LUND UNIVERSITY

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Earned Income Tax Credit and Wages

A Study of Swedish Panel Data

Bachelor Thesis

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Abstract

This thesis examines how the introduction of an Earned Income Tax Credit (EITC) in Sweden in 2007 may have affected pre-tax salaries. Previous research has found that the incidence of an EITC may not be entirely carried by the employees, which in some earlier research is assumed. A reduction in pre-tax salaries implies that a portion of the tax credit benefits the employers. If true, an EITC may increase income inequality. Previous research has also estimated the elasticity of labor supply to be different between men and women which suggests different responses to an EITC. Using collapsed data from Statistics Sweden I examine the effect of the EITC on pre-tax salaries by using a difference in differences approach. My results show that the EITC did not have an effect on pre-tax salaries. Neither did it have a dissimilar impact on pre-tax salaries depending on gender. These results suggest that the incidence of the EITC was exclusively carried by the employees and that the EITC did not increase income inequality by inducing changes in pre-tax salaries.

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1. Introduction

In 2007 the newly elected center-right wing government introduced an Earned Income Tax Credit (EITC). The reasoning behind it was to make it more profitable to work and by so incentivize people to work more. Especially making it more profitable for people outside the labor force to become a part of the labor force was an important objective for the EITC. This group often saw the least benefits of increasing their labor supply due to a combination of decreases in government grants and increases in taxes, leaving a very small net effect off working more. This is where the government saw the biggest possibilities for an increase in labor supply. An EITC would result in a higher net effect of choosing to work more. In each year between 2008 and 2010 the EITC was made more generous to make it even more profitable to choose to work more. See the appendix for a table showing the details of how the EITC was calculated in each year. (Finansdepartementet 2006, 2007, 2008, 2009)

Previous research has found EITCs to have a negative impact on pre-tax salaries for the groups benefitting from it. If true, this would both weaken the case for the EITC as a labor supply stimulating policy and affect the evaluation of the EITC when considering the distributional consequences. In this thesis I examine whether such effects can be seen on salaries in Sweden following the introduction of an EITC in 2007.

Using collapsed data on occupational, educational and gender level with records of average salaries and number of employees for 2003-2013 and comparing groups which saw a larger than the median change in taxes with groups which saw a smaller than the median change in taxes, I didn´t find the EITC to have had any impact on pre-tax salaries. Neither did I find any difference in the EITC´s effect on pre-tax salaries between men and women. This suggests that the incidence of the EITC was fully carried by the employees and that the EITC didn´t affect income inequality by inducing changes in pre-tax salaries.

The thesis is structured in the following way: In section 2 I present labor market theory as well as previous research on an EITC´s effect on pre-tax salaries. In section 3 I describe the data used and methodology used to utilize the data. In section 4 I present my results and in section 5 I discuss the results and conclude my thesis.

2. The Labor Market and the EITC

In this section I will first present the theory of how the labor market works, what affects the labor supply how pre-tax salaries responds to changes in labor supply and explain how this relates to my thesis. Second, I will present previous research conducted regarding the effects of an EITC on pre-tax salaries.

2.1 Predicted Effects on Labor Supply and Salaries

According to Rosen, Gayer and Civan (2014), what effect an EITC has on pre-tax salaries depends on the nature of labor supply and the nature of labor demand, both of which are affected by several variables.

The aggregated labor supply depends on individuals´ optimal time endowment which in its turn depends on the wage in the labor market and each individual´s own preferences. If the after-tax salary changes, each individual´s response in terms of labor supply will be unique and according to their personal preferences. (Rosen, Gayer & Civan, 2014)

The net response is the sum of two different effects – the substitution effect and the income effect. The substitution effect relates to the change in salary leading to a change of the relative price of work and leisure – if the salary goes up, leisure becomes less desirable due to increased alternative cost. The income effect relates to the change in wealth happening because of the change in wage – an increased wage may lead to an individual decreasing her supply of labor simply because she can afford to, assuming leisure is a normal good. These two effects can work in opposite directions and the change in labor supply depends on which is the dominating one. (Rosen, Gayer & Civan, 2014)

