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To cite this article: Sean de Hoon, Renske Keizer & Pearl Dykstra (2017) The influence of motherhood on income: do partner characteristics and parity matter?, Community, Work & Family, 20:2, 211-225, DOI: [10.1080/13668803.2016.1227770](https://doi.org/10.1080/13668803.2016.1227770)

To link to this article: <http://dx.doi.org/10.1080/13668803.2016.1227770>



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Published online: 06 Sep 2016.



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The influence of motherhood on income: do partner characteristics and parity matter?

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ABSTRACT

Although the economic independence of women has been greatly advanced in recent decades, it continues to lag far behind men's in the Netherlands and elsewhere. The negative consequences of motherhood are an important driving force behind women's abiding lower income. Although mother's lower earnings have received a substantial amount of attention from scholars and the underlying mechanisms are well established, surprisingly little is known about mitigating factors. This article contributes to the literature by investigating how the earnings disadvantage of mothers is affected by partner characteristics and by parity. We formulate hypotheses about the effect of a partner's working hours, his earnings and his gender role orientations, on the earnings disadvantage associated with motherhood. Furthermore, we examine the role of parity in this earnings disadvantage. Our hypotheses are tested using longitudinal data from the first three waves of the Netherlands Kinship Panel Study. Our hypotheses concerning partner characteristics are not supported. The earnings disadvantage of mothers is hardly affected by them. We do find that parity matters greatly in examining the effect that motherhood has on women's earnings. The transition to motherhood has a much larger effect on earnings than the birth of subsequent children. The implications of these findings and the specificity of the Dutch context are discussed.

RESUMEN

A pesar de que la independencia económica de las mujeres ha avanzado enormemente en las últimas décadas, aun sigue estando muy por detrás de la de los hombres en los Países Bajos y en otros lugares. Las consecuencias negativas de la maternidad son una importante fuerza motriz detrás del ingreso más bajo de las mujeres. A pesar de que los ingresos más bajos de las madres han recibido una considerable cantidad de atención por parte de los estudiosos y los mecanismos subyacentes están bien establecidos, se sabe muy poco sobre los factores atenuantes. Este artículo contribuye a la literatura mediante la investigación de cómo la desventaja de ingresos de las madres se ve afectada por las características de la pareja y la paridad. Formulamos

ARTICLE HISTORY


Received 25 February 2015
Accepted 17 July 2016

KEYWORDS

Motherhood; parity;
inequality; earnings; partner

PALABRAS CLAVES

Maternidad; paridad;
desigualdad; ganancias;
pareja

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hipótesis sobre el efecto de las horas de trabajo de la pareja, sus ingresos y sus orientaciones sobre los roles de género, en la desventaja de ingresos asociada con la maternidad. Además, analizamos el papel de la paridad en esta desventaja de ingresos. Comprobamos nuestras hipótesis utilizando datos longitudinales de las primeras tres olas del Estudio de Panel de Parentesco de los Países Bajos (NKPS). Nuestras hipótesis sobre las características de la pareja no están comprobadas. La desventaja de ingresos de las madres apenas se ve afectada por ellas. Por el contrario, sí encontramos que las cuestiones de paridad afectan en gran medida al examinar el efecto que tiene la maternidad en el ingresos de las mujeres. La transición a la maternidad tiene un efecto mucho mayor sobre los ingresos que el nacimiento de los siguientes hijos. Discutiremos las implicaciones de estos hallazgos y cuanto los mismos son específicos al contexto holandés.

Despite marked improvements over the past decades, women's economic independence in the Netherlands and elsewhere continues to lag far behind men's (Van den Brakel, 2012; Weichselbaumer & Winter-Ebmer, 2005). The negative consequences of motherhood contribute heavily to women's enduring lower income. Although quite a few studies have examined why motherhood is detrimental to women's earnings – showing that it is the result of reduced labor force participation, fewer working hours and lower hourly wages (e.g. Sigle-Rushton & Waldfogel, 2007; Winslow-Bowe, 2006) – surprisingly little research has examined factors that mitigate or aggravate the earnings disadvantage of mothers (for a review, see Gough & Noonan, 2013).

