CHILD PENALTY & MARRIAGE DISSOLUTION

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DISCLAIMER

Access to the anonymised data used in this study was provided by Statistics NZ in accordance with security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business, or organisation, and the results in this paper have been confidentialised to protect these groups from identification.

Careful consideration has been given to the privacy, security, and confidentiality issues associated with using administrative and survey data in the IDI.

Further detail can be found in the Privacy impact assessment for the Integrated Data Infrastructure available from https://www.stats.govt.nz/integrated-data/

01 BACKGROUND

BACKGROUND

Labour market outcomes for women are negatively impacted after the arrival of their first child → **child penalty** (Kleven et al., 2019a, 2019b; Nielsen et al., 2004)

Child penalties faced by mothers include decreased wages and earnings, reduced labour market attachment, higher likelihood of being employed part-time.

Recent research has focused on the underlying causes of the child penalty:

- The price of work flexibility such as more family-friendly careers, less commuting, more part-time work, atypical work schedules, irregular hours (Adda et al., 2017; Fontenayet al., 2023)
- Gender norms... (Kleven, 2022)
- ... while biological reasons have been ruled out (Andresen Nix, 2022; Kleven et al., 2021)

BACKGROUND

Small number of studies examining child penalty by marital status:

- A number of papers show being married is often associated with higher child penalties compared to being unmarried (Buding and England, 2001; Kleven, 2022; Emery, 2022)
- Conversely, Harkness (2016) and Kleven (2021) found higher child penalties for unmarried/single women compared to married women in the UK and Denmark
- Harkness (2022) finds a larger penalty for single mothers, who were previously married, compared to single mothers, who were unmarried, at birth of first child

▶ No consensus as to how marital status impacts child penalty

▶ Literature mainly focuses on partnerless mothers rather explicitly on divorced mothers (vs. single, never married, separated, widowed)

▶ Appears to be some impact of marriage dissolution on child penalty

▶ Limited understanding of mechanisms driving child penalty by marital status

FOCUS ON MARITAL DISSOLUTION

This study examines the potential role that marital status and marriage dissolution may play in understanding child penalties for women.

WHY MARITAL STATUS MAY MATTER:

- Divorce increases economic need as no economies of scale or income pooling with a partner
- Changing role for divorced mothers - both breadwinner and caregiver which may impact career choices
- Divorced individuals are less likely to have subsequent children and may return sooner to the labour market
- Divorced and married women may have different personality traits or gender norms that contribute to differences in their career trajectories

CONTRIBUTION TO LITERATURE

- First paper to investigate the relationship between marital status and child penalty in New Zealand (New Zealand is currently missing in the Child Penalty Atlas)
- Examines how marital status impacts child penalties in developed economies and considers different mechanisms to provide a better understanding as to why marital status has differential impacts on child penalty

Our findings show:

- Mothers face child penalties seven years after the birth of their first child
- This is -33.4% for employment and -39.8% for earnings and in line with estimates for mothers in Australia, US and the UK
- For mothers who get divorced within seven years after the birth of their first child, employment penalty is -4.7% (compared to -32.4% for married mothers) and is the same as fathers. For earnings, this is -12.7% (compared to -40.6%)
- Economic need is the mechanism driving these differences