In the body of research assessing what effect an EITC has on labor supply there has emerged two main lessons regarding the nature of labor supply responses. To begin with – labor supply does increase thanks to the EITC. But the increase in labor supply is largely concentrated along the extensive (participation) margin. This implies that labor supply elasticities are larger along the extensive margin than along the intensive (hours worked) margin. (Eissa & Hoynes, 2005)

Now, what effect a change in supply of labor has on salaries depends on the relative elasticity of the aggregated demand for labor and the aggregated supply of labor. The relatively elastic agent will carry a smaller share of the incidence of the EITC. In the extreme

case of either demand or supply being completely elastic, the incidence of the EITC is fully carried by the other agent. The elasticity of labor demand is crucial for how successful the EITC is as a policy for increasing labor supply. The less elastic demand is, the larger reductions in pre-tax salaries the workers will experience and the less likely are they to increase their supply of labor. (Rosen, Gayer & Civan, 2014)

To examine the effect of the EITC on pre-tax salaries in Sweden I draw from the framework of Feldstein (1973), who presents an outline for how wages are affected by a change in the relative supply of labor, allowing for heterogeneity in labor supply. Feldstein uses a Cobb-Douglas production function consisting of two production factors – unskilled and skilled labor.

In Feldstein´s model, the type of labor of which supply increases relatively more will experience a reduction in pre-tax salaries. Feldstein then builds on this framework adding complexity by including capital as a third production function and altering the rate of substitution for the two types of labor, though I will stick to the very basics of the model which was outlined above, except for the terminology used. Instead of skilled and unskilled labor I will be using treated and control group. These two groups will be created based on difference in the magnitude of change in taxes following the introduction of the EITC, with the treated group consisting of groups which saw a larger than the median change in taxes and the control group of groups which saw a smaller than the median change in taxes. I will then examine how different changes in supply of labor may have changed the difference in pre-tax salaries between the two groups.

Drawing from the above, the treated group is likely to see a larger increase in labor supply due to this group seeing a larger effect on taxes from the EITC i.e. a larger change in profitability of increasing one´s labor supply. The larger increase in profitability translates into a relatively larger increase in alternative cost of leisure, which means that the treated group will experience a greater substitution effect. This will translate into a change in pre-tax salaries, as long as labor demand is not completely elastic in which case pre-tax salaries will not change.

When it comes to differences between men and women, there will likely be a dissimilar impact on pre-tax salaries with women seeing a bigger change in pre-tax salary. This is due

to women being estimated to be more responsive in their supply of labor following changes in wage. See Evers et al (2008) for a meta-analysis over labor supply elasticities.

2.2 Previous Research on EITCs´ Effect On Salaries

Kubik (2002) examines whether changes in personal income taxes has had an effect on wage structure by looking at data from the US and the Tax Reform Act of 1986. Kubik questions the assumption of workers carrying the full incidence of the tax and instead argues that in an economy with heterogenous workers with varying skill, the pre-tax wage depends on the relative supply of workers of each skill-level. He bases his arguing in a simple labor market framework where the relative supply of each skill-level affects the marginal productivity of a worker on any skill-level hence it also affects the salary.

Kubik finds that workers in occupations in which the median workers got lower marginal taxes saw a reduction in pre-tax salaries, which is related to the increase in relative labor supply of these occupations. (Kubik, 2002)

Another researcher examining the relation between EITCs and pre-tax salaries using US data from 1990s is Rothstein (2010). Rothstein also questions the methodology of carrying out analyses with the assumption of the incidence of the tax being carried fully by employees. Rothstein (2010) finds that “substantial portions of the funds expended on the EITC are shifted to employers”. When the reasoning behind introducing an EITC goes along the line of increasing labor supply it is crucial to the outcome predictions whether one holds pre-tax wages fixed or allows them to change, as the latter substantially weakens the case for the EITC, according to Rothstein.

Another researcher also looking at the effect on pre-tax salaries using US data is Leigh (2010). Utilizing differences in the EITC across states, Leigh examines how hourly wages are affected by the EITC in the US and finds that an increased generosity of the EITC leads to a larger reduction in hourly wages for high school drop outs, than for workers with a high school diploma, and no effect on hourly wages for college graduates.

