

# The Employment Effects of Israel's EITC: Evidence on the Differential Effect of Family vs. Individual-Income Based Designs



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# Introduction

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- Israel launched an EITC program in 2007.
- The program was expanded several times – indicating policymakers' support.
- **BOI Research and persistent endorsement by BOI** governors played an important role in the program's design and promotion.



# Implementation Timeline

<b>Legislative change regarding eligibility criteria and benefit amounts</b>	<b>Year of payment</b>	<b>Eligibility period</b>
Eligibility of employees in the pilot regions	2008	1-12 2007
Eligibility expanded to self-employed in the pilot regions	2009	1-12 2008
Eligibility expanded to mothers of 0-2 year olds nationwide	2010	1-12 2009
The eligibility in the pilot areas was restricted only to these 4 months.	2011	1-4 2010
Mothers of 0-2 year olds nationwide remained eligible for the full year	2011	1-12 2010
Nationwide implementation for employees and self-employed	2012	1-12 2011
A 50% increase in the credit for mothers of children aged 0-19	2013	1-12 2012
Raising the benefits for men to the women's level, and introducing a two-workers bonus	2019	1-12-2018



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## Economic/Social Background

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- High and rising **poverty rate** – especially after the social transfers' cuts in 2002-2003.
- **Low employment** rate – especially among the low-skilled, Arab women and ultraorthodox Jews.
- Research (e.g., of the BOI) indicating that **'Income Support' discourages employment.**
- **Personal Income tax reductions:** need to share the benefits with low income employees.



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## Intellectual/Professional Background

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- Successful **expansion of the EITC in the US** during the 1990s.
- Adoption of **similar programs** in the UK, Ireland, New Zealand and Australia (and a few others).
- Consistent with the ‘**Welfare to Work**’ spirit; applies only to **working families** and increases incentives to work.



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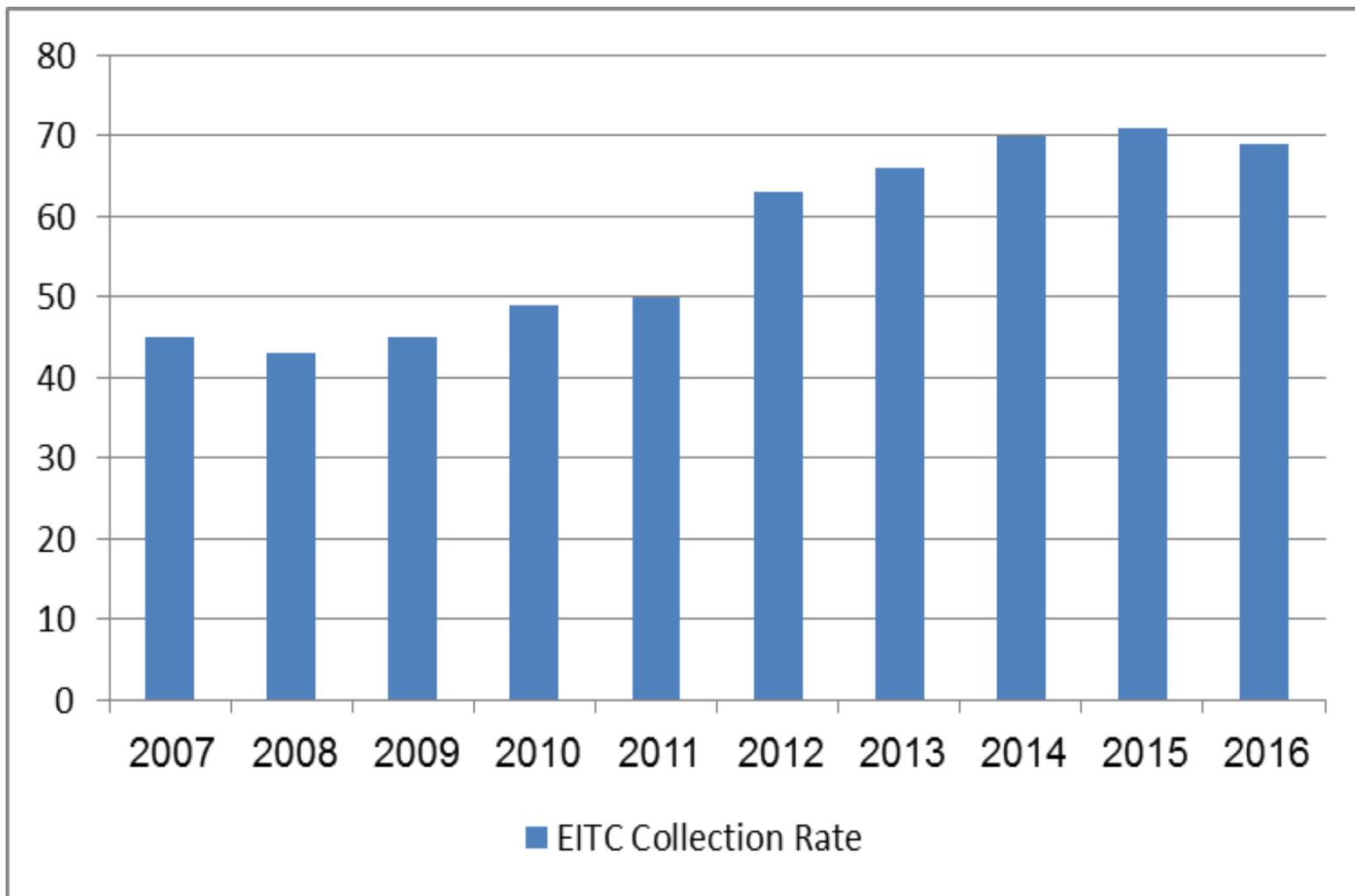
# Informed Professional Preparation