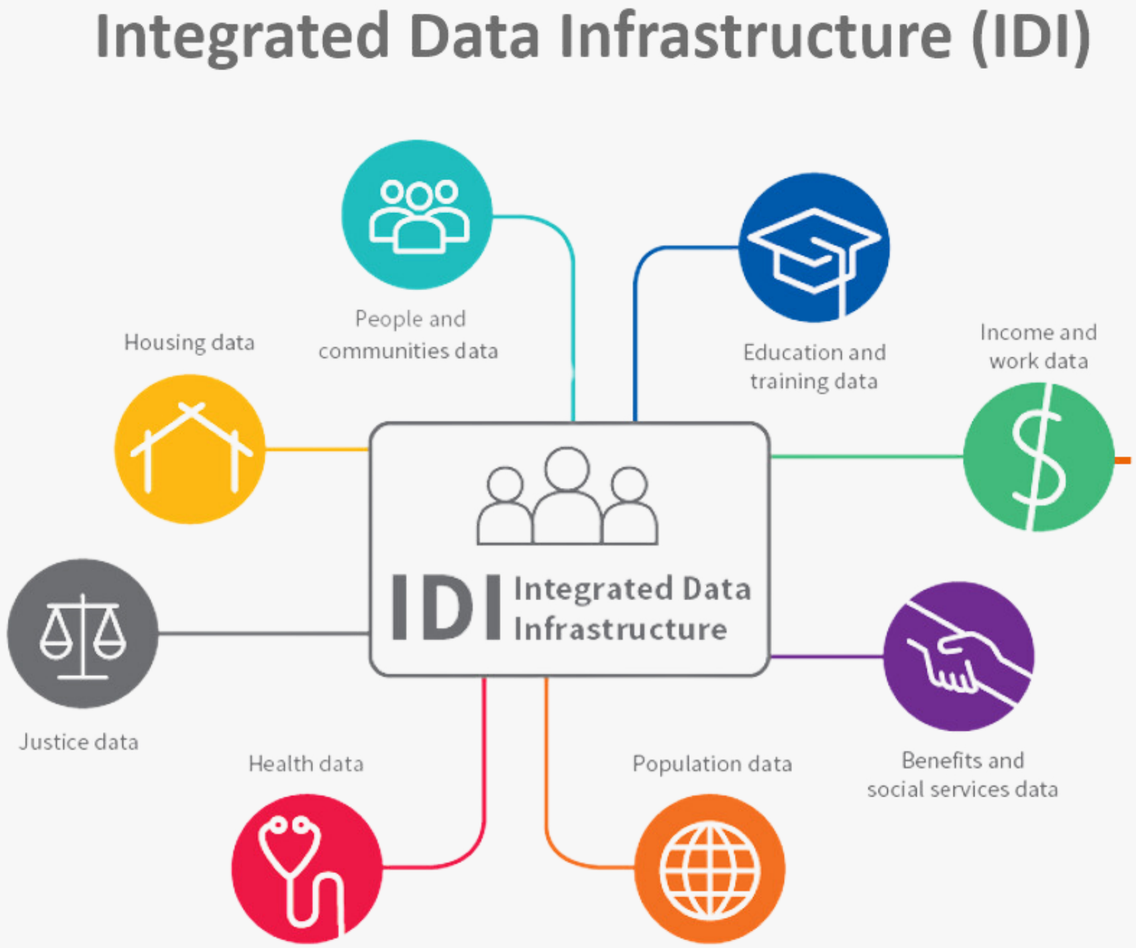
02 DATA & METHOD

DATA

The Integrated Data Infrastructure (IDI) is administered by Stats NZ and houses a wide range of population-wide administrative data collected from government organisations, as well as survey data.

Administrative data is collected by government agencies while conducting its business or legislative duties.

Individuals can be linked across different datasets.



IDENTIFICATION STRATEGY

1.

Department of Internal Affairs (DIA) birth records → child born between 2007 and 2015

Exclude children and parents who have had children with multiple partners

2.

DIA holds marriage and divorce records → parents who were married before the child's birth *

* legal requirement to be separated or live apart from each other for at least two years prior to divorce

3.

Treated Group: Divorced within first seven years after the child's birth

Final sample consists of 38,922 married and 555 divorced parents.

4.

Inland Revenue → monthly information on income from wages and salaries

DESCRIPTIVE STATISTICS

	Mothers			Fathers		
	Married	Divorced	t-stats	Married	Divorced	t-stats
	(1)	(2)	(3)	(4)	(5)	(6)
Age	29.68	29.65	0.163	31.55	32.34	-3.722***
	(4.24)	(4.74)	(0.870)	(4.95)	(5.43)	(0.000)
Bachelor's or Higher	0.273	0.207	3.437***	0.136	0.077	4.011
	(0.445)	(0.406)	(0.000)	(0.343)	(0.268)	(0.000)
Employed	0.862	0.840	1.493	0.794	0.760	1.916*
	(0.345)	(0.367)	(0.135)	(0.405)	(0.427)	(0.056)
Earnings ($NZD)	5,144	4,736	3.321***	6,066	5,501	3.909
	(2628)	(2287)	(0.000)	(2944)	(2769)	(0.000)
Marriage length (years)	1.923	1.983	-0.608			
	(2.316)	(2.657)	(0.543)			
Have second child †	0.788	0.350	25.010***			
	(0.409)	(0.477)	(0.000)			
Individuals	38,922	555		38,922	555	

Note: IDI and authors' calculations. Descriptive statistics refer to 12 months before birth of the first child. Divorced parents have their divorce recorded within the first seven years after the child's birth. †Within seven years after the birth of the first child.
Numbers in parenthesis are standard deviations in columns (1), (2), (4) and (5) and p-values in columns (3) and (6).

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EMPIRICAL STRATEGY

- Closely follows Kleven et al. (2019b, 2021)
- Event study approach where **t = 0** is birth of first child
- Follow labour market outcomes for parents from **t - 60** (five years prior) to **t + 84** (7 years after) who were married before t = 0
- **Treatment group:** divorced in the 7 years following the child's birth (between t = 1 and t = 84)
- **Control group**: did not divorce in the 7 years following the child's birth

EMPIRICAL STRATEGY

We apply the following specification:

$$Y_{it} = \alpha' \mathbf{D}_{it}^{Event} + \beta' \mathbf{D}_{it}^{Age} + \gamma' \mathbf{D}_{it}^{Year} + \delta' \mathbf{D}_{it}^{Month} + \nu_{it} \qquad (1)$$

- i refers to individual at event time t where t is at the monthly level
- Y refers to labour market outcome - employment or earnings
- α refers to event-time dummies which is months to/from child's birth
- Reference month t = - 12 (one year before child's birth and before pregnancy)
- Account for age, year and month dummies to control for life cycle and time trends