This article contributes to the literature by investigating how characteristics of the male partner and the number of children a woman has affect the earnings disadvantage of mothers. Previous studies have investigated to what extent partner characteristics affect women's involvement in paid work, and therefore their earnings (Bernasco, de Graaf, & Ultee, 1998; Bianchi & Milkie, 2010; Thompson & Walker, 1989). Although researchers have suggested that partner characteristics, such as partner's earnings, may also affect linkages between motherhood and women's income, their ideas have not yet been put to the test (Anderson, Binder, & Krause, 2003; Budig & England, 2001; Budig & Hodges, 2010). For example, Budig and Hodges (2010) suggest that for women higher in the earnings distribution motherhood may have a smaller effect on their income due to favorable characteristics of their partner. Therefore, the first contribution the current study makes to the literature is to explicitly address how partner characteristics shape the relation between motherhood and women's earnings. In particular, we focus on the partner's time availability by means of his work hours (e.g. Blood & Wolfe, 1960; Kamo, 1988), his financial resources (e.g. Greenstein, 1996), and his gender role orientations (e.g. Thompson & Walker, 1989) given their importance for the division of tasks in the household, which in turn is associated with the amount of time women spend on the labor market and ultimately their earnings.

A second contribution to the literature is that we focus on parity. Previous research has either examined the earnings of mothers versus those of childless women (Budig, Misra, & Boeckmann, 2012), or scholars have assumed that each additional child has the same detrimental consequences for a woman's earnings (Budig & England, 2001). We question this

assumption, arguing that the reduction in income after a second or third child is less pronounced, as major adjustments to employment mostly take place following the birth of the first child. A recent study on occupational attainment following motherhood is in line with the notion that the transition to motherhood is the crucial factor, not the arrival of subsequent children (Abendroth, Huffman, & Treas, 2014).

The two research questions that guide this study are therefore the following: First, to what extent do partner characteristics affect the negative relation between motherhood and women's earnings? Second, to what extent is the relation between motherhood and women's earnings affected by parity? In order to test our hypotheses, we use data from the first three waves of the Netherlands Kinship Panel Study (NKPS), which followed a representative sample of the Dutch population between 2002 and 2011. These data are especially well suited for the purpose of this study, as the longitudinal nature allows us to look at how changes in earnings are related to changes in parity over time. As is customary in the literature on the effect of motherhood on wages and earnings (e.g. Waldfogel, 1997), we use fixed-effects models. These models account for unobserved heterogeneity and only utilize within-person variation, that is changes over time within an individual or couple. The data are multi-actor, with detailed information gained from both respondents and their partners.

The Dutch context

Our study is situated in the Netherlands, a country with several distinct characteristics that structure women's investment in paid work. Dutch society was long characterized by a male bread-winner model and until the 1960s working (married) women were the exception rather than the rule (Plantenga, Schippers, & Siegers, 1999). Although the Netherlands now has one of the highest female labor force participation rates among OECD countries (OECD, 2012), relatively few women work full-time. In fact, the Netherlands has the highest proportion of part-time employed women (and men) (OECD, 2012). This means that, while female labor market participation is high, the average number of hours worked by women is actually lower than in many other countries (OECD, 2012). Dutch workers enjoy relatively greater flexibility in working hours than those in other countries as a result of legislation that gives individuals the right to increase or decrease their working hours (Yerkes, 2013). The current situation in the Netherlands can best be described as a one-and-a-half earner model (Plantenga, 2002). The 'half' generally refers to the contribution of the woman to household income. Even though most Dutch women work, the division of labor at home remains strongly influenced by traditional ideas about women's role. The majority of Dutch mothers believes children should be taken care of by their parents rather than childcare professionals (Portegijs, Cloin, Oom, & Eggink, 2006). Compared to the Nordic countries where more than 70% of all respondents approves of a young mother working full-time, only 30% of Dutch respondents approves this situation (Saraceno, 2011). These opinions are reflected in the comparatively low full-time childcare usage rate in the Netherlands: only 6% of children aged 0–3 (Mills et al., 2014). The low usage rate is most likely also driven by the high childcare costs in the Netherlands, that result from relatively low government childcare expenditure (Noailly & Visser, 2009). Furthermore, women take on the majority of the childcare duties at home. In fact, *The Fatherhood Report* (The Fatherhood Institute, 2010) showed that for each hour a mother takes care of

her children in the Netherlands, the father only spends 27 minutes with them. Fathers in all OECD countries, with the exception of Austrian fathers, were relatively more involved than Dutch fathers. The highly gendered distribution of childcare responsibilities is institutionalized in the Netherlands in the available paternity leave. While mothers are entitled to 12 weeks paid leave after the birth of a child, Dutch fathers can only take two days¹ fully paid leave, far less than the leave available in countries like Spain (15 days), Finland (18) and Norway (60) (Huerta et al., 2013; Moss, 2013).

