009)	(0.009)	(0.012)	(0.013)	(0.013)	(0.014)	(0.014)	(0.015)
Q2 of firm size	0.002	0.002	0.001	0.009	0.004	0.005	0.014	0.013	-0.010	0.003	0.007	0.024**	0.028***	0.030***	0.035***	0.024
	(0.003)	(0.003)	(0.004)	(0.006)	(0.007)	(0.007)	(0.009)	(0.010)	(0.006)	(0.006)	(0.007)	(0.010)	(0.010)	(0.010)	(0.012)	(0.017)
Q3 of firm size	0.001	0.007***	0.010***	0.012**	0.009	0.012	0.013	0.014*	0.001	0.009**	0.033***	0.037***	0.034***	0.029**	0.024*	0.032**
	(0.004)	(0.002)	(0.004)	(0.005)	(0.007)	(0.007)	(0.008)	(0.008)	(0.004)	(0.004)	(0.006)	(0.008)	(0.011)	(0.012)	(0.012)	(0.012)
Q4 of firm size	0.002	0.010***	0.016***	0.017***	0.016*	0.022**	0.032***	0.033***	-0.011*	-0.005	0.016***	0.015**	0.011	0.021**	0.029***	0.029***
	(0.004)	(0.004)	(0.005)	(0.006)	(0.009)	(0.010)	(0.009)	(0.010)	(0.006)	(0.004)	(0.005)	(0.006)	(0.007)	(0.008)	(0.009)	(0.009)
Q5 of firm size	0.002	0.006*	0.012***	0.005	0.009	0.010	0.012	0.010	0.000	0.002	0.015*	0.024**	0.027**	0.032***	0.038***	0.039***
	(0.004)	(0.003)	(0.004)	(0.007)	(0.008)	(0.009)	(0.009)	(0.009)	(0.004)	(0.004)	(0.007)	(0.010)	(0.010)	(0.010)	(0.009)	(0.010)
First-born in 2014	-0.005	0.006	0.010**	0.011**	0.010*	0.016**	0.021***	0.022***	-0.005	-0.003	0.012	0.013	0.017	0.032***	0.034***	0.038***
	(0.003)	(0.003)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.006)	(0.004)	(0.004)	(0.008)	(0.009)	(0.010)	(0.010)	(0.010)	(0.009)
First-born in 2015	0.001	0.001	0.006*	0.010*	0.015**	0.016**	0.023***	0.026***	-0.003	0.003	0.015**	0.029***	0.031***	0.036***	0.042***	0.042***
	(0.003)	(0.003)	(0.003)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)	(0.006)	(0.004)	(0.006)	(0.007)	(0.008)	(0.007)	(0.008)	(0.009)
First-born in 2016	0.002	0.004	0.013***	0.014**	0.011*	0.008	0.002	0.004	-0.004	-0.006	0.016**	0.021**	0.023**	0.018*	0.020**	0.021**
	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.004)	(0.005)	(0.007)	(0.008)	(0.009)	(0.010)	(0.008)	(0.010)
First-born in 2017	0.007	0.004	0.003	0.010*	0.011*	0.021***	0.027***	0.024**	0.000	0.003	0.012*	0.018**	0.019**	0.029***	0.032***	0.032***
	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)	(0.007)	(0.008)	(0.010)	(0.005)	(0.003)	(0.006)	(0.007)	(0.008)	(0.010)	(0.011)	(0.010)
First-born in 2018	0.004	0.006	0.003	0.003	0.010*	0.009	0.013*	0.012*	-0.002	0.004	0.032***	0.030***	0.025**	0.020*	0.034***	0.034***
	(0.005)	(0.004)	(0.006)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)	(0.006)	(0.005)	(0.007)	(0.007)	(0.010)	(0.010)	(0.010)	(0.010)

Notes. IV analysis second-stage coefficient estimates. Peer effects are analysed separately by sex group, year since first birth, and individual characteristic. Each cell represents a separate regression. The time dimension spans from –2 to 6 years (excluding zero), where –2 and –1 refer to the 24–13 and 12–1 months preceding childbirth, respectively. Value 1 refers to the month of birth until 12 months after. Values 2 to 6 denote successive 12-month intervals post-birth. Subpopulations, all measured 12 months before childbirth, are defined by age, education, born in the Netherlands (NL), contract type, employment status, firm size in quantiles (Q), and birth cohort. Standard errors are clustered by PES region.

Table A3: Heterogeneity effects in neighbour peer effects (INF)