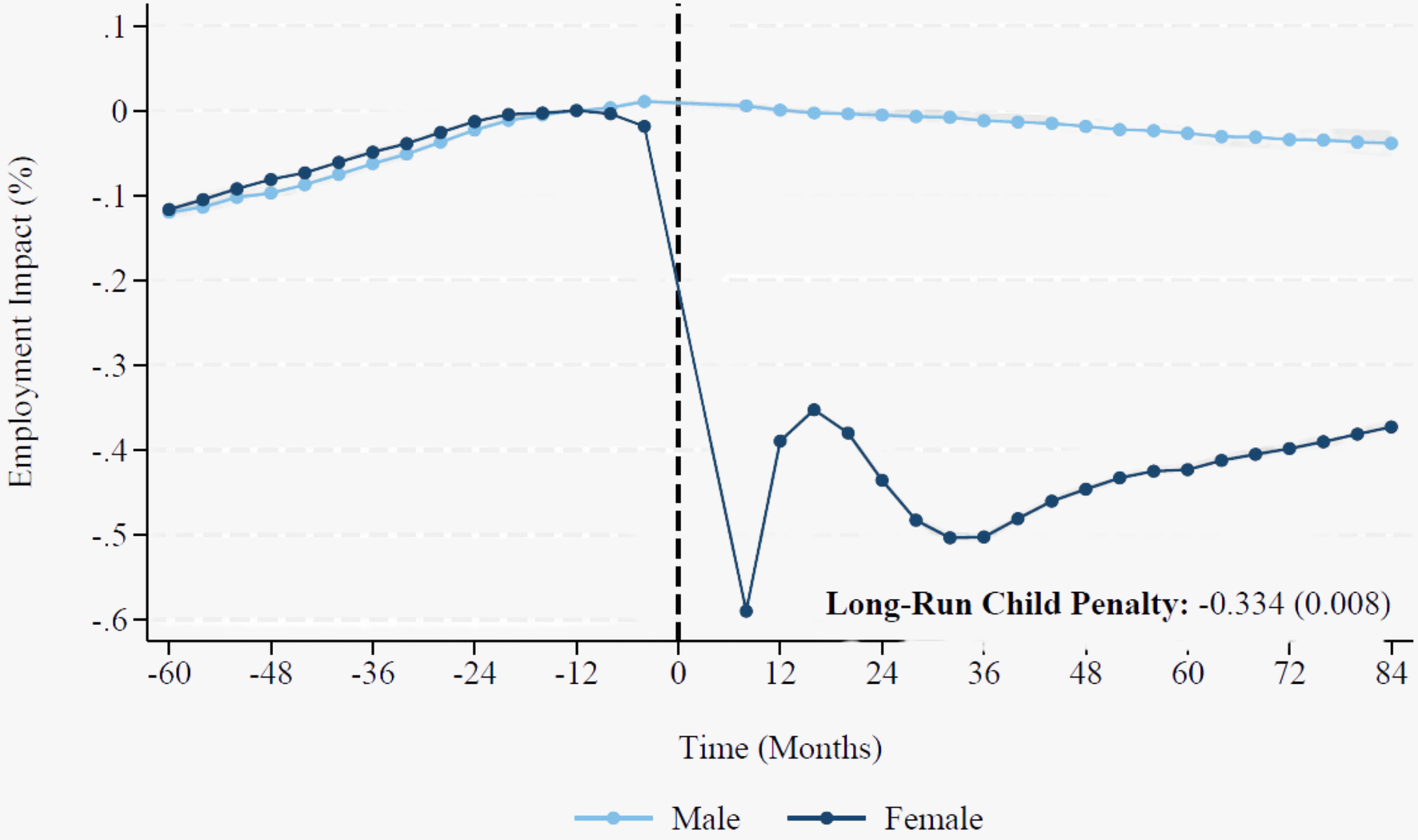
Regressions are run separately for mothers and fathers and by marital status (four specifications).

We then calculate the percentage effect P:

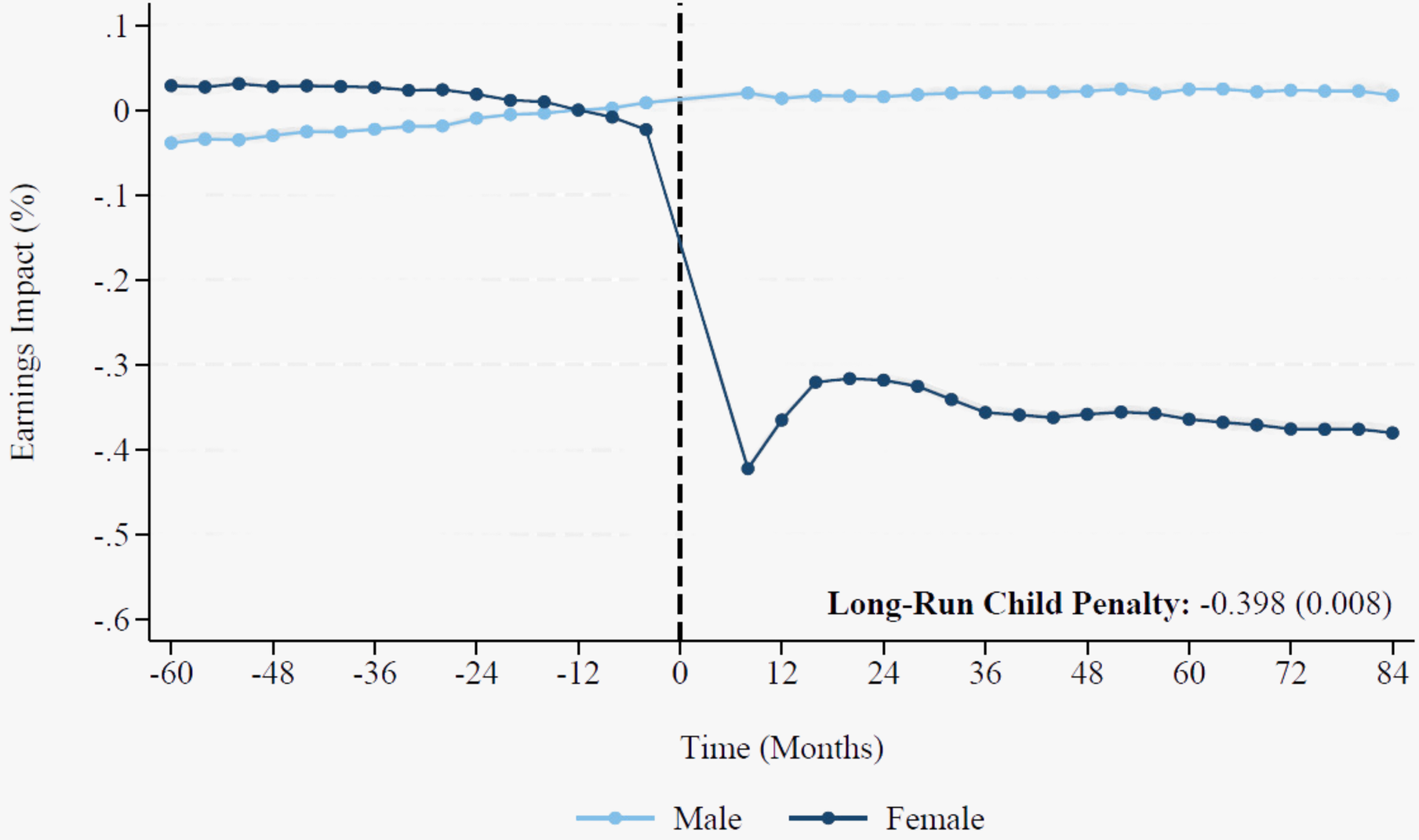
$$P_t \equiv \frac{\hat{\alpha}_t}{E[\hat{Y}_{it}|t]} \qquad (2)$$