Taken together, these characteristics suggest that in the Dutch context motherhood strongly affects women's investment in paid work and thus their income. Indeed the earnings disadvantage seems to be among the largest compared to other developed countries, with estimates of a gross difference of as much as 50% annually, between women with and without children (Budig et al., 2012). In a country with such a large earnings differential between mothers and childless women, where men on average take on relatively little responsibility for childcare, contributions of the male partners that do provide assistance could make a substantial difference. Therefore it is an interesting context for the current study.

Partner characteristics

The first aim of this paper is to examine how a partner may mitigate the negative effect that motherhood has on women's earnings. In order to answer this question, we start by considering why motherhood is negatively related to women's earnings in the first place. Following the birth of a child, mothers often cut back their working hours or quit working all together. Over time, the lower accumulation of experience resulting from unemployment and/or working fewer hours results in lower hourly wages (Sigle-Rushton & Waldfogel, 2007). Furthermore, there is some evidence suggesting discrimination against mothers (Correll, Benard, & Paik, 2013), resulting in higher levels of unemployment, shorter work weeks, and lower hourly wages. As discrimination is very difficult to examine with the research design we use, we focus on factors that influence the adjustments that mothers themselves make to their labor force participation after having made the transition to parenthood. Although outsourcing all childcare tasks to professionals is an alternative to cutting back working hours, Dutch parents are reluctant to do so (De Ruijter, 2005). Of interest to us is therefore whether there are circumstances that make fathers more likely to contribute to childcare and domestic labor and thereby mitigate the negative association between motherhood and women's earnings.

The time availability perspective (Blood & Wolfe, 1960; Kamo, 1988) suggests that the performance of domestic labor tasks is inversely related to the time spent on the labor market, and especially so for men (Presland & Antill, 1987). This suggests that a male partner who works fewer hours will take on more domestic labor tasks after the birth of a child, enabling a smaller decrease in the mother's working hours and ultimately her earnings. We therefore hypothesize that motherhood affects a woman's earnings less negatively among women with a partner who works fewer hours (H1).

The partner's financial contributions to the household may affect a mother's involvement in paid work in two ways. The relative resources perspective (e.g. Greenstein, 1996) suggests that a partner with lower earnings has less bargaining power to avoid doing domestic labor. A lower earning partner can therefore be expected to (have to)

take on more domestic labor, enabling the woman to work more hours. At the same time, a lower earning partner may necessitate a woman to work more hours in order to make ends meet financially (Bernasco et al., 1998). Both mechanisms lead to the same hypothesis, namely that lower earnings on the part of the partner reduce the negative effect of motherhood on women's earnings (H2).

The partner's personal convictions, and more specifically his beliefs about gender roles (e.g. Hiller, 1984; Thompson & Walker, 1989) may also play an important role in mitigating the negative consequences that motherhood has for women's earnings. A partner with less traditional gender role attitudes is more likely to contribute to domestic labor enabling her to work more (Kaufman & Bernhardt, 2014). As the woman's own gender role attitudes will probably also affect the relation between motherhood and earnings, these must be accounted for. We therefore hypothesize that, accounting for a woman's own gender role attitudes, having a less traditional partner will mitigate the negative relation between motherhood and earnings (H3).

Parity

There are several reasons to assume that major adjustments in employment are more likely to occur following the transition to motherhood than following the birth of an additional child. First, a mother can combine certain childcare tasks when an additional child is born, reaping benefits of scale. One study suggests that mothers spend as much as 40% less time on a second child than on the first (Ekert-Jaffé, 2010). Second, from a financial point of view a second child puts additional strain on a household. Therefore, while a mother may be able to work fewer hours when she makes the transition to motherhood, she may not be able to afford to scale back her hours further when a second child is born. Accordingly, using data from the Dutch workforce survey, researchers from Statistics Netherlands (Bierings & Souren, 2011) showed that mothers reduce their working hours most drastically following the birth of a first child. These considerations suggest that the transition to motherhood is more detrimental to women's earnings than the birth of a second (or third) child. Recent research on the relation between motherhood and occupational status supports this notion of a 'declining penalty with parity' (Abendroth et al., 2014, p. 1003). We expect to find that in the Netherlands, the transition to motherhood is associated with a greater decrease in earnings than a second or higher order birth (H4).