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- **Simplicity:** minimal reporting; ignore capital income.
- **Avoid stigma:** administer by ITA
- **Political legitimacy:** age 23, non-linear with respect to the number of children; focused on **target group**
- **Limit intra-family effects** and disincentives
- Start with a **pilot**
- Designated ongoing **research team**



## Collection rate of the EITC – speedy convergence to the US level (% of those eligible according to ITA data)





## Well targeted program

(% of payments reaching the 'working poor' – 2011 data)

Wage income quintile	Net monthly household wage*	Average monthly EITC paid*	EITC as a percent of wage income	EITC recipients by quintile (% of recipients)	Sum paid by quintile (% of EITC payments)
1	850	104	12	31	31
2	2,164	134	6	40	44
3	3,547	136	4	23	21
4	5,325	113	2	6	4
5	10,328	121	1	0	0
Total	4,016	124	3	100	100

\* - NIS per standardized person in the receiving household.



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## What about employment?

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- In the US and the UK **the EITC was found to:**
  - **Positively affect single-earner households** – especially single mothers.
  - **Negatively affect married couples' employment** – especially married women.
- But, by design, **the scope for intra-family effect in Israel is limited**; eligibility is based predominantly on the individual's income.



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## Data and methodology

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- ITA data on employees are used to examine **exits from employment.**
- Compare exit rates of EITC recipients (or eligible persons) to non-recipients.
  - During the **'pilot' period**
  - To similar people during the **entire program period**
  - Using Propensity Score Matching for people who **worked both in 2005-06 and during 2011-13.**
- Focus on married couples in the relevant income and age ranges.



## The EITC's Effect on Exits from Employment - Men (Odds ratio, 2008 - 2009)

	(2)	(3)	(4)
Treated	<b>0.500***</b>	<b>0.494***</b>	<b>0.693***</b>
Treated and spouse treated	1.369	1.724	1.542*
Spouse treated	<b>0.876</b>	<b>0.700*</b>	<b>0.842</b>
One year change in wife's income (value)	<b>0.998***</b>	<b>0.998***</b>	<b>0.998***</b>
Subject's monthly income (NIS 1,000's)	0.729***	0.733***	0.728***
Annual spousal income (NIS 1,000's)	<b>0.997***</b>	<b>0.997***</b>	<b>0.997***</b>
Parent to a child under the age of 1	0.840***	0.850***	0.844***
Parent to child aged 5 - 9	1.006	1.010	1.002
Working in the public sector	0.584***	0.589***	0.579***
Number of observations	41,879	39,408	41,879
Log pseudo likelihood	-11,005.80	-10,354.20	-11,010.90



## The EITC's Effect on Exits from Employment - Women (Odds ratio, 2008 - 2009)

	(2)	(3)	(4)
<b>Treated</b>	<b>0.480***</b>	<b>0.487***</b>	<b>0.815**</b>
Treated and spouse treated	1.292	1.860	1.274
<b>Spouse treated</b>	<b>0.567</b>	<b>0.394</b>	<b>0.756</b>
One year change in spousal income (value)	0.999**	0.999**	0.999**
Subject's monthly income (NIS 1,000's)	0.726***	0.729***	0.727***
Annual spousal income (NIS 1,000's)	0.996***	0.996***	0.996***
<b>Parent to a child under the age of 1</b>	<b>1.748***</b>	<b>1.740***</b>	<b>1.744***</b>
<b>Parent to child aged 5 to 9</b>	<b>1.174***</b>	<b>1.179***</b>	<b>1.168**</b>
Working in the public sector	0.467***	0.458***	0.467***
Number of observations	35,511	34,364	35,511
Log pseudo likelihood	-7,361.30	-7,054.60	-7,375.40



## The EITC's Effect on Exits from employment - Men (Odds ratio 2006-2013)

	(2)	(3)	(4)
<b>Treated</b>	<b>0.424***</b>	<b>0.421***</b>	<b>0.753***</b>
Treated and spouse treated	1.121	1.222*	0.938
<b>Spouse treated</b>	<b>0.824***</b>	<b>0.764***</b>	<b>0.792***</b>
One year change in wife's income (value)	0.998***	0.998***	0.992***
Subject's monthly income (NIS 1,000's)	0.741***	0.741***	0.740***
Annual spousal income(in 1,000's NIS)	1.000	1.000	1.008***
Parent to a child under the age of 1	1.016	1.023	1.023
Parent to child aged 5 to 9	1.070***	1.070***	1.068***
Working in the public sector	0.691***	0.689***	0.682***
Number of persons	92,441	91,537	92,441
Number of observations	372,945	352,880	372,938
Log likelihood	-81,787.80	-76,126.30	-81,970.80