03 RESULTS

RESULTS EMPLOYMENT

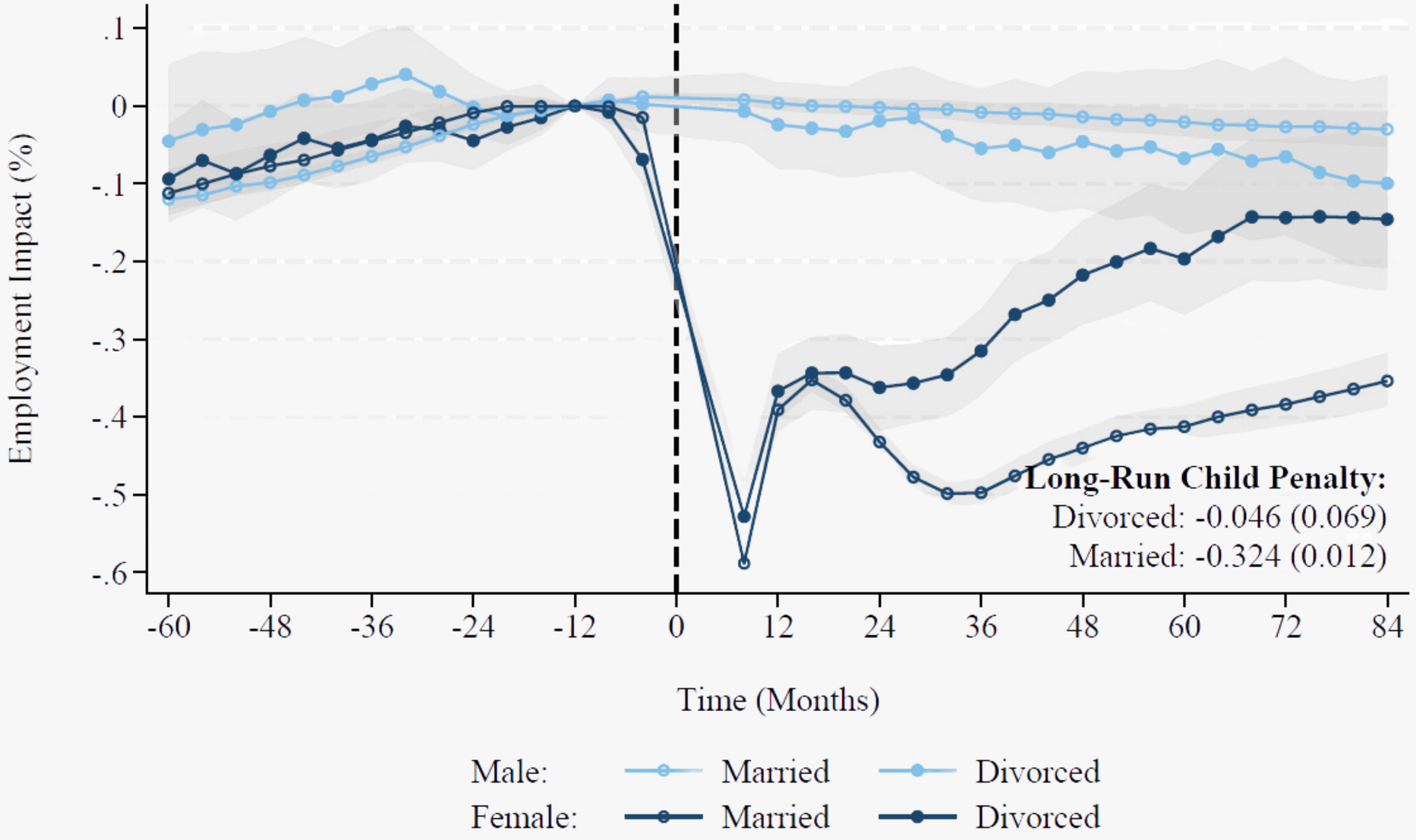


RESULTS EARNINGS



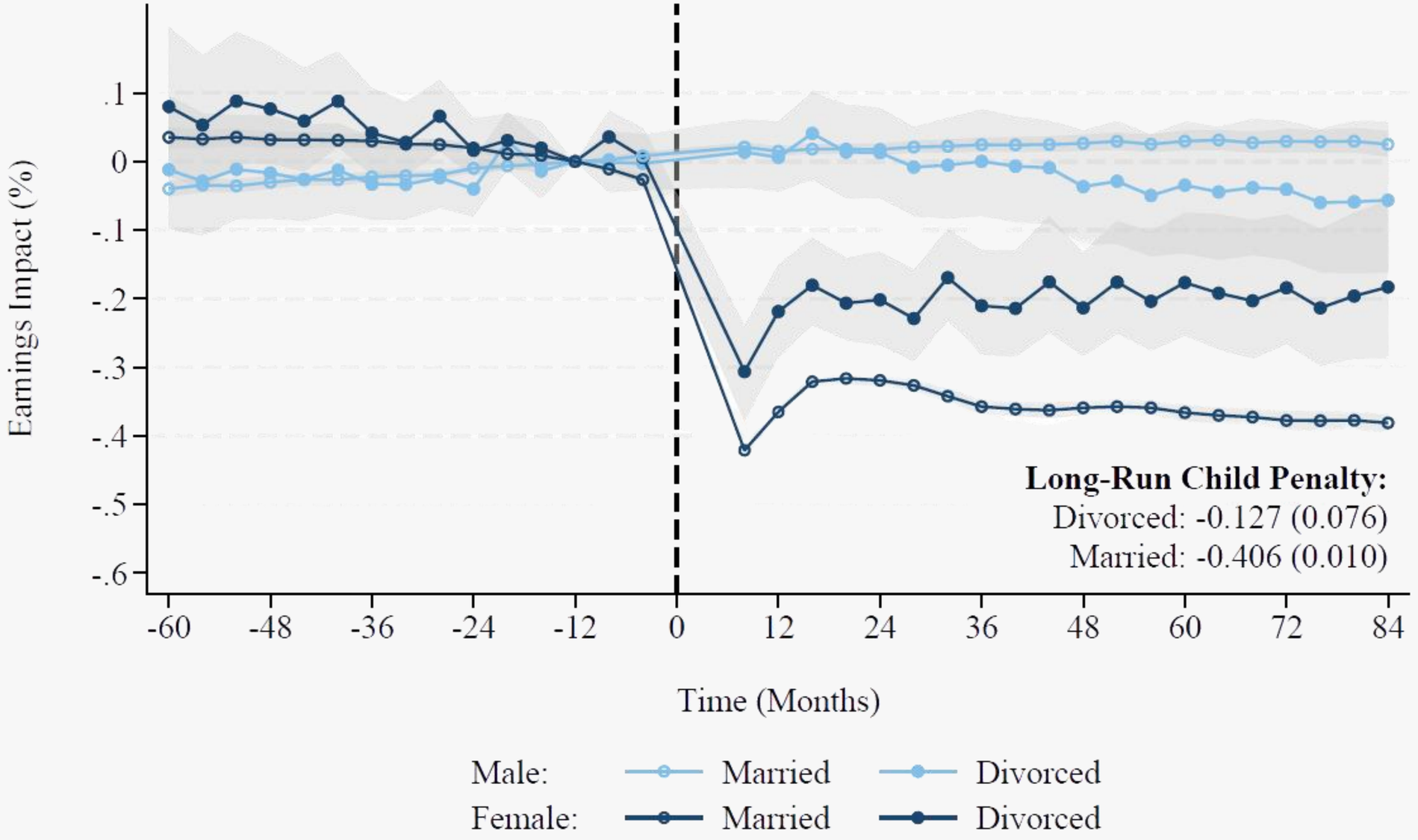
RESULTS

EMPLOYMENT BY MARITAL STATUS



RESULTS

EARNINGS BY MARITAL STATUS



04 MECHANISMS

POTENTIAL MECHANISMS

ECONOMIC NEED

SUBSEQUENT FERTILITY

GENDER NORM

ECONOMIC NEED

- Sharp increase in economic need following a divorce as there is no longer economies of scale or income pooling
- Married families earning below $50,000: 4.2% before childbirth and 5-9% after childbirth
- Divorced fathers: 3.5% before childbirth to 15.7% seven years after childbirth
- Divorced mothers: 7.2% before childbirth to 45.7% seven years after childbirth