Yet another one is Azmat (2008), looking at the shift in incidence when the UK replaced the Family Credit in favor of the Working Families´ Tax Credit which increased the transparency of who was a beneficiary of the tax credit. Azmat finds that for males, the shift to the new

policy leads to a relatively large share the incidence being shifted to the employer, showing both that the tax credit affected wages and that the impact of the tax credit depends on whether the employer can observe who is a beneficiary and who is not.

There has also been work done on the same topic using Swedish data. By combining the effect of both the EITC and the reduction in unemployment benefits by looking at the change in net replacement rate - the ratio between after-tax incomes of unemployed and employed - Bennmarker et al (2013) looks at what effect the change in net replacement rate may have had on wages in Sweden and finds a positive relationship between the net replacement rate and pre-tax salaries.

3. Data & Methodology

3.1 Data

This thesis exploits data from three sources - Statistics Sweden, the Swedish Tax Agency and the Riksdagen data base. From Statistics Sweden I gathered collapsed data on occupational level with records of average yearly salary and average number of employees in each year for six different levels of education and for men respective women, as well as a total which includes both genders. The data spans from 2003 to 2013. This leaves me with a data set which is based on groups, where one group is one occupation, one level of education and one gender or the gender-indifferent total, for which I then observe average salary and average number of employees in each year.

For men I have 473 different groups, with a total of 4476 observations across 2003-2013. For women I have 389 different groups, with a total of 3719 observations across 2003-2013. For the gender-indifferent total I have 526 different groups, with a total of 5047 observations across 2003-2013.

From the Swedish Tax Agency I collected information on exactly how taxes are calculated and the formulas for how to calculate the basic deduction. Finally, from the Riksdagen data base I collected the formulas for exactly how the EITC were to be calculated for each year.

3.2 Tax Structure

To simulate the EITCs effect on pre-tax salaries, I base all my calculations on the year of 2006 which immediately predates the implementation of the EITC, which means the data from this year is unaffected by the EITC. See the appendix for a detailed description of how taxes were calculated, including the formulas for the basic deduction and the EITC.

Because of my data being on the aggregated level I do not need to account for tax deductibles based on individual characteristics in my tax structure. Hence, I can stick to a simplified structure only taking into consideration labor incomes. Working with aggregative data also means I do not need to take into my considerations that the size of the EITC depends on whether someone is older than 65 or younger, which would change the formula. The same goes for the size of the basic deduction. But since, according to Statistics Sweden, less than 2 % of the currently working labor force between 15 and 74 years old in 2006 was older than 65, I do not expect this sampling to affect my results significantly.

3.3 A Difference in Differences Approach to Identify the Effect of the EITC

Drawing from the theory and literature presented above I divide the labor market into two different groups – treated or control – depending on the magnitude of the effect the EITC had on average tax rate (ATR) and marginal tax rate (MTR). Groups which saw a larger than the median change in taxes will end up in the treated group, and groups which saw a smaller than the median change in taxes will end up in the control group. Since the EITC depends on the size of income, the two groups are largely divided into a control group consisting of workers with higher incomes, and a treatment group consisting of workers with lower incomes.

To examine the effect of the EITC on pre-tax salaries I will then compare these two groups using a difference in difference (DD) approach to identify the effect of the EITC.

If the increase in labor supply is largely concentrated to either group, there will be a shift in the relative supply of labor between the two groups which according to the framework outlined by Feldstein (1973) would lead to changes in pre-tax salaries.

Using a DD approach, you can estimate systematic differences in two groups due to an exogenous event only affecting one of the two groups. To observe the effect of this event

you need data from the years prior to the event, and you need data for the years post the event. (Wooldridge, 2012)

In its most simple form with two time periods, the DD regression looks like

$$Y = \alpha_1 + \beta_1 \times Post + \alpha_2 \times Treated + \beta_2 \times Post \times Treated$$

Where the Post variable is a dummy variable for the time-period after the event, and the Treated variable is a dummy variable for the group affected by the event.