	Men								Women							
	Years since first birth								Years since first birth							
	-2	-1	1	2	3	4	5	6	-2	-1	1	2	3	4	5	6
$>$ 20 and $\leq$ 30 year	0.008	-0.014*	-0.007	0.006	0.012	0.024*	0.027**	0.033**	-0.023**	-0.036***	0.003	0.018	0.016	0.017	0.024	0.029*
	(0.007)	(0.007)	(0.010)	(0.009)	(0.012)	(0.014)	(0.012)	(0.013)	(0.008)	(0.010)	(0.012)	(0.014)	(0.016)	(0.015)	(0.017)	(0.016)
$>$ 30 and $\leq$ 35 year	0.012*	0.006	0.000	0.003	0.017	0.016	0.024**	0.014	-0.016*	-0.024**	0.014	0.035**	0.039**	0.051***	0.044***	0.032*
	(0.006)	(0.004)	(0.009)	(0.010)	(0.011)	(0.011)	(0.011)	(0.012)	(0.009)	(0.012)	(0.017)	(0.017)	(0.017)	(0.017)	(0.016)	(0.017)
$>$ 35 and $\leq$ 40 year	-0.006	-0.011	-0.010	0.002	0.010	0.025*	0.032**	0.040***	-0.018	-0.069***	-0.022	0.073**	0.060	0.027	-0.009	0.030
	(0.011)	(0.010)	(0.013)	(0.014)	(0.014)	(0.013)	(0.013)	(0.013)	(0.019)	(0.020)	(0.023)	(0.033)	(0.036)	(0.041)	(0.032)	(0.023)
$>$ 40 and $\leq$ 45 year	-0.019	-0.022	0.007	-0.005	0.019	0.052	0.091***	0.088***	-0.021	-0.063	-0.029	0.028	0.059	0.061	0.177*	0.114
	(0.022)	(0.020)	(0.027)	(0.031)	(0.030)	(0.034)	(0.031)	(0.029)	(0.057)	(0.050)	(0.075)	(0.059)	(0.064)	(0.080)	(0.103)	(0.117)
Low/average educated	0.007	-0.003	0.008	0.020*	0.025*	0.037***	0.038***	0.040***	-0.017	-0.029**	-0.006	0.024	0.028	0.022	0.028	0.027*
	(0.007)	(0.006)	(0.009)	(0.012)	(0.013)	(0.014)	(0.012)	(0.014)	(0.010)	(0.012)	(0.013)	(0.018)	(0.019)	(0.019)	(0.022)	(0.016)
High educated	-0.001	-0.003	-0.010	-0.007	0.003	0.000	0.010	0.010	0.003	0.002	0.039***	0.050***	0.045***	0.053***	0.049***	0.054***
	(0.008)	(0.005)	(0.006)	(0.007)	(0.009)	(0.010)	(0.009)	(0.010)	(0.006)	(0.006)	(0.010)	(0.011)	(0.015)	(0.017)	(0.016)	(0.014)
Unobserved education	0.030*	0.012	0.016	0.001	0.021	0.039*	0.066**	0.053	-0.012	-0.021	-0.097*	-0.079	-0.062	-0.087	-0.023	-0.030
	(0.017)	(0.009)	(0.013)	(0.016)	(0.020)	(0.023)	(0.030)	(0.033)	(0.036)	(0.048)	(0.053)	(0.070)	(0.068)	(0.055)	(0.063)	(0.058)
Not born in NL	0.028	-0.007	-0.006	-0.027	0.007	0.037	0.057*	0.030	-0.047**	-0.108***	-0.107***	-0.058	-0.045	-0.059	-0.016	-0.065
	(0.017)	(0.024)	(0.026)	(0.025)	(0.026)	(0.024)	(0.029)	(0.026)	(0.022)	(0.036)	(0.032)	(0.050)	(0.053)	(0.049)	(0.050)	(0.056)
Born in NL	-0.002	-0.006*	-0.002	0.004	0.009	0.013	0.018**	0.021**	-0.025***	-0.034***	0.009	0.034***	0.030***	0.032**	0.028*	0.034**
	(0.004)	(0.004)	(0.006)	(0.007)	(0.008)	(0.009)	(0.008)	(0.008)	(0.006)	(0.007)	(0.009)	(0.011)	(0.011)	(0.013)	(0.015)	(0.013)
Temporary contract	0.007	-0.024**	-0.021*	-0.025*	-0.024	-0.011	-0.004	-0.003	-0.049***	-0.072***	-0.033**	-0.005	0.005	0.011	0.021	0.015
	(0.010)	(0.012)	(0.013)	(0.014)	(0.018)	(0.019)	(0.016)	(0.019)	(0.012)	(0.014)	(0.013)	(0.020)	(0.021)	(0.020)	(0.023)	(0.027)
Permanent contract	0.004	0.000	0.004	0.018**	0.036***	0.043***	0.051***	0.050***	-0.019***	-0.032***	0.008	0.040***	0.037**	0.034***	0.034**	0.041***
	(0.004)	(0.003)	(0.004)	(0.006)	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.008)	(0.011)	(0.012)	(0.013)	(0.012)	(0.014)	(0.010)
Part-time employed	0.008	-0.028	0.008	0.007	-0.001	0.035	0.047*	0.040	-0.027**	-0.041***	-0.004	0.016	0.037**	0.032*	0.034	0.036
	(0.014)	(0.019)	(0.021)	(0.024)	(0.026)	(0.028)	(0.026)	(0.029)	(0.010)	(0.010)	(0.015)	(0.017)	(0.016)	(0.018)	(0.022)	(0.023)
Full-time employed	0.005	-0.004	-0.007	0.002	0.017**	0.022***	0.029***	0.030***	-0.016*	-0.036***	-0.009	0.034*	0.014	0.023	0.025	0.028
	(0.005)	(0.004)	(0.006)	(0.007)	(0.008)	(0.007)	(0.008)	(0.009)	(0.008)	(0.010)	(0.017)	(0.017)	(0.020)	(0.017)	(0.017)	(0.018)
Q1 of firm size	-0.002	-0.004	0.001	0.018	0.035	0.037	0.059**	0.049*	-0.052**	-0.039*	-0.004	0.038	0.031	0.003	-0.008	0.026
	(0.014)	(0.012)	(0.016)	(0.019)	(0.027)	(0.031)	(0.027)	(0.025)	(0.021)	(0.021)	(0.029)	(0.033)	(0.039)	(0.043)	(0.048)	(0.044)
Q2 of firm size	0.019*	0.006	-0.003	0.008	0.014	0.016	0.025	0.035**	-0.041***	-0.064***	-0.043**	0.016	0.036	0.057**	0.082***	0.059***
	(0.011)	(0.008)	(0.011)	(0.013)	(0.015)	(0.017)	(0.016)	(0.016)	(0.014)	(0.015)	(0.016)	(0.024)	(0.027)	(0.027)	(0.026)	(0.021)
Q3 of firm size	0.003	-0.007	0.002	0.006	0.022*	0.035**	0.035*	0.034*	-0.030**	-0.051***	-0.012	0.026	0.036	0.024	0.019	0.001
	(0.010)	(0.006)	(0.009)	(0.011)	(0.013)	(0.014)	(0.018)	(0.020)	(0.012)	(0.016)	(0.020)	(0.021)	(0.024)	(0.027)	(0.026)	(0.027)
Q4 of firm size	0.011	-0.021**	-0.021*	-0.011	0.005	0.028	0.036*	0.032	-0.024*	-0.059***	0.000	0.002	-0.016	-0.009	-0.005	-0.001
	(0.009)	(0.008)	(0.011)	(0.015)	(0.018)	(0.021)	(0.020)	(0.022)	(0.013)	(0.011)	(0.017)	(0.020)	(0.021)	(0.019)	(0.021)	(0.019)
Q5 of firm size	-0.014	-0.020**	-0.005	-0.008	-0.003	0.002	0.000	0.003	-0.022**	-0.042***	-0.012	0.021	0.030	0.039**	0.045**	0.062***
	(0.009)	(0.009)	(0.013)	(0.015)	(0.018)	(0.020)	(0.022)	(0.022)	(0.011)	(0.012)	(0.021)	(0.018)	(0.019)	(0.018)	(0.018)	(0.019)
First-born in 2014	0.001	0.002	-0.005	0.006	0.013	0.020	0.029*	0.031*	-0.022*	-0.049***	-0.014	0.028	0.026	0.046	0.071**	0.056**
	(0.008)	(0.009)	(0.012)	(0.016)	(0.017)	(0.016)	(0.016)	(0.015)	(0.011)	(0.014)	(0.023)	(0.027)	(0.033)	(0.030)	(0.027)	(0.023)
First-born in 2015	0.007	-0.017**	-0.010	0.002	0.009	0.020*	0.033**	0.031**	-0.030**	-0.054***	-0.008	0.035*	0.032	0.019	0.032	0.042*
	(0.008)	(0.007)	(0.009)	(0.010)	(0.010)	(0.011)	(0.012)	(0.013)	(0.012)	(0.012)	(0.023)	(0.020)	(0.022)	(0.020)	(0.025)	(0.024)
First-born in 2016	0.005	-0.009	0.002	-0.004	0.007	0.007	0.013	0.020	-0.022	-0.024	0.024	0.041**	0.042*	0.052**	0.026	0.038*
	(0.010)	(0.010)	(0.014)	(0.014)	(0.016)	(0.017)	(0.019)	(0.020)	(0.016)	(0.016)	(0.020)	(0.018)	(0.022)	(0.021)	(0.022)	(0.022)
First-born in 2017	-0.001	-0.016*	-0.022	-0.008	0.004	0.022	0.037**	0.038**	-0.043***	-0.055***	-0.028**	-0.003	-0.006	-0.019	-0.019	-0.011
	(0.010)	(0.009)	(0.014)	(0.015)	(0.017)	(0.017)	(0.015)	(0.015)	(0.011)	(0.012)	(0.011)	(0.015)	(0.017)	(0.017)	(0.019)	(0.022)
First-born in 2018	0.004	-0.012	-0.001	0.000	0.015	0.020	0.008	-0.004	-0.017	-0.029*	0.015	0.020	0.028	0.031	0.023	0.014
	(0.011)	(0.010)	(0.015)	(0.018)	(0.020)	(0.022)	(0.023)	(0.023)	(0.016)	(0.016)	(0.023)	(0.024)	(0.020)	(0.020)	(0.023)	(0.021)

Notes. See Table A2.