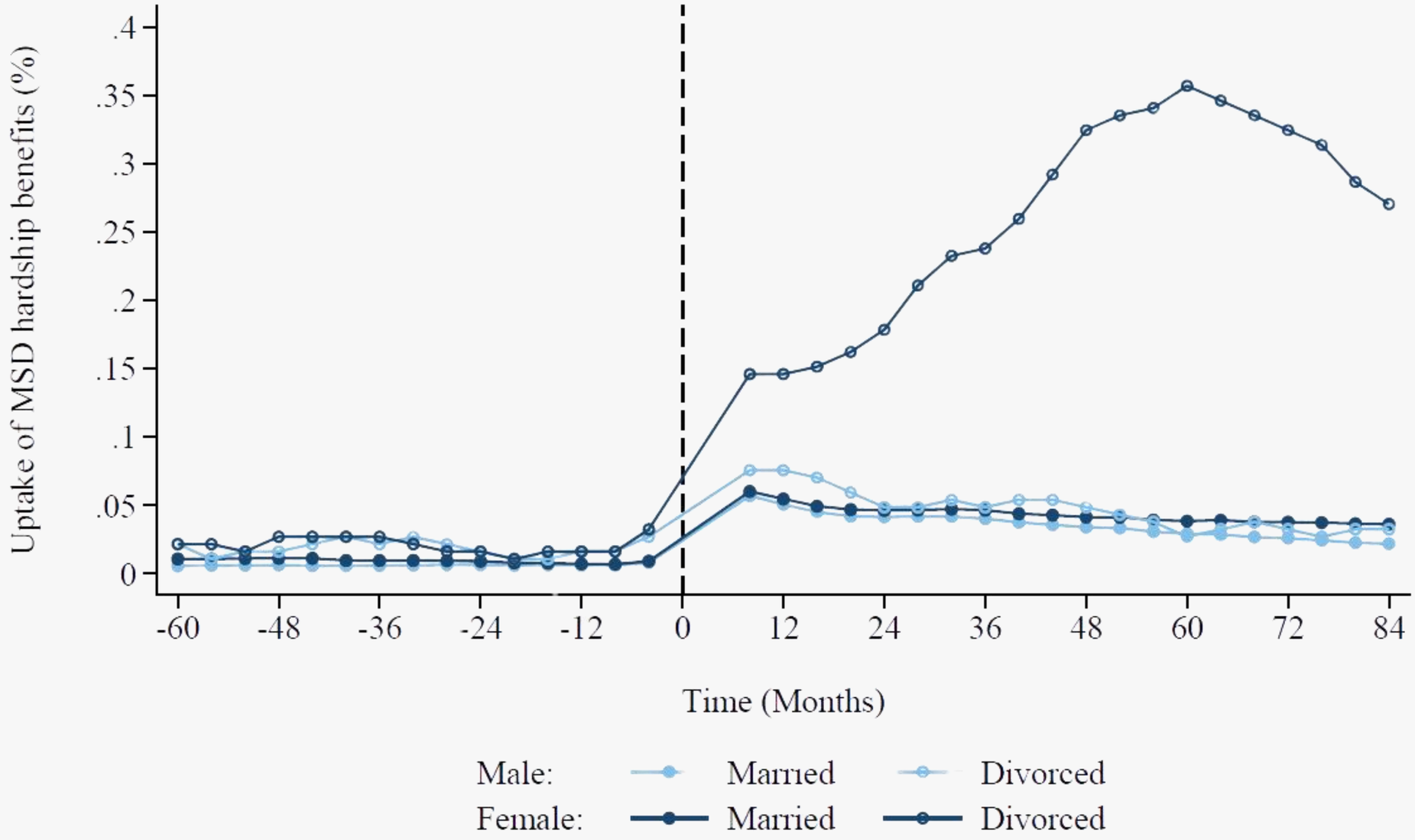
ANNUAL HOUSEHOLD INCOME BELOW $50,000

Months since childbirth	Married Families	Divorced Mothers	Divorced Fathers
-33 to -12	0.04	0.07	0.035
-11 to 12	0.048	0.068	0.046
13 to 24	0.090	0.265	0.137
25 to 36	0.065	0.180	0.070
37 to 48	0.063	0.274	0.066
49 to 60	0.062	0.464	0.138
61 to 72	0.068	0.410	0.128
73 to 84	0.06	0.45	0.157
Total	72 939	1 014	1 023

Note: IDI and authors' calculations. The table shows the fraction of households reporting an annual household income of below NZ$50k in the 2013 and 2018 Census. Note that each individual reports their annual household income twice, which doubles the number of observations. The months since childbirth refers to the difference between Census date (March 2013, resp. 2018) and child's birth date.

ECONOMIC NEED

BENEFIT RECEIPT (HARDSHIP)