Table 1 (Wooldridge, 2012) outlines what the different coefficients captures

	Before	After	After - Before
Control	α_1	$\alpha_1 + \beta_1$	β_1
Treated	$\alpha_1 + \alpha_2$	$\alpha_1 + \alpha_2 + \beta_1 + \beta_2$	$\beta_1 + \beta_2$
Treated - Control	α_2	$\alpha_2 + \beta_2$	β_2

Source: (Wooldridge, 2012) pp.457

The coefficient of interest is β_2 , which captures the estimated effect of the event on dependent variable Y

$$\beta_2 = (\bar{y}_{2,T} - \bar{y}_{2,C}) - (\bar{y}_{1,T} - \bar{y}_{1,C})$$

where subscripts stand for pre or post time-period and control or treated group. The first parenthesis indicates the difference in Y between the two groups post the event and the second parenthesis indicates the difference in average of Y between the groups prior to the event. If the two groups follow the same trend, the difference of the two parenthesis is the estimated effect of the event on Y. (Wooldridge, 2012)

The difference in differences approach relies entirely on the assumption that in the absence of the event, the two groups would follow the exact same trend. If they do not, this approach fails. This is because the difference between the two groups in the two time-periods will be due to other events and causes and not solely due to the event - still the whole difference is acknowledged as the effect of the event. (Angrist & Pischke, 2009)

Assume there is a pre-existing trend towards increasing difference in Y between the two groups over time. In this case, the difference between the two parentheses above will have grown for other reasons than some exogenous event. Still, this difference will still be acknowledged as the estimated effect of the event. Hence, any difference in the trend between the groups will cause serious bias.

3.4 Specifications

To estimate the EITCs effect on salaries I use five different model specifications. Four of which stem from the same base model but due to certain specifications unique for each model they utilize the data available in various ways. Model specification (1) is as follows

$$Salary = \alpha_1 + \beta_1 \times Post_t + \alpha_2 \times Treated_i + \beta_2 \times Post_t \times Treated_i + \varepsilon_i$$

a problem with the above specification is that it doesn´t control for characteristics such as occupation, occupation and gender. These characteristics are likely to have an impact on salary and not controlling for them would leave me with biased results. In specification (2) below, I use fixed effects to control for all time-invariant characteristics within each group, such as occupation, education and gender. In the specification below, δ_i is the group-specific variable which captures all time-invariant characteristics

$$Salary = \delta_i + \alpha_1 + \beta_1 \times Post_t + \alpha_2 \times Treated_i + \beta_2 \times Post_t \times Treated_i + \varepsilon_i$$

any change in salary over time that can´t be attributed to time-invariant variables will be my estimated effect of treatment.

Another problem with the first specification is that it does not take into consideration the size of each group. Hence, occupations with very few employees have equal impact on my results as groups with many employees, which might drive my results. To adjust for the size of each group, I add frequency weighting by number of employees within each group in specification (3). Since observations within each group are likely to be serially correlated, I compute clustered standard errors to allow for arbitrary autocorrelation within each group. By doing so, I avoid oversampling my data.

Putting both problems and solutions above together in specification (4), I here use both fixed effects to control for time-invariant heterogeneity within groups and weight by number of employees in each group as well as compute clustered standard errors.

To observe for the estimated effect of the EITC in each year, I replace the post time-period dummy variable with a dummy variable for each year in specification (5). I use fixed effects and frequency weighting as well as computing clustered standard errors. To allow for straight forward interpretation of the coefficients I use 2006 as base year.

This implies that if β_2 truly solely catches the effect of the EITC, it would be estimated to equal zero in the years predating the EITC, and in each year after the EITC it will show the estimated difference in pre-tax salary between the two groups. Hence, specification (5) shows whether the assumption of identical counterfactual trends in the absence of introduction of the EITC holds, which was crucial for the DD approach to actually work.

$$Salary = \delta_i + \alpha_1 + \beta_1 \times Year_t + \alpha_2 \times Treated_i + \beta_2 \times Year_t \times Treated_i + \varepsilon_i$$

4. The EITC´s Effect on Salaries

Beginning with the results from specifications (1) – (4) with one dummy variable for the whole post treatment time-period the overall qualitative result is that the EITC had a significant negative impact on pre-tax salaries. Though, Table 2, shows that the estimated magnitude of impact varies across the specifications, as well as the estimated standard errors.