Table A4: Heterogeneity effects in colleague peer effects (ICN)

	Men								Women							
	Years since first birth								Years since first birth							
	-2	-1	1	2	3	4	5	6	-2	-1	1	2	3	4	5	6
$>$ 20 and $\leq$ 30 year	0.003**	0.021***	0.041***	0.041***	0.037***	0.033***	0.032***	0.032***	0.028***	0.109***	0.130***	0.119***	0.105***	0.092***	0.082***	0.078***
	(0.001)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)
$>$ 30 and $\leq$ 35 year	-0.002	0.020***	0.035***	0.028***	0.025***	0.025***	0.026***	0.023***	0.007**	0.083***	0.121***	0.100***	0.082***	0.075***	0.066***	0.060***
	(0.002)	(0.001)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.004)	(0.007)	(0.007)	(0.005)	(0.004)	(0.004)	(0.005)
$>$ 35 and $\leq$ 40 year	-0.006***	0.022***	0.038***	0.034***	0.033***	0.026***	0.022***	0.025***	0.010**	0.098***	0.137***	0.107***	0.099***	0.082***	0.072***	0.064***
	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)	(0.007)	(0.008)	(0.008)	(0.007)	(0.007)	(0.009)
$>$ 40 and $\leq$ 45 year	-0.013***	0.028***	0.046***	0.037***	0.031***	0.027***	0.023***	0.024***	0.015	0.133***	0.164***	0.144***	0.102***	0.087***	0.090***	0.083***
	(0.004)	(0.006)	(0.008)	(0.008)	(0.009)	(0.008)	(0.008)	(0.009)	(0.010)	(0.015)	(0.020)	(0.018)	(0.019)	(0.019)	(0.015)	(0.014)
Low/average educated	0.001	0.022***	0.043***	0.042***	0.040***	0.035***	0.034***	0.033***	0.033***	0.117***	0.133***	0.125***	0.109***	0.098***	0.088***	0.086***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)
High educated	-0.000	0.026***	0.040***	0.031***	0.027***	0.025***	0.024***	0.021***	0.008***	0.089***	0.127***	0.101***	0.088***	0.078***	0.069***	0.063***
	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.006)	(0.006)	(0.005)	(0.004)	(0.004)	(0.003)
Unobserved education	0.004	0.016***	0.027***	0.027***	0.026***	0.024***	0.027***	0.031***	0.017**	0.060***	0.065***	0.067***	0.061***	0.042***	0.037***	0.034***
	(0.003)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)	(0.008)	(0.006)	(0.010)	(0.011)	(0.014)	(0.011)	(0.009)	(0.010)
Not born in NL	-0.003	0.037***	0.072***	0.066***	0.056***	0.049***	0.048***	0.049***	0.027***	0.131***	0.150***	0.138***	0.116***	0.099***	0.091***	0.086***
	(0.002)	(0.003)	(0.005)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)
Born in NL	-0.000	0.018***	0.032***	0.029***	0.027***	0.024***	0.023***	0.022***	0.018***	0.093***	0.121***	0.107***	0.094***	0.084***	0.075***	0.070***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
Temporary contract	-0.002	0.036***	0.059***	0.046***	0.040***	0.037***	0.035***	0.034***	0.028***	0.163***	0.184***	0.159***	0.138***	0.123***	0.111***	0.104***
	(0.002)	(0.003)	(0.004)	(0.003)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)
Permanent contract	-0.001	0.016***	0.030***	0.027***	0.025***	0.023***	0.022***	0.023***	0.004**	0.060***	0.098***	0.083***	0.071***	0.062***	0.054***	0.053***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.004)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Part-time employed	0.024***	0.073***	0.109***	0.093***	0.080***	0.069***	0.066***	0.068***	0.044***	0.162***	0.184***	0.166***	0.148***	0.133***	0.120***	0.113***
	(0.004)	(0.005)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.005)	(0.003)	(0.006)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.004)
Full-time employed	-0.004***	0.017***	0.031***	0.025***	0.023***	0.022***	0.021***	0.020***	0.001	0.077***	0.114***	0.088***	0.072***	0.062***	0.055***	0.051***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
Q1 of firm size	-0.008***	-0.007***	0.019***	0.023***	0.022***	0.023***	0.022***	0.021***	-0.012***	-0.004*	0.016***	0.039***	0.038***	0.034***	0.027***	0.028***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)
Q2 of firm size	-0.002	0.013***	0.022***	0.016***	0.015***	0.012***	0.010**	0.011**	-0.004	0.046***	0.074***	0.061***	0.051***	0.047***	0.039***	0.038***
	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.006)	(0.007)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)
Q3 of firm size	0.000	0.046***	0.059***	0.048***	0.040***	0.037***	0.036***	0.034***	0.027***	0.156***	0.197***	0.151***	0.129***	0.109***	0.103***	0.094***
	(0.003)	(0.003)	(0.005)	(0.007)	(0.007)	(0.007)	(0.006)	(0.007)	(0.003)	(0.006)	(0.008)	(0.007)	(0.009)	(0.009)	(0.007)	(0.007)
Q4 of firm size	0.013*	0.110***	0.133***	0.101***	0.083***	0.076***	0.074***	0.072***	0.073***	0.332***	0.388***	0.307***	0.259***	0.220***	0.196***	0.180***
	(0.007)	(0.009)	(0.011)	(0.010)	(0.009)	(0.010)	(0.012)	(0.011)	(0.006)	(0.008)	(0.007)	(0.008)	(0.009)	(0.009)	(0.009)	(0.008)
Q5 of firm size	0.043***	0.169***	0.204***	0.163***	0.138***	0.125***	0.124***	0.122***	0.113***	0.389***	0.406***	0.325***	0.271***	0.244***	0.224***	0.208***
	(0.008)	(0.011)	(0.011)	(0.010)	(0.009)	(0.009)	(0.010)	(0.010)	(0.007)	(0.008)	(0.014)	(0.011)	(0.010)	(0.010)	(0.010)	(0.010)
First-born in 2014	0.001	0.027***	0.044***	0.039***	0.036***	0.037***	0.035***	0.033***	0.025***	0.118***	0.147***	0.127***	0.108***	0.093***	0.078***	0.075***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.006)	(0.007)	(0.008)	(0.009)	(0.006)	(0.006)
First-born in 2015	-0.002	0.021***	0.039***	0.034***	0.031***	0.025***	0.027***	0.027***	0.019***	0.104***	0.133***	0.119***	0.104***	0.091***	0.079***	0.076***
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
First-born in 2016	-0.001	0.017***	0.035***	0.031***	0.028***	0.024***	0.025***	0.023***	0.020***	0.105***	0.126***	0.110***	0.095***	0.085***	0.078***	0.073***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.003)	(0.004)	(0.005)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)
First-born in 2017	-0.001	0.017***	0.033***	0.030***	0.022***	0.017***	0.014***	0.016***	0.018***	0.082***	0.107***	0.100***	0.085***	0.081***	0.076***	0.070***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.004)
First-born in 2018	-0.004**	0.018***	0.039***	0.040***	0.041***	0.041***	0.036***	0.034***	0.016***	0.090***	0.130***	0.113***	0.101***	0.086***	0.080***	0.070***
	(0.002)	(0.003)	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.004)	(0.005)	(0.006)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)