## The EITC's Effect on Exits from employment - Women (Odds ratio 2006-2013)

	(2)	(3)	(4)
<b>Treated</b>	<b>0.397***</b>	<b>0.410***</b>	<b>0.738***</b>
Treated and spouse treated	0.938	1.051	0.783***
Spouse treated	1.171**	1.055	1.053
One year change in spousal income (value)	0.999***	0.999***	0.994***
Subject's monthly income (NIS 1,000's)	0.700***	0.700***	0.699***
Annual spousal income(1,000's NIS )	<b>1.001***</b>	<b>1.001***</b>	<b>1.009***</b>
<b>Parent to a child under the age of 1</b>	<b>1.781***</b>	<b>1.753***</b>	<b>1.768***</b>
<b>Parent to child aged 5 to 9</b>	<b>1.087***</b>	<b>1.078***</b>	<b>1.080***</b>
Working in the public sector	0.605***	0.611***	0.603***
Number of persons	109,744	109,038	109,744
Number of observations	491,065	471,378	491,060
Log likelihood	-97,536.30	-92,073.90	-97,848.70



## Treatment Effects by Group - Men

	All	Core	Ultra-orthodox	Arabs	Older (55+)	Young (22-35)	1-2 Children	3+ Children
<b>Treated</b>	<b>-0.031***</b>	<b>-0.032***</b>	<b>-0.039***</b>	<b>-0.026***</b>	<b>-0.021***</b>	<b>-0.033***</b>	<b>-0.033***</b>	<b>-0.027***</b>
Treated and spouse treated	0.011***	0.015**	0.011	0.008	-0.005	0.017***	0.018***	0.002
Spouse treated	-0.017***	-0.011***	-0.012	-0.025***	-0.009	-0.025***	-0.016***	-0.010***



## Treatment Effects by Group - Women

	All	Core	Ultra-orthodox	Arabs	Older (55+)	Young (22-35)	1-2 Children	3+ Children
<b>Treated</b>	<b>-0.026***</b>	<b>-0.022***</b>	<b>-0.021***</b>	<b>-0.039***</b>	<b>-0.031***</b>	<b>-0.030***</b>	<b>-0.025***</b>	<b>-0.021***</b>
Treated and spouse treated	-0.006	0.002	<b>-0.034**</b>	0.004	-0.012	<b>-0.016**</b>	-0.0002	-0.008
Spouse treated	0.006	-0.005	<b>0.035**</b>	0.001	-0.002	<b>0.018***</b>	0.0009	0.003



## PSM: The impact of the EITC on exits - Men

		<b>treated</b>	<b>control</b>	<b>diff</b>	<b>diff in diff</b>	<b>T-st</b>
2005-2011	2005	0.047	0.063	-0.016	-0.028	-5.156
	2011	0.039	0.083	-0.044		
2005-2012	2005	0.056	0.076	-0.020	-0.014	-2.683
	2012	0.047	0.081	-0.034		
2005-2013	2005	0.052	0.070	-0.018	-0.027	-5.052
	2013	0.041	0.086	-0.045		
2006-2011	2006	0.046	0.052	-0.006	-0.032	-6.325
	2011	0.041	0.079	-0.038		
2006-2012	2006	0.056	0.053	0.003	-0.041	-8.270
	2012	0.044	0.082	-0.038		
2006-2013	2006	0.048	0.061	-0.013	-0.037	-7.365
	2013	0.040	0.089	-0.050		



## PSM: The impact of the EITC on exits - Women

		<b>treated</b>	<b>control</b>	<b>diff</b>	<b>diff in diff</b>	<b>T-st</b>
2005-2011	2005	0.051	0.073	-0.023	-0.021	-5.343
	2011	0.024	0.068	-0.044		
2005-2012	2005	0.057	0.067	-0.010	-0.028	-6.911
	2012	0.028	0.066	-0.038		
2005-2013	2005	0.068	0.072	-0.004	-0.032	-7.255
	2013	0.026	0.062	-0.036		
2006-2011	2006	0.045	0.060	-0.015	-0.031	-8.495
	2011	0.025	0.071	-0.046		
2006-2012	2006	0.054	0.067	-0.012	-0.026	-7.104
	2012	0.029	0.068	-0.039		
2006-2013	2006	0.056	0.071	-0.015	-0.026	-6.598
	2013	0.026	0.067	-0.041		



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## Conclusion

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- Receiving an EITC is associated with a **reduction of 1 to 2 percentage points in exits** from employment.
- The EITC effect is present in **all population segments**; it is **strongest for ultraorthodox men, Arab women** and younger employees (ages 22-35)
- EITC eligibility of the wife has no negative effect on the employment of men.
- A negative effect of spousal EITC eligibility is present among ultraorthodox women and women in ages 22-35.
- **The negative spousal effect is not present for women who are eligible to the EITC.**



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**Thank You**