Table 2 *The EITC´s effect on monthly salaries*

	Not Weighted		Weighted	
	Panel A: All observations			
MTR	-1726	-1239.5	-1808.4	-1275.5
	(419.8)	(104.6)	(239.6)	(168)
ATR	-1977.8	-758.9	-2413	-1356.7
	(447.8)	(105.7)	(267.6)	(162.9)
	Panel B: Only observations for men			
MTR	-739	-960.6	-1410.4	-1293.8
	(528.1)	(120.4)	(352.2)	(211.2)
ATR	-1989.3	-847.5	-2619.6	-1609.2
	(504.4)	(120.6)	(274.4)	(196)
	Panel C: Only observations for women			
MTR	-1916.7	-840.4	-1961	-958.4
	(373.1)	(112.1)	(349.8)	(194.5)
ATR	-1936.3	-505.9	-2547.2	-1176.3
	(406.5)	(113.1)	(357)	(177)
Fixed Effects	O	X	O	X
Weighted	O	O	X	X

Table 2 shows the results of model specifications (1)-(4). The columns highlight the impact of first adding fixed effects, secondly weighting the results by number of employees and thirdly when combining both fixed effects and frequency weighting. Each specification is applied to all observations in Panel A, only men in Panel B and only women in Panel C, with respect to each definition of treatment – MTR or ATR.

The comparison between column one and column two in Table 2 highlights the effect of controlling for time-invariant heterogeneity within groups. The lower estimated standard errors are due to controlling for within-group characteristics which will have an impact on one´s salary. The comparison of column one and column three highlights the effect of frequency weighting and computing clustered standard errors. By allowing for groups with larger number of to have a stronger impact on my results, the estimated effect of

the EITC becomes larger. This suggests that there are more numerous groups that respond strongly to the introduction of the EITC.

Comparing column one and four highlights the effect of using both fixed effects and weighting for number of employees in each group as well as computing clustered standard errors. Both the estimated effect of the EITC and the estimated standard errors are smaller for the same reasons as mentioned above. Though, the standard errors in column four are bigger than in column two – when using only fixed effects – because I compute clustered standard errors.

The results in Table 2 suggests that the EITC did have a negative impact on pre-tax salaries, and that the treated group, which saw larger than median effect on their taxes due to the EITC, experienced a decrease in pre-tax salaries relative to the control group. This suggests that the EITC increased income inequality by having a unequal impact on pre-tax salaries.

However, the results suggest that the EITC didn´t have a dissimilar impact on pre-tax salaries between genders, which I predicted them to have due to men and women being different when it comes to responsiveness in labor supply to changes in wage.

In Table 3 below the results from specification (5) - which allows us to observe the EITC´s effect on salaries in each year by using a year-dummy variable instead of a dummy variable for the whole post-EITC time-period – we can observe a possible explanation to why previous results indicated the EITC to have such a strong effect on pre-tax salaries.

Table 3 *The effect of the EITC on monthly salaries in each year*

Year	Observations		
	Both men and women	Women only	Men only
2003	697	508.2	854.6
	(160.3)	(168.5)	(188.2)
2004	360.2	336.6	495
	(101.4)	(111.4)	(135.6)
2005	157.7	105.6	337.6
	(74.1)	(72)	(109.3)
2007	-337.1	-262	-218.9
	(106.3)	(123.8)	(106)
2008	-643.9	-376.3	-602.5
	(116.4)	(117)	(156.9)
2009	-689.6	-441	-734.9
	(119.6)	(124.3)	(167.7)
2010	-869.6	-592.2	-876
	(136)	(148.7)	(196.1)
2011	-1150.9	-863.6	-1264.2
	(174.4	(200.8)	(229.2)
2012	-1373.2	-1102.8	-1209.5
	(208.6)	(239.5)	(274.6)
2013	-1627	-1552.7	-1385.8
	(196.1)	(218.8)	(289.7)

Table 3 shows the results from specification (5) – in which the dummy variable for the post-treatment time-period is replaced with a dummy variable for each year. Column one shows the estimated yearly effect on all observations, column two on women only and column three on men only.