Notes. See Table A2.

Table A5: Heterogeneity effects in colleague peer effects (ICF)

	Men								Women							
	Years since first birth								Years since first birth							
	-2	-1	1	2	3	4	5	6	-2	-1	1	2	3	4	5	6
$>$ 20 and $\leq$ 30 year	0.002	0.007**	0.037***	0.047***	0.044***	0.037***	0.035***	0.035***	0.025***	0.115***	0.149***	0.133***	0.121***	0.112***	0.104***	0.095***
	(0.003)	(0.003)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.003)	(0.004)	(0.009)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)
$>$ 30 and $\leq$ 35 year	0.004	0.020***	0.038***	0.041***	0.042***	0.046***	0.048***	0.049***	0.001	0.099***	0.161***	0.124***	0.097***	0.086***	0.085***	0.075***
	(0.004)	(0.003)	(0.004)	(0.005)	(0.006)	(0.007)	(0.010)	(0.009)	(0.004)	(0.007)	(0.013)	(0.011)	(0.011)	(0.009)	(0.008)	(0.009)
$>$ 35 and $\leq$ 40 year	0.002	0.030***	0.045***	0.051***	0.055***	0.054***	0.050***	0.048***	0.005	0.115***	0.184***	0.147***	0.137***	0.131***	0.117***	0.107***
	(0.005)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.007)	(0.008)	(0.011)	(0.014)	(0.015)	(0.013)	(0.013)	(0.014)	(0.013)
$>$ 40 and $\leq$ 45 year	0.000	0.024**	0.057***	0.065***	0.039**	0.041**	0.032*	0.039*	-0.001	0.166***	0.164***	0.106**	0.110***	0.114**	0.126***	0.101**
	(0.008)	(0.010)	(0.014)	(0.014)	(0.017)	(0.016)	(0.019)	(0.020)	(0.023)	(0.028)	(0.038)	(0.040)	(0.038)	(0.045)	(0.043)	(0.041)
Low/average educated	0.002	0.012***	0.044***	0.056***	0.050***	0.046***	0.042***	0.042***	0.029***	0.124***	0.147***	0.135***	0.121***	0.111***	0.106***	0.099***
	(0.002)	(0.003)	(0.004)	(0.004)	(0.005)	(0.006)	(0.006)	(0.005)	(0.004)	(0.005)	(0.008)	(0.005)	(0.005)	(0.006)	(0.006)	(0.005)
High educated	-0.002	0.035***	0.053***	0.045***	0.040***	0.037***	0.036***	0.034***	0.008**	0.110***	0.158***	0.123***	0.105***	0.098***	0.089***	0.079***
	(0.002)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)	(0.006)	(0.005)	(0.003)	(0.005)	(0.010)	(0.009)	(0.007)	(0.007)	(0.006)	(0.006)
Unobserved education	0.038***	0.024***	0.044***	0.059***	0.068***	0.064***	0.066**	0.068**	-0.017	0.055	0.056	0.041	-0.012	-0.015	-0.031	-0.066
	(0.014)	(0.007)	(0.014)	(0.014)	(0.015)	(0.018)	(0.022)	(0.026)	(0.032)	(0.034)	(0.051)	(0.054)	(0.066)	(0.072)	(0.082)	(0.102)
Not born in NL	0.003	0.027***	0.075***	0.100***	0.099***	0.089***	0.084***	0.085***	0.038***	0.144***	0.208***	0.172***	0.149***	0.146***	0.142***	0.121***
	(0.006)	(0.006)	(0.011)	(0.013)	(0.015)	(0.017)	(0.018)	(0.016)	(0.010)	(0.009)	(0.012)	(0.009)	(0.013)	(0.011)	(0.009)	(0.011)
Born in NL	0.000	0.016***	0.037***	0.038***	0.032***	0.029***	0.027***	0.026***	0.012***	0.105***	0.138***	0.123***	0.109***	0.098***	0.090***	0.082***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.008)	(0.006)	(0.005)	(0.005)	(0.004)	(0.004)
Temporary contract	-0.004	0.031***	0.066***	0.066***	0.060***	0.057***	0.055***	0.059***	0.015***	0.179***	0.217***	0.175***	0.151***	0.144***	0.138***	0.124***
	(0.005)	(0.004)	(0.006)	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.004)	(0.005)	(0.012)	(0.007)	(0.008)	(0.009)	(0.008)	(0.006)
Permanent contract	0.009**	0.018***	0.036***	0.041***	0.039***	0.037***	0.034***	0.031***	-0.007**	0.067***	0.123***	0.107***	0.097***	0.082***	0.075***	0.071***
	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.003)	(0.007)	(0.012)	(0.011)	(0.009)	(0.008)	(0.009)	(0.009)
Part-time employed	0.025***	0.079***	0.122***	0.118***	0.107***	0.090***	0.085***	0.089***	0.037***	0.181***	0.218***	0.191***	0.172***	0.158***	0.145***	0.133***
	(0.005)	(0.006)	(0.008)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.004)	(0.008)	(0.012)	(0.010)	(0.010)	(0.010)	(0.009)	(0.007)
Full-time employed	0.002	0.015***	0.036***	0.039***	0.037***	0.037***	0.035***	0.034***	-0.008*	0.093***	0.147***	0.106***	0.087***	0.077***	0.078***	0.070***
	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.007)	(0.004)	(0.007)	(0.015)	(0.011)	(0.008)	(0.007)	(0.008)	(0.009)
Q1 of firm size	-0.017***	-0.034***	0.013***	0.032***	0.028***	0.028***	0.027***	0.027***	-0.027***	-0.051***	-0.026***	0.030***	0.034***	0.037***	0.030***	0.029***
	(0.003)	(0.004)	(0.004)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.003)	(0.004)	(0.009)	(0.007)	(0.006)	(0.007)	(0.006)	(0.008)
Q2 of firm size	-0.010**	-0.008***	0.015***	0.016***	0.015**	0.016***	0.016**	0.014*	-0.018***	0.009	0.038***	0.038***	0.033***	0.034***	0.037***	0.034***
	(0.004)	(0.003)	(0.005)	(0.005)	(0.006)	(0.005)	(0.006)	(0.008)	(0.005)	(0.009)	(0.011)	(0.010)	(0.009)	(0.007)	(0.008)	(0.009)
Q3 of firm size	0.002	0.039***	0.058***	0.061***	0.054***	0.056***	0.047***	0.043***	-0.002	0.130***	0.199***	0.140***	0.130***	0.119***	0.108***	0.091***
	(0.007)	(0.006)	(0.009)	(0.012)	(0.013)	(0.011)	(0.011)	(0.013)	(0.009)	(0.011)	(0.019)	(0.017)	(0.018)	(0.015)	(0.013)	(0.013)
Q4 of firm size	0.023***	0.149***	0.171***	0.131***	0.121***	0.110***	0.097***	0.087***	0.045***	0.364***	0.476***	0.350***	0.296***	0.255***	0.236***	0.213***
	(0.008)	(0.016)	(0.021)	(0.022)	(0.018)	(0.024)	(0.025)	(0.029)	(0.011)	(0.013)	(0.019)	(0.014)	(0.016)	(0.016)	(0.014)	(0.013)
Q5 of firm size	0.086***	0.204***	0.201***	0.189***	0.163***	0.148***	0.143***	0.153***	0.126***	0.423***	0.431***	0.332***	0.276***	0.251***	0.234***	0.213***
	(0.015)	(0.016)	(0.016)	(0.016)	(0.016)	(0.018)	(0.019)	(0.019)	(0.010)	(0.011)	(0.018)	(0.013)	(0.013)	(0.012)	(0.013)	(0.012)
First-born in 2014	0.001	0.021***	0.043***	0.046***	0.045***	0.051***	0.047***	0.038***	0.024***	0.129***	0.172***	0.149***	0.125***	0.119***	0.112***	0.095***
	(0.004)	(0.004)	(0.005)	(0.006)	(0.006)	(0.007)	(0.005)	(0.006)	(0.005)	(0.006)	(0.011)	(0.009)	(0.010)	(0.011)	(0.009)	(0.009)
First-born in 2015	0.010**	0.017***	0.037***	0.051***	0.052***	0.046***	0.045***	0.049***	0.018***	0.117***	0.154***	0.138***	0.130***	0.115***	0.102***	0.100***
	(0.004)	(0.004)	(0.007)	(0.008)	(0.007)	(0.008)	(0.009)	(0.009)	(0.005)	(0.006)	(0.010)	(0.008)	(0.008)	(0.009)	(0.009)	(0.008)
First-born in 2016	-0.001	0.005	0.033***	0.050***	0.050***	0.042***	0.039***	0.039***	0.005	0.111***	0.148***	0.124***	0.107***	0.094***	0.100***	0.085***
	(0.004)	(0.005)	(0.008)	(0.009)	(0.009)	(0.009)	(0.011)	(0.010)	(0.006)	(0.006)	(0.010)	(0.010)	(0.008)	(0.008)	(0.009)	(0.009)
First-born in 2017	0.003	0.016***	0.041***	0.038***	0.029**	0.022**	0.025***	0.029***	0.006	0.085***	0.129***	0.106***	0.091***	0.094***	0.090***	0.089***
	(0.004)	(0.004)	(0.005)	(0.007)	(0.009)	(0.010)	(0.009)	(0.009)	(0.005)	(0.006)	(0.009)	(0.010)	(0.010)	(0.009)	(0.009)	(0.008)
First-born in 2018	-0.005	0.013**	0.037***	0.042***	0.040***	0.043***	0.042***	0.044***	0.018***	0.099***	0.162***	0.131***	0.119***	0.106***	0.094***	0.084***
	(0.005)	(0.005)	(0.006)	(0.007)	(0.009)	(0.008)	(0.008)	(0.009)	(0.005)	(0.009)	(0.013)	(0.012)	(0.010)	(0.011)	(0.010)	(0.009)