Methods

Respondents

In order to test our hypotheses, we use data from three waves of the NKPS. The NKPS is a large-scale panel survey that started in 2002 among a representative sample of adults between the ages of 18 and 79 residing in private households (Merz et al., 2012). The data were collected using a combination of web, telephone and face-to-face interviews. The respondent's current partner was also asked to complete a short questionnaire.

In the first wave, 8161 respondents filled out the questionnaire, of whom 6091 participated in the second wave, and 4390 did so in the third wave. This gives a total of 18,642 observations. Of these, 26% were excluded because there is no partner. We also exclude

observations where a new partner is present, as we do not want to measure the possible effect of a partner change. This excludes a further 6% of the observations. We also excluded observations where women did not have a paid job either because they were unemployed or for instance retired (45%), or where the partner was not employed (6%) to avoid situations where one of the partners is responsible for the lion's share of the housework.² Following the official definition of Statistics Netherlands, we define a respondent as employed when she or he performs at least 12 hours of paid labor per week. Information about the number of missing values on individual variables is presented below. The final sample consists of 3831 observations from 2005 couples.

Measures

Earnings are measured as the monthly income from paid labor reported by the women in each of the three waves. We suspected measurement error among 5% of observations where, considering their working hours, respondents reported earning less than 70% of minimum wage. These observations were therefore excluded. In addition, we excluded observations who were in the top 1 percentile of the earnings distribution, as they represent extreme outliers and in some cases possibly measurement error. In a further 10% of observations, earnings were not reported and these are also excluded. The measure of monthly earnings was log transformed to account for the skewed distribution of the original values.

In order to measure our main independent variable, childbearing, we use three dummy variables indicating the presence of *one child*, *two children* or *three or more children*, with childless women as the reference category. In fixed-effects models, described in more detail below, only changes in variables over time are taken into account. A change in the number of children therefore indicates childbirth. We chose not to include a dummy for a higher number of children, as families with more than three children are highly uncommon (6%). There were no missing values on this variable.

The partner's gender role attitudes are measured by means of four items: 'A women must quit her job when she becomes a mother,' 'It's unnatural if men in a business are supervised or managed by women,' 'It's more important for boys than it is for girls to be able to earn a living later in life' and 'Working mothers put themselves first rather than their families.' The answer categories ranged from 1 = *strongly agree* to 5 = *strongly disagree*. The answers are recoded so that a higher score indicates that a partner is more traditional. Previous research has validated this scale and it has been used in earlier studies (De Jong & Liefbroer, 1998; Kalmijn, Bernasco, & Weesie, 1996). The Cronbach's alpha for the scale was .74. As we do not want to measure changes in attitudes of the partner which may occur after the birth of a child, we only take into account the attitudes of the partner in the first wave. The woman's gender role attitudes were measured using the same four questions as the partner's. For women, the responses to these questions also formed a reliable scale with a Cronbach's alpha of .73. As a result of partners not filling out the questionnaire, 22% of observations do not have information on this variable for the partner. Among women, 5% of observations had missing values on the gender role attitudes measure.

As the partners were not questioned on their work hours, we have the *partner's working hours* as reported by the woman in each of the waves. Unfortunately, this will undoubtedly introduce some error into the measure, but we have no reason to believe that this error will be related to our variables of interest. In the analyses, the values of this variable are

divided by ten; therefore the reported coefficient is the effect of an increase of ten hours. There are no missing values on this variable.

The *partner's earnings* are also measured in each wave using information provided by the main respondent. The measure is constructed in the same way as monthly earnings for women, with the exception that it is not logged.³ In the analyses, the values of this variable are divided by 1000; therefore the reported coefficient can be interpreted as the effect of an increase of 1000 Euros. As with the women's earnings, there was a percentage of observations in which the partner's income did not seem to be measured correctly. For 9% of observations, earnings were below 70% of minimum wage or in the top 1%. These observations were excluded. In addition, 10% of the working partners did not report their income.