The results in Table 3 shows that the estimated effect of the EITC on pre-tax salaries, if interpreted bluntly, is positive in the years prior to the actual implementation of the EITC.

Obviously, this is a faulty interpretation and these results suggest that the coefficient for the estimated effect of the EITC catches other variables which affected the difference in pre-tax salaries as well. Illustrating the results in Table 3 in a graph will make this easier to observe.

Figure 1 *The effect of the EITC on monthly salaries in each year*

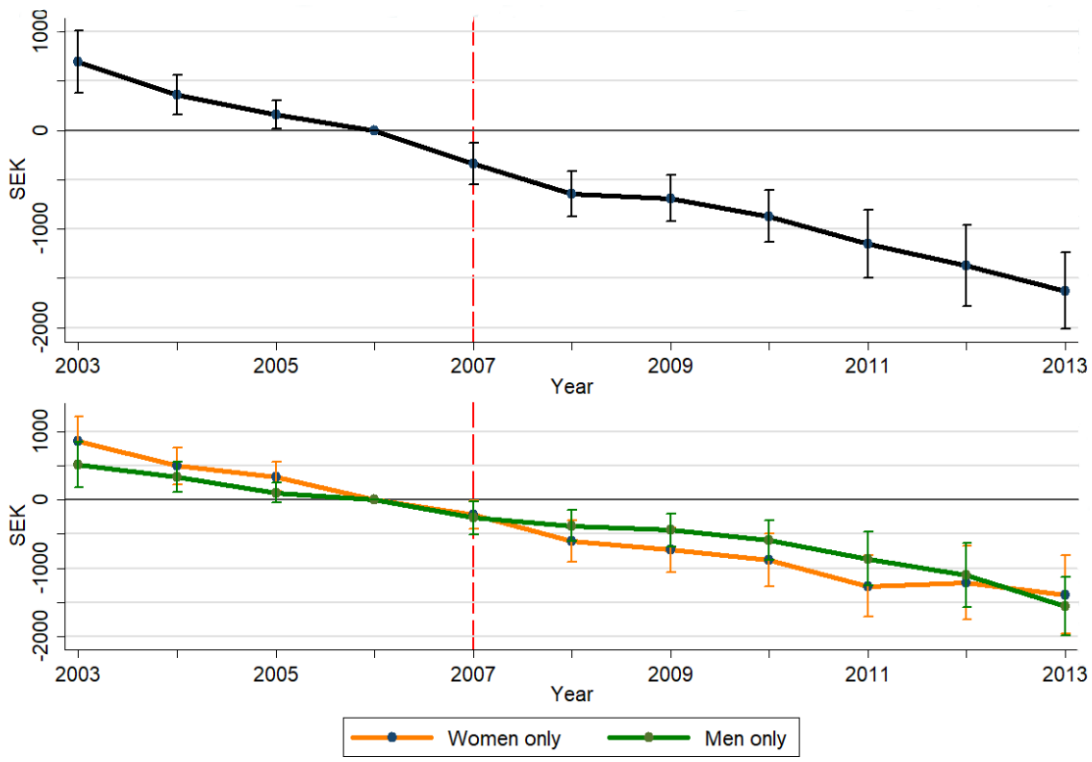

Figure 1 illustrates the results from Table 3. The black line is the results from estimating the yearly effect off the EITC on all observations. The orange and green line shows the estimated effect of the EITC on women only and men only, respectively. The red line indicates the year when the EITC was introduced. Note that 2006 was used as base year.

Figure 1 shows that there´s an almost perfectly linear underlaying trend towards increasing differences in pre-tax salaries between the two groups. This is a clear violation of the assumption of identical counterfactual trends in the absence of treatment which the DD approach relies on. Instead of catching the effect of the EITC, the results in Table 2 catches this underlaying trend, and the specifications used attributes the whole difference in pre-tax salaries to the implementation of the EITC – while the increased difference in pre-tax salaries is solely due to this underlaying trend. Hence, my results in Table 2 are faulty.