Notes. See Table A2.

Table A6: Heterogeneity effects in family peer effects (IFN)

	Men								Women							
	Years since first birth								Years since first birth							
	-2	-1	1	2	3	4	5	6	-2	-1	1	2	3	4	5	6
$>$ 20 and $\leq$ 30 year	0.004***	0.000	-0.001	-0.001	0.000	-0.003*	-0.004**	-0.003*	0.004**	-0.002*	-0.006**	-0.012***	-0.016***	-0.019***	-0.020***	-0.024***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
$>$ 30 and $\leq$ 35 year	-0.002	0.000	-0.002	-0.002	-0.001	-0.001	0.000	0.000	-0.001	-0.003*	0.001	-0.001	0.001	-0.001	-0.005	-0.004
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
$>$ 35 and $\leq$ 40 year	-0.002	0.003	0.007**	0.005	0.005	0.002	0.004	0.004	-0.006	0.002	0.009*	0.016**	0.011	0.007	0.005	0.005
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.002)	(0.004)	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)
$>$ 40 and $\leq$ 45 year	-0.004	-0.004	-0.002	-0.005	-0.007	-0.007	0.001	-0.002	-0.038***	-0.024**	-0.016	-0.034*	-0.041**	-0.034	-0.050***	-0.053***
	(0.005)	(0.005)	(0.007)	(0.007)	(0.008)	(0.009)	(0.008)	(0.008)	(0.009)	(0.011)	(0.015)	(0.017)	(0.017)	(0.023)	(0.017)	(0.017)
Low/average educated	0.004***	0.001	0.002	0.002	0.002	-0.001	-0.001	-0.001	0.006**	-0.003	-0.012***	-0.018***	-0.020***	-0.025***	-0.027***	-0.032***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
High educated	0.001	0.000	-0.002	-0.002	0.000	0.001	0.002	0.003	0.004***	0.004***	0.006***	0.002	0.001	0.001	-0.002	-0.002
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)
Unobserved education	-0.005*	0.000	-0.002	-0.004	-0.005	-0.005	0.000	-0.002	0.009	0.006	-0.010	-0.007	-0.009	0.003	0.004	-0.001
	(0.003)	(0.002)	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.008)	(0.008)	(0.011)	(0.015)	(0.016)	(0.017)	(0.020)	(0.021)
Not born in NL	0.015***	0.003	-0.002	-0.001	0.008	0.010	0.025*	0.025*	0.019**	0.002	0.043***	0.017*	0.015	0.019*	0.012	0.003
	(0.005)	(0.004)	(0.006)	(0.008)	(0.010)	(0.011)	(0.012)	(0.013)	(0.007)	(0.005)	(0.006)	(0.009)	(0.009)	(0.010)	(0.013)	(0.012)
Born in NL	0.001	0.000	-0.001	-0.001	-0.001	-0.002*	-0.002*	-0.002	0.001	-0.003***	-0.005**	-0.008***	-0.010***	-0.013***	-0.015***	-0.017***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Temporary contract	0.001	0.000	0.000	-0.001	0.000	-0.002	-0.003	-0.001	0.003	-0.006***	-0.004	-0.012***	-0.015***	-0.020***	-0.023***	-0.025***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)
Permanent contract	0.000	0.000	-0.002**	-0.002	-0.002	-0.002	-0.001	-0.002	-0.002**	-0.004***	-0.006***	-0.006**	-0.007**	-0.009**	-0.010***	-0.013***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Part-time employed	0.001	-0.002	-0.001	-0.005	-0.005	-0.006	-0.003	-0.004	0.003*	-0.005***	-0.008***	-0.014***	-0.017***	-0.023***	-0.025***	-0.027***
	(0.003)	(0.004)	(0.003)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Full-time employed	0.000	0.000	-0.001	-0.001	0.000	-0.001	-0.001	-0.001	-0.001	-0.003**	-0.002	-0.003	-0.004	-0.003	-0.006*	-0.008**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)
Q1 of firm size	0.001	0.001	-0.002	-0.001	-0.003	-0.005	-0.004	-0.008*	0.003	0.000	-0.001	-0.002	-0.006	-0.007	-0.013***	-0.014***
	(0.002)	(0.001)	(0.002)	(0.003)	(0.003)	(0.004)	(0.005)	(0.005)	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
Q2 of firm size	0.002	-0.001	-0.002	0.000	0.002	-0.001	-0.001	0.003	-0.004	-0.008***	-0.007*	-0.009***	-0.009**	-0.012**	-0.016***	-0.019***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.005)	(0.006)	(0.005)
Q3 of firm size	0.000	0.001	0.000	-0.003	-0.002	-0.002	-0.003	-0.001	0.001	-0.004	-0.005	-0.008	-0.008	-0.010**	-0.012**	-0.017***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)
Q4 of firm size	-0.004**	-0.002	-0.001	-0.003	-0.001	-0.003	0.001	0.004	-0.001	-0.007***	-0.008**	-0.010**	-0.012**	-0.017***	-0.015***	-0.016***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.002)	(0.002)	(0.003)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
Q5 of firm size	0.001	-0.001	-0.001	-0.002	0.001	0.003	0.001	0.000	-0.002	-0.007**	-0.003	-0.012***	-0.015***	-0.017***	-0.020***	-0.020***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)
First-born in 2014	-0.001	-0.001	-0.003	-0.003	-0.003	-0.006**	-0.005*	-0.003	0.002	-0.002	-0.002	-0.005	-0.006	-0.011**	-0.016***	-0.016***
	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
First-born in 2015	0.002	0.000	0.000	-0.002	-0.003	-0.002	-0.004	-0.006*	-0.001	-0.006**	-0.007	-0.013***	-0.016***	-0.015***	-0.017***	-0.022***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)
First-born in 2016	0.001	0.000	0.001	0.003	0.005	0.004	0.004	0.003	0.003	-0.001	0.003	0.000	-0.004	-0.008**	-0.010**	-0.010**
	(0.002)	(0.001)	(0.002)	(0.003)	(0.003)	(0.004)	(0.005)	(0.004)	(0.003)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)
First-born in 2017	0.000	0.001	0.000	-0.002	-0.002	-0.004	-0.002	0.000	-0.001	-0.003	-0.004	-0.005	-0.005	-0.010*	-0.011**	-0.012**
	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.002)	(0.002)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
First-born in 2018	0.004*	0.002	-0.002	-0.001	-0.001	-0.004	-0.004	-0.004	0.000	-0.006**	-0.007*	-0.014***	-0.016***	-0.016***	-0.019***	-0.026***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)

Notes. See Table A2.

Table A7: Heterogeneity effects in family peer effects (IFC)