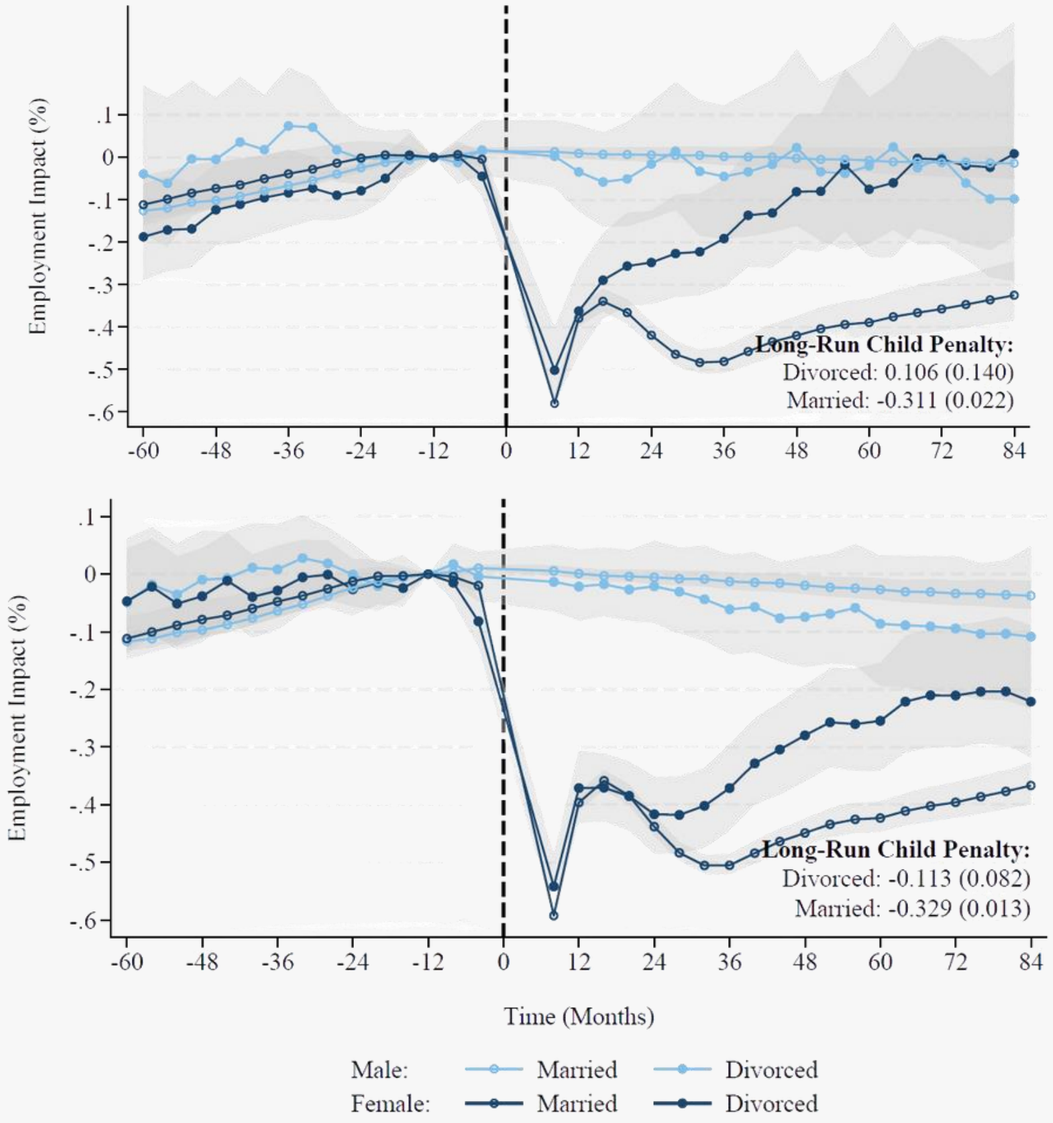


ECONOMIC NEED

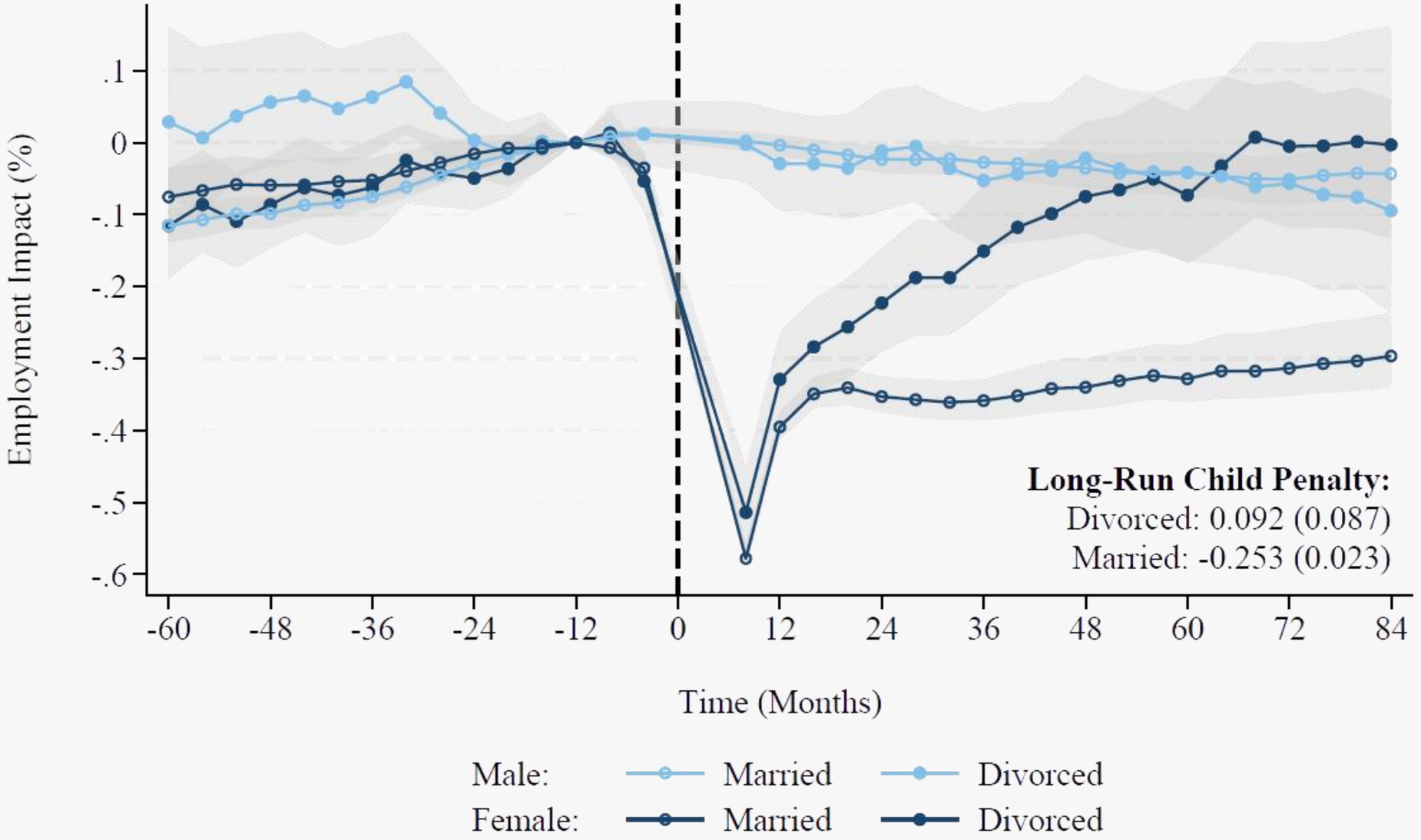
DIVORCE TIMING & EMPLOYMENT

EARLY
(1.5 TO 4 YEARS)

LATE
(5 TO 7 YEARS)



SUBSEQUENT CHILDREN



GENDER NORMS

No statistically significant difference between married and divorced women with respects to gender progressivity index.