We include *age*, *age squared* and *education level* as control variables in the analyses. Age is usually found to be positively related to earnings, whereas the squared term generally has a negative relation to earnings (Mincer, 1974), together indicating a weakening positive relation. The level of educational attainment is measured on a 10-point scale, where 1 indicates a woman has no formal education and 10 indicates a woman has completed post-graduate education. There was a single observation with an unusually high age of 105 where measurement error was suspected and this observation was excluded. There were no other missing values for these variables.

Descriptive statistics for the variables used in the analyses are reported per wave in Table 1.

Analysis strategy

We use fixed-effects models to analyze the panel data from the NKPS. Fixed-effects models control for all unobserved time-invariant individual heterogeneity. This means that

Table 1. Descriptive statistics for the variables used in the analyses, NKPS waves 1–3.

Variable ^a	Wave 1		Wave 2		Wave 3		Min.	Max.
	Mean/ proportion	SD	Mean/ proportion	SD	Mean/ proportion	SD		
Woman's monthly earnings (in €)	1256	608	1303	612	1466	646	250	4000
Woman's monthly earnings (logged)	7.03	0.45	7.07	0.46	7.20	0.44	5.62	8.29
No children	.28	–	.17	–	.10	–	0	1
One child	.17	–	.16	–	.12	–	0	1
Two children	.38	–	.44	–	.49	–	0	1
Three or more children	.17	–	.23	–	.29	–	0	1
Partner's working hours ^b	42	8.3	41	8.4	41	8.3	12	60
Partner's monthly earnings ^c	2096	834	2181	818	2393	827	253	7000
Gender role attitudes of the partner	1.86	0.65	1.83	0.63	1.81	0.64	1	4.5
Gender role attitudes of the woman	1.58	0.57	1.56	0.56	1.56	0.57	1	4.5
Woman's age	39	9.2	42	8.5	45	8	18	67
Woman's education	6.7	1.9	6.8	1.9	6.9	1.9	1	10
N (observations)	1510		1344		977			

^aAll continuous variables are centered in the analyses.

^bDivided by 10 in the analyses.

^cDivided by 1000 in the analyses.

differences between individuals which do not vary over time, such as biological differences, as well as selection bias, are controlled for. Only the within-subject variation in the variables is utilized in estimation, meaning the approach models how changes in the dependent variable are related to changes in the independent variable. Fixed-effects models are the standard in research on the effects of motherhood on women's earnings (e.g. Waldfogel, 1997) and the method is conceptually well suited for our analyses, as we are interested in assessing the relation between changes in parity and the earnings of a woman. Results of a Hausman (1978) test confirm that the use of fixed-effects models is preferred to the use of random-effects models.

Our hypotheses concern the effect that partner characteristics have on the relation between parity and a woman's earnings. We therefore include a series of interactions between the dummy variables for the number of children and the partner characteristics. The interactions are entered into the models in several steps (Model 2: interaction between the number of children and the partner's working hours; Model 3: interaction between the number of children and the partner's earnings and Model 4: interaction between the partner's attitudes and the number of children). In each of the models assessing the effect of partner characteristics on the motherhood earnings disadvantage we also include interactions between the number of children and the woman's gender role attitudes, in order to account for confounding influences. The first model includes only the dummy variables for the number of children and the control variables. Given that the dependent variable is the log of monthly earnings, the exponent of the coefficients can be interpreted as the percentage change in monthly earnings associated with a change in the variable under consideration.

We should note that we interpret the results of the interaction effects as if the partner characteristics remain stable and the number of children increases. However, as is always the case, the interactions also reflect the effect in the situation where the number of children remains stable and partner characteristics change. Readers should keep this in mind.

Results

Descriptive

Table 1 presents descriptive results for the variables used in the analyses. In the first wave, 28% has no children, 17% has one child, 38% has two children and 17% has three or more children. Over the course of wave two and three about 15% of the women in our sample had one or more children. Thirteen percent of the women had their first child over the course of waves two and three. Partners work on average around 41 hours per week and earn about 2200 Euro's. The attitudes of the partner are on average not very traditional, scoring around 1.8 out of 5 and women are slightly less traditional.