	Men								Women							
	Years since first birth								Years since first birth							
	-2	-1	1	2	3	4	5	6	-2	-1	1	2	3	4	5	6
$>$ 20 and $\leq$ 30 year	0.004***	0.000	0.001	0.003*	0.004**	0.003	0.001	0.001	0.008***	0.001	-0.002	-0.006*	-0.008***	-0.010***	-0.012***	-0.015***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
$>$ 30 and $\leq$ 35 year	-0.001	0.000	0.000	-0.001	-0.001	0.001	0.002	0.002	-0.001	0.000	0.000	-0.002	-0.001	-0.001	-0.005*	-0.002
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.001)	(0.001)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)
$>$ 35 and $\leq$ 40 year	-0.004*	-0.001	0.005*	0.002	0.003	0.003	0.000	0.001	-0.002	0.000	0.011**	0.013*	0.010	0.006	0.005	0.005
	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)	(0.003)	(0.003)	(0.005)	(0.007)	(0.006)	(0.008)	(0.008)	(0.008)
$>$ 40 and $\leq$ 45 year	0.000	-0.003	-0.001	-0.007	-0.003	-0.009	-0.005	-0.007	-0.036***	-0.021*	-0.018	-0.032	-0.025	-0.017	-0.036**	-0.036**
	(0.006)	(0.005)	(0.006)	(0.007)	(0.008)	(0.008)	(0.008)	(0.010)	(0.008)	(0.010)	(0.017)	(0.019)	(0.021)	(0.024)	(0.018)	(0.016)
Low/average educated	0.004***	0.002	0.003**	0.004**	0.006***	0.003*	0.002	0.004	0.011***	0.003	-0.006*	-0.013***	-0.017***	-0.019***	-0.021***	-0.022***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
High educated	0.001	0.000	0.000	0.000	0.001	0.004*	0.003	0.003	0.006***	0.005***	0.006***	0.005***	0.005***	0.005*	0.001	0.001
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Unobserved education	-0.007	-0.003	-0.004	-0.008	-0.008	-0.003	0.000	0.004	0.005	0.004	-0.003	-0.012	-0.016	-0.013	-0.012	-0.013
	(0.004)	(0.003)	(0.005)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)	(0.010)	(0.012)	(0.018)	(0.020)	(0.020)	(0.021)	(0.020)
Not born in NL	0.017***	0.006	0.008	0.011	0.022**	0.024***	0.034***	0.037***	0.019***	0.014**	0.048***	0.029***	0.028***	0.036***	0.026**	0.016
	(0.005)	(0.006)	(0.007)	(0.008)	(0.009)	(0.009)	(0.009)	(0.010)	(0.007)	(0.007)	(0.008)	(0.008)	(0.010)	(0.011)	(0.011)	(0.011)
Born in NL	0.001	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.004***	-0.001	-0.003	-0.005**	-0.006***	-0.008***	-0.010***	-0.010***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Temporary contract	0.000	0.000	0.001	0.000	0.002	0.002	0.001	0.002	0.009***	-0.002	0.002	-0.004	-0.007*	-0.007*	-0.012***	-0.013***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.002)	(0.002)	(0.004)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
Permanent contract	0.000	-0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	-0.002	-0.005**	-0.004	-0.005*	-0.007**	-0.008**	-0.009**
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Part-time employed	0.001	-0.002	0.000	-0.001	0.002	0.001	-0.001	0.002	0.006***	0.000	-0.002	-0.008**	-0.010**	-0.015***	-0.018***	-0.019***
	(0.003)	(0.004)	(0.004)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)	(0.001)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)
Full-time employed	0.001	0.000	0.001	0.001	0.002	0.002	0.001	0.001	0.001	-0.002	-0.002	-0.001	-0.002	0.000	-0.002	-0.004
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Q1 of firm size	-0.001	0.001	0.001	0.003	0.004	0.003	0.005	0.001	0.005	0.002	0.001	0.000	-0.002	-0.003	-0.007	-0.008
	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.006)	(0.005)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)
Q2 of firm size	0.001	-0.002	0.000	0.003	0.001	0.001	0.000	0.002	0.000	-0.003	-0.001	-0.010**	-0.009*	-0.009*	-0.014***	-0.015***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.005)	(0.002)	(0.002)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)
Q3 of firm size	0.000	0.002	0.001	-0.003	-0.001	-0.003	-0.006	-0.003	0.004	-0.003	-0.004	-0.005	-0.003	-0.004	-0.006	-0.011**
	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.002)	(0.003)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)
Q4 of firm size	-0.003*	-0.003	0.000	-0.001	0.000	-0.001	0.001	0.005	0.000	-0.004	-0.005	-0.003	-0.008**	-0.013***	-0.012**	-0.011*
	(0.002)	(0.002)	(0.002)	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.006)
Q5 of firm size	0.004	-0.002	-0.002	-0.001	0.002	0.006*	0.004	0.002	0.003	-0.002	0.000	-0.003	-0.005	-0.005	-0.009***	-0.006
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)
First-born in 2014	0.000	0.001	0.002	0.000	0.002	0.000	0.000	0.002	0.003*	0.000	-0.002	-0.002	-0.002	-0.005	-0.010**	-0.008*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
First-born in 2015	0.003	0.000	0.004	0.004	0.004	0.007**	0.001	-0.001	0.005**	0.000	-0.002	-0.006	-0.009**	-0.008*	-0.011***	-0.012**
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
First-born in 2016	0.002	-0.001	0.002	0.003	0.004	0.004	0.004	0.007	0.006**	0.000	0.001	0.000	-0.003	-0.004	-0.005	-0.006
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)
First-born in 2017	-0.003	0.000	-0.002	-0.004	-0.002	-0.005	-0.003	-0.003	0.002	0.000	0.001	0.000	-0.001	-0.005	-0.007	-0.006
	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.002)	(0.002)	(0.004)	(0.003)	(0.005)	(0.005)	(0.005)	(0.005)
First-born in 2018	0.002	0.001	-0.002	0.000	0.001	0.002	0.000	-0.002	0.002	-0.004	-0.003	-0.011*	-0.012**	-0.013**	-0.017***	-0.023***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.002)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.005)