GENDER PROGRESSIVITY INDICATOR, NEW ZEALAND

	Married	Divorced
Agree	10.16	6.63
Nor agree neither disagree	13.21	15.47
Disagree	76.63	77.90
Total	100.00	100.00

Note: Authors' calculations using data from the World Values Survey for wave 3 (1994–1998), 5 (2005–2009), 6 (2010–2014) and 7 (2017–2022). The numbers show the level of agreement or disagreement to the statement: "When jobs are scarce, men should have more right to a job than women". Unweighted results.

05 CONCLUSION

CONCLUSION

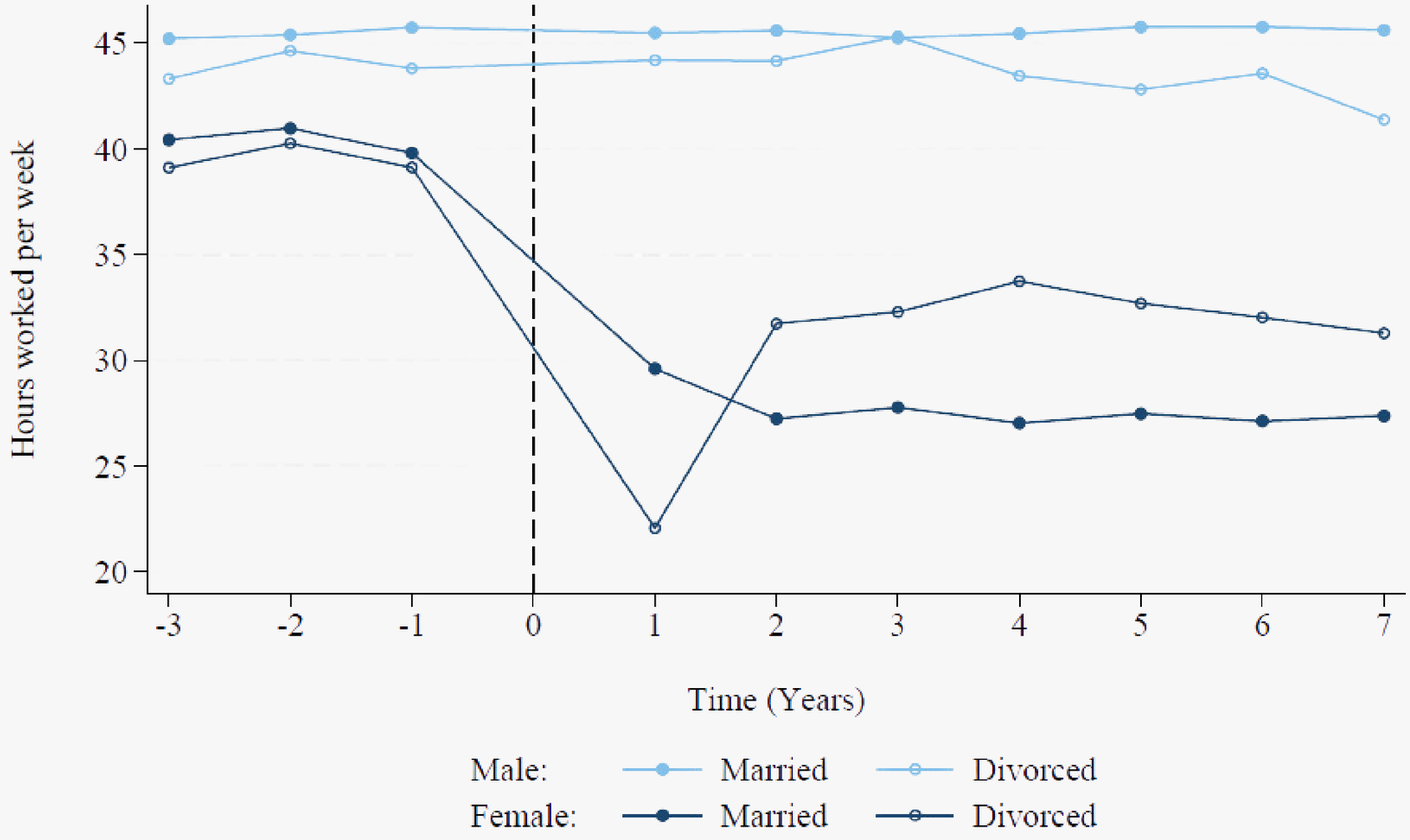
- This study provides the first New Zealand child penalty estimates (employment and earnings) for the "Child Penalty Atlas"
- Our findings show married mothers suffer a larger child penalty (especially employment) compared to divorced mothers - not the case for fathers
- Increased economic need among divorced mothers drives their stronger labour market attachment which results in smaller child penalties - not subsequent fertility or differences in gender norms.

THANK YOU!

APPENDIX

RESULTS

NUMBER OF WORKING HOURS PER WEEK BY GENDER AND MARITAL STATUS



RESULTS

PROBABILITY OF WORKING IN A FIRM WITH 80% OF STAFF OF THE SAME GENDER