For reasons of parsimony we do not discuss the direct effects of the partner characteristics on the women's monthly earnings below. However, the coefficients are reported in Table 2. Note that the direct effect of the gender role attitudes is not estimated, as gender role attitudes were only measured in the first wave and therefore do not change over waves.

Table 2. Fixed-effects regressions predicting changes in women's monthly earnings (logged).

	Model 1	Model 2	Model 3	Model 4
First birth	−0.268*** (0.026)	−0.264*** (0.027)	−0.265*** (0.029)	−0.266*** (0.029)
Second birth	−0.339*** (0.032)	−0.333*** (0.032)	−0.343*** (0.033)	−0.343*** (0.033)
Third birth	−0.373*** (0.043)	−0.369*** (0.043)	−0.387*** (0.043)	−0.387*** (0.043)
First birth × Partner's working hours		−0.009 (0.025)	−0.016 (0.026)	−0.016 (0.026)
Second birth × Partner's working hours		−0.021 (0.023)	−0.025 (0.023)	−0.026 (0.023)
Third birth × Partner's working hours		−0.060* (0.027)	−0.076** (0.028)	−0.075** (0.028)
First birth × Partner's earnings			0.013 (0.035)	0.012 (0.035)
Second birth × Partner's earnings			−0.004 (0.030)	−0.004 (0.030)
Third birth × Partner's earnings			0.027 (0.033)	0.027 (0.034)
First birth X Partner's gender role orientations				0.003 (0.044)
Second birth X Partner's gender role orientations				0.025 (0.047)
Third birth × Partner's gender role orientations				0.007 (0.064)
Partner's working hours		0.032 (0.019)	0.026 (0.019)	0.026 (0.019)
Partner's earnings			0.055 (0.028)	0.055 (0.028)
Constant	8.008*** (0.200)	7.978*** (0.203)	7.955*** (0.202)	7.959*** (0.202)
R-squared	0.201	0.205	0.218	0.218
N	3831	3831	3831	3831

Standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$. All models include: age, age squared and education level. Models 2–4 include interactions between childbirth dummies and woman's gender role attitudes.

Multivariate

The results of the first model indicate that the birth of a first child is on average related to a decrease in monthly earnings of about 24%. In order to ascertain the effect of the birth of a second child, we subtract the effect of a first birth from the effect of a second birth, because the reference category in both cases is the childless women. This reveals that the birth of a second child is related to a decrease in earnings of 5%. Additional analyses using those with one child as the reference category revealed that the effect of a second child is significant. A third birth is related to a decrease in earnings of 2%. Additional analyses reveal that the difference is only significant compared to having no children or one child. The effect of the birth of a third child is not significant compared to having two children. These results, illustrated in [Figure 1](#), support our fourth hypothesis that the earnings disadvantage associated with motherhood declines with parity.

Partner characteristics

We expected that women with a partner who works fewer hours would have a smaller decrease in earnings following the birth of a child. The results of Model 2 in [Table 2](#) show support for this expectation, but only with regard to the birth of a third child. For

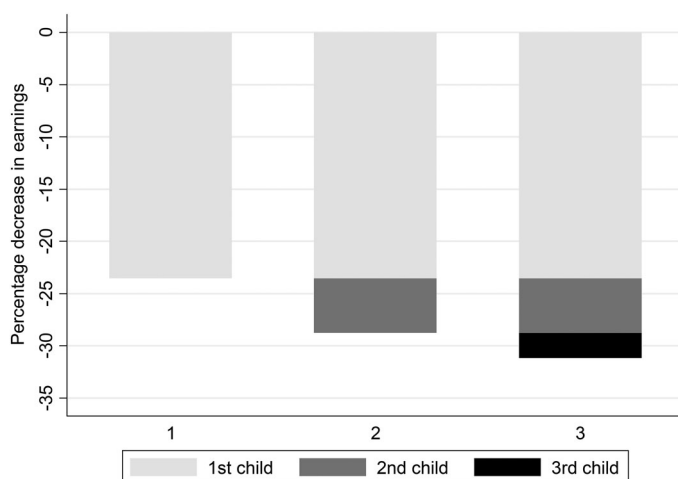


Figure 1. The separate and combined effect of the birth of a first, second and third child on a woman's earnings.

every ten hours that a partner works less (or more), the decrease in earnings associated with a third birth is about 6% smaller (or larger).