Notes. See Table A2.

A.2 Peer effects by educational attainment group

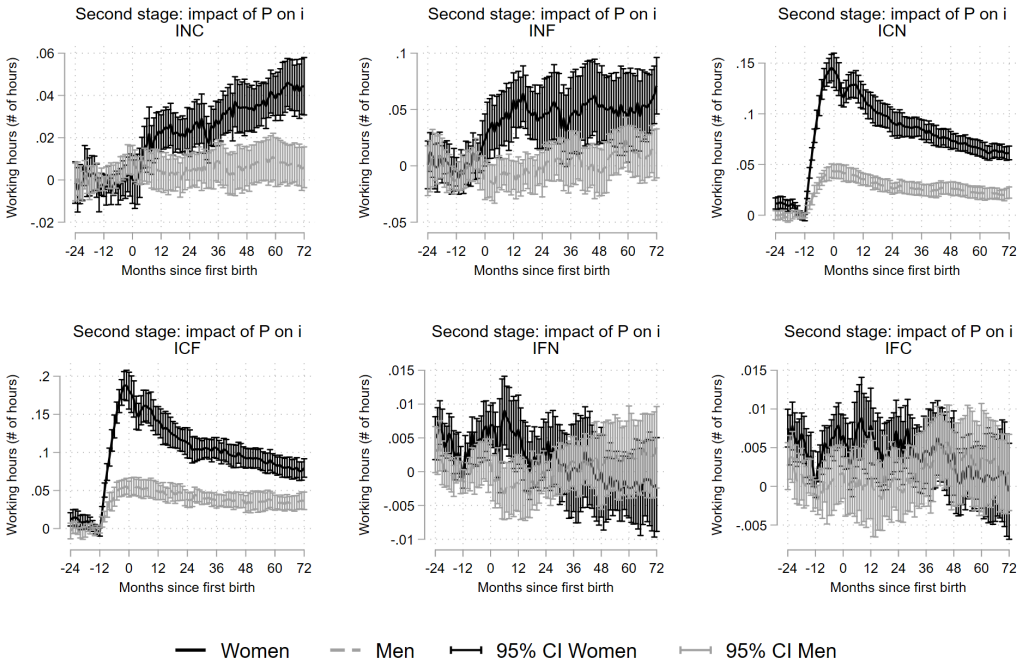
We present the same set of results as in Figure 3, but now stratified by educational attainment category, to assess heterogeneity in peer effects. In Figure A7, Figure A8 and Figure A9, we show the results for high-educated individuals, low- and average-educated individuals, and individuals with missing educational information, respectively.

A couple of observations are worthwhile to point out. First, neighbour peer effects on men are statistically significant for low- and average-educated individuals but not for high-educated individuals. In contrast, neighbour peer effects seem more pronounced for high educated women than lower educated women. Second, colleague peer effects appear significant for both women and men of both educational attainment groups. Third, negative family peer effects on women are driven by the sample of low- and average-educated individuals and not by high-educated individuals. Finally, the results for individuals with missing educational information are relatively noisy, consistent with the observed relatively small sample sizes.

We also analyse peer effects on individuals who worked full time before giving birth. We focus in this analysis only on individuals who were full-time employed at baseline, where baseline is defined as the twelfth month before giving birth. We impose this sample selection because of the 37 percentage points difference between women and men in the average full-time employment rate as shown in Table 2. That is, we aim to address a potential difference between women and men, which is that for men it is likely that peer effects reduce paid working hours given their relatively high full-time employment rate, whereas for women peer effects working hours changes can go in either direction. Hence, by retaining full-time employed individuals, the underlying mechanism of peer effects involves reductions in paid working hours only. We provide the results of this check in Figure A10.