Our relative resources hypothesis stated that women with a lower earning partner would have a smaller decrease in earnings following the birth of a child. We do not find support for this expectation in the results of Model 3. The results remained the same in a specification where the interactions with partner's working hours were excluded. These findings contradict our hypothesis derived from the relative resources perspective.

Our third hypothesis posited that women with less traditional partners would get more help from their partners with domestic labor, resulting in a lower decrease in earnings associated with the birth of a child. The interactions between the dummies for the number of children and the partner's attitudes are not significant. A specification in which only the interaction with the partner's attitudes was estimated did not yield substantively different results. Therefore, we find no support for our gender roles hypothesis.

Throughout Models 2, 3 and 4 we included an interaction between the number of children and the woman's gender role attitudes. The effects of these interactions are not reported in Table 2, but are available upon request. The woman's gender role attitudes did not mitigate the effects of parity in any of the models. The results of all the models were also unaffected by excluding these interaction effects.

Work, motherhood and the economic crisis

The first and second wave of the NKPS were collected prior to the global economic crisis that unfolded in 2008, the third wave was collected at the height of this crisis around 2010. It is very likely that the economic crisis has influenced women's decisions regarding both work and motherhood. In order to ascertain whether our results are affected by the economic context in which the data were collected, we ran additional models. In these models, we interacted a dummy variable indicating whether an observation was collected before 2008 or after, with the variables of interest in our analyses: parity and partner

characteristics. The results (available upon request) suggested that the negative effect of childbirth on women's earnings was about 25% smaller during the economic crisis. This difference was roughly the same for the effect of a first, second and third birth, indicating that our findings with respect to parity are unaffected by the economic context. We did not find any substantive differences in the effects of partner characteristics either. One explanation why the negative effect of the birth of a child on women's earnings is smaller during economic downturn is that women are more reluctant to cut back their working hours because of the associated financial risks.

Additional analyses

As discussed, we only included observations in our analyses from those who were employed at the time of the interview. It is possible that this selection criterion affects our results with respect to the effect of partner characteristics on the motherhood penalty. In order to assess whether this is the case, we modeled unemployment (i.e. exclusion from the analyses) on the variables that are incorporated in our main models using logistic regression analyses. The results (available upon request) revealed that women who give birth, women who are older, who have relatively lower levels of education and who have more traditional attitudes are more likely to become unemployed. Furthermore, having a more traditional male partner was also related to a greater likelihood of becoming unemployed. However, we found no evidence that the effect of childbirth on unemployment is moderated by partner characteristics. This indicates that the results of our main models with respect to partner characteristics are not affected by our selection criterion.

Discussion

With this paper, we aimed to contribute to the literature in two distinct ways. First, we explicitly examined whether characteristics of the partner affect the association between the birth of a child and a woman's earnings. Second, we studied how the effects of childbearing on women's earnings depend on parity. We hypothesized that having a partner who worked fewer hours, who had lower earnings or who had less traditional attitudes, would mitigate the negative effect of motherhood on earnings. Furthermore, building on recent work (Abendroth et al., 2014), we expected to find that the negative effect of motherhood on earnings would decline with parity.

Our findings indicate that partner characteristics hardly matter for the effect that motherhood has on women's earnings. Neither the partner's earnings, nor his gender role attitudes affect the relation between motherhood and earnings. This suggests that, at least in the Netherlands, dynamics surrounding children and women's earnings do not seem to involve the relative resources (e.g. Greenstein, 1996) or the gender role attitudes (e.g. Thompson & Walker, 1989) of the partner. One explanation why the relative resources of the partner do not matter, may be that the division of childcare is not (or is less) the result of power struggles within a couple. The perspective is based on the notion that domestic labor is a nuisance which partners will try to avoid, and childcare may not be seen as a nuisance. Although the perspective is generally extended to include childcare (Deutsch, Lussier, & Servis, 1993), in the Netherlands the underlying

mechanisms of the division of household duties and childcare tasks do not seem to be the same. There is some evidence both in the Netherlands (Poortman & Van Der Lippe, 2009) and in the United States (Ishii-Kuntz & Coltrane, 1992) that this is indeed the case.

A third perspective, time availability (e.g. Blood & Wolfe, 1960), does seem to matter, but only marginally. The partner's working hours mitigate the effect of motherhood only concerning the birth of a third child. A partner who works fewer hours may therefore enable a woman to remain more attached to the labor market following the birth of a third child, leading to a smaller decrease in earnings. By and large however, the effect of motherhood on women's earnings is remarkably independent of characteristics of the partner. This notion was further bolstered by additional analyses showing that partner's *time spent on household labor* (whether typically female or typically male tasks) and *emotional support* were both also unrelated to the effect of motherhood on women's earnings. In earlier work scholars suggested that women's own characteristics, such as being married (Budig & England, 2001), her position in the earnings distribution (Budig & Hodges, 2010) and her level of educational attainment (Anderson et al., 2003), were partly representative of effects that the partner has. Our study does not support this point of view, at least not in the Netherlands. In case differences exist in the Netherlands in the effect of motherhood on women's earnings depending on for instance their position in the earnings distribution, this does not seem to be driven by characteristics of the partners of these women.

Our findings do provide strong evidence that parity matters when considering the effect of motherhood on a woman's earnings. A first child is more detrimental to women's earnings than a second or third child. In fact, a second child or third child hardly seems to affect women's earnings at all. Adjustments to women's employment therefore indeed seem to be most drastic following the birth of first child (Abendroth et al., 2014). Our findings are also in line with data from Statistics Netherlands (Bierings & Souren, 2011), which showed that working hours are most strongly affected by the birth of a first child. There are several explanations for this finding. Mothers may benefit from economies of scale, or they may not be able to afford to cut back their working hours as additional children are born. Abendroth et al. (2014) also suggest that employer discrimination may be most pronounced following a first birth. Future research could aim to more fully comprehend why the effect of motherhood on earnings declines with childbirth. Whatever the mechanism may be, our study reiterates the importance of parity when it comes to examining the relation between motherhood and a woman's labor market outcomes.

There are several limitations to the current study. It should first be stressed that we only examine working couples. As discussed, this may lead to an underestimation of the motherhood penalty because we exclude women who quit working entirely following the birth of a child. We found evidence for this in additional analyses, which showed that childbirth was related to a greater likelihood of becoming unemployed. Results of the same analyses did suggest however, that the impact of childbirth on the likelihood of unemployment is not affected by characteristics of the partner. We also only focused on women with a partner in this study, while some women will bear children without a partner present. We do not address the effect that childbearing might have on these women's earnings. Furthermore, our selection of couples who remained together over the course of the three waves possibly introduced a bias

towards couples with close relationships, which may have influenced the findings. In any case, the selection criteria we applied need be kept in mind when gauging the generalizability of our findings. Also, although our results suggests that the economic independence of women takes a considerable hit following the transition to motherhood, the effect need not necessarily persist over time. Earlier work has shown that the earnings gap between mothers and childless women seems to dissipate over time (Sigle-Rushton & Waldfogel, 2007).

Whether our findings are typical for the Netherlands, or whether they also pertain to other countries remains to be seen. The Netherlands has very flexible working hour arrangements compared to other countries, especially for women (Yerkes, 2013). Therefore one would expect to find effects of partner characteristics more easily in the Netherlands than in a country where working hours are more rigid. Future studies, preferably making use of cross-national dyadic data, should put this idea to the test in countries outside the Netherlands.

Despite its limitations, the current study has revealed that in a traditional context like the Netherlands, partner characteristics are of little influence on the negative association between motherhood and income. Parity, however, turned out to be of significant influence, with the transition to motherhood leading to the most substantial drop in income.

Notes

1. In 2017, this will be extended to five days (Antwoord voor bedrijven, 2016).
2. Disregarding the observations of those who are students, retired or disabled, our exclusion of those who are not employed leads to a loss of 31% of the observations ($N = 3377$). Another 10% are employed but work less than 12 hours per week ($N = 681$). This is still a relative large proportion of the entire sample. However, readers should be aware that in the NKPS women (and men) that are unemployed are amongst those who are oversampled.
3. In alternative analyses, we used the logged measure of partner's earnings. This did not lead to substantively different results.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by Netherlands Organization for Scientific Research [grant number 406-13-047] and European Research Council [grant number 324211].

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