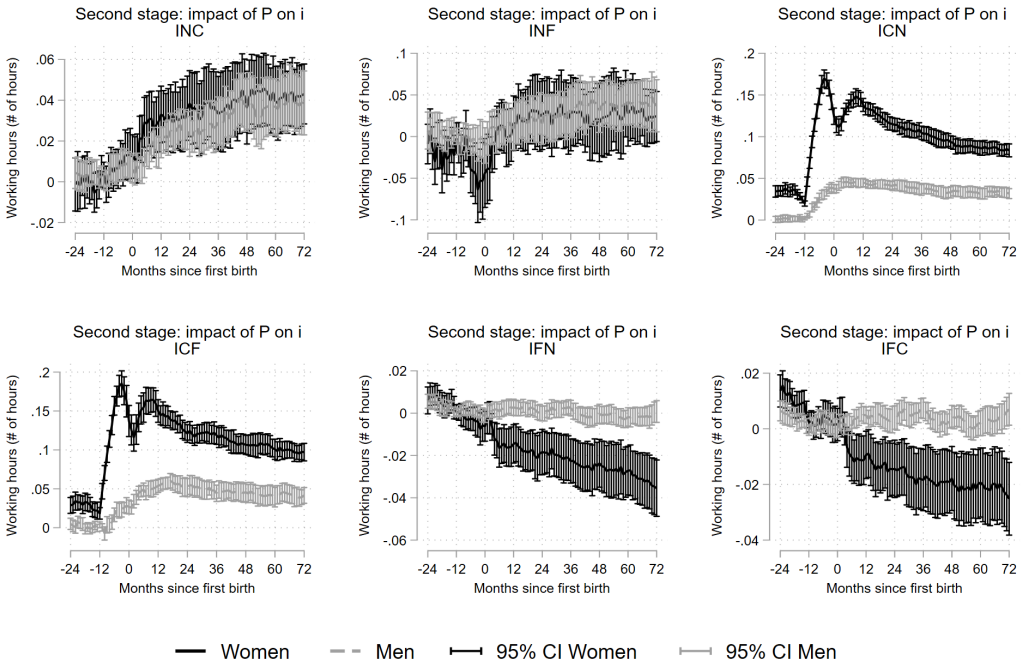
Overall, the results are in line with the conclusions of our default set of results provided in Figure 3. That is, we find statistically significant neighbour peer effects and statistically significant colleague peer effects on both women and men. Interestingly, we do not find significant family peer effects on women who were full-time employed at baseline. This observation implies that the statistically negative family peer effects we found in Figure 3 were driven by peer effects on women who worked part-time at baseline.

Figure A7: IV results - Sample of high-educated individuals, Second stage coefficients



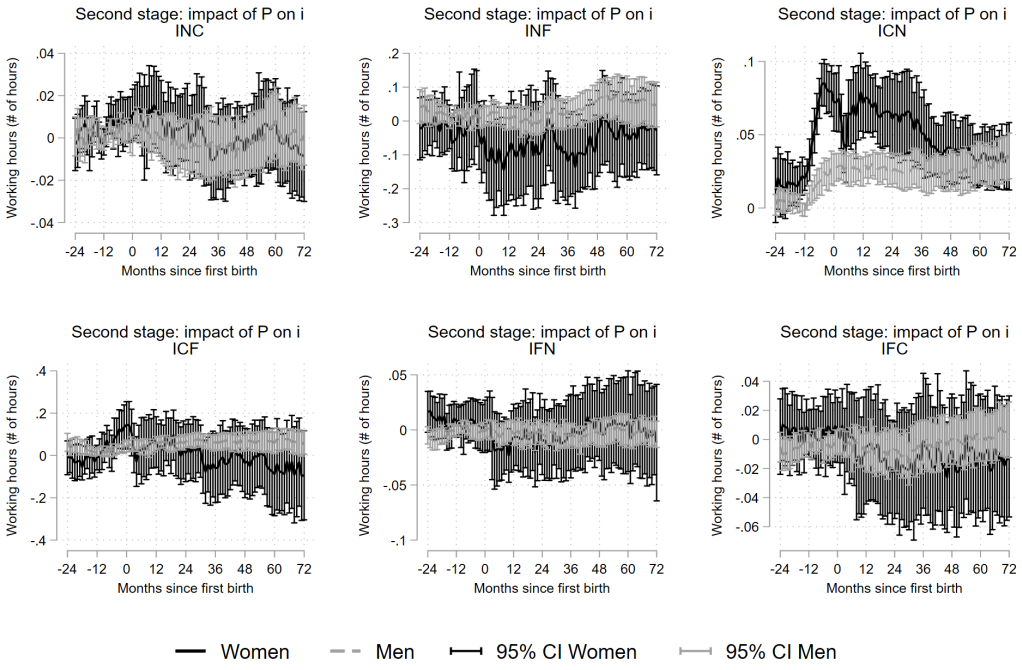
Notes. Sample size: 140,234 women and 99,616 men. See Figure 3 for other notes.

Figure A8: IV results - Sample of low-educated individuals and average-educated individuals, Second stage coefficients



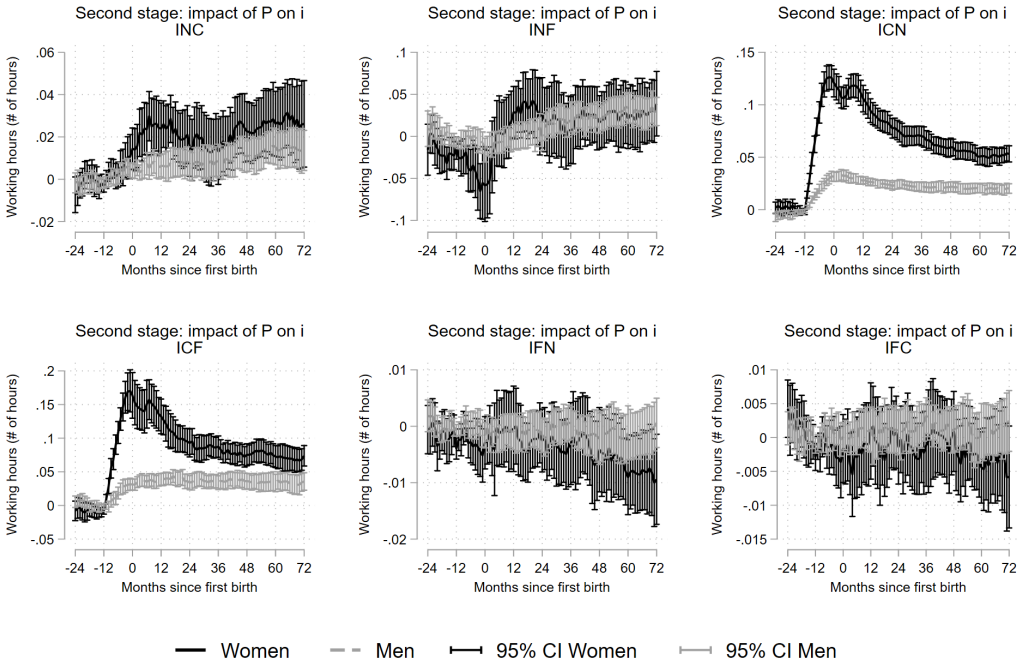
Notes. Sample size: 155,071 women and 140,783 men. See Figure 3 for other notes.

Figure A9: IV results - Sample of individuals with missing educational information, Second stage coefficients



Notes. Sample size: 20,286 women and 27,480 men. See Figure 3 for other notes.

Figure A10: IV results - Sample of full-time employed individuals, Second stage coefficients



Notes. We use a sample of focal individuals who were full-time employed 12 months before becoming a parent. Sample size: 129,518 women and 201,856 men. See Figure 3 for other notes.