If the EITC actually did have an effect on pre-tax salaries, it would be observed in Figure 1 as a break downwards (upwards) if the EITC had a downward (upward) pressure on pre-tax salaries. No such break can be observed suggesting that the EITC did not have an effect on pre-tax salaries at all. This means that the EITC did not increase income inequality by inducing dissimilar changes in pre-tax salaries.

Neither does Figure 1 show any difference in the EITC´s impact on pre-tax salaries between genders, neither gender experienced a change in pre-tax salaries following the EITC.

5. Discussion

The absence of any impact on pre-tax salaries suggests that, according to the theory outlined above, the elasticity of labor demand was completely elastic and absorbed all of the increased supply of labor.

Following the model outlined by Feldstein, another possible reason to why no effect on pre-tax salaries are seen could be that the relative supply of the two types of labor didn´t change at all after the EITC was introduced. This is rather unlikely since the EITC has a bigger impact on profitability of working more for the treated group than for the control group due to the nature of an EITC and my method for constructing the treated and control groups. Hence, the two groups experience different changes in alternative cost of leisure and accordingly their responses in labor supply to the EITC will be different.

If the labor demand were completely elastic, the incidence of the EITC was entirely carried by the employees regardless of the magnitude of the EITC´s impact on taxes. Hence, the EITC did not induce changes in pre-tax salaries that could have increased income inequality.

The reason why my result shows no difference in the EITC´s impact on pre-tax salaries between genders, although I predicted this due to men and women having different labor supply elasticities, could be for several reasons. One possible reason could be the nature of the Swedish tax structure– calculating taxes based on individual income and not some aggregate like household income, which is the case in some other countries (see Blundell & MaCurdy (1999) for a description of the UK and US tax programs) - and Sweden being a relatively equal country with women and men already participating in the labor force to largely the same extent. Less equal countries where women have a more traditional house-wife role which introduces an EITC may see a larger increase in supply of labor for women

simply because women are able to increase their labor supply while men already work full-time.

To conclude, my results suggests that the EITC that was introduced in 2007 have had no effect on pre-tax salaries. My work also shows the risk for making faulty conclusions if not considering the possibility of underlaying trends in the data affecting the outcome. The assumption of identical counterfactual trends didn´t hold, hence, using a difference in differences approach failed and the estimates are biased. When instead estimating the yearly difference between the two groups a underlaying trend towards increasing differences shows. The implementation of the EITC doesn´t appear to have had any impact on this trend.

These results suggest that the incidence of the tax credit was carried exclusively by the employees and that the EITC did not cause any changes in salaries and hence it didn´t increase income inequality. This makes the EITC a strong policy tool for incentivizing a increase of labor supply and increased labor participation. If policy makers want to increase labor supply further, making the EITC even more generous appears as a reasonable method to achieve that.

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7. Appendix

Table 4 *Basic deduction formulas*

Yearly income	Formulas
0 – 0.99 PBA	$0.423 \times \text{PBA}$
0.99 PBA – 2.72 PBA	$0.423 \times \text{PBA} + 0.2 \times (\text{Salary} - 0.99 \times \text{PBA})$
2.72 PBA – 3.11 PBA	$0.77 \times \text{PBA}$
3.11 PBA – 7.88 PBA	$0.77 \times \text{PBA} - 0.1 \times (\text{Salary} - 3.11 \times \text{PBA})$
7.88 PBA –	$0.293 \times \text{PBA}$

The table shows how to compute the basic deduction for any salary in any year. PBA is short for Price Basic Amount (Prisbasbelopp). For all calculations the PBA of 2006 was used.

Source: Swedish Tax Agency (Inkomstskattelagen) and Swedish Tax Agency (Kommunal och statlig inkomstskatt)

Table 5 *EITC formulas*

Year	*Yearly income*	*Formulas*
2007	$- 0.79 \times PBA$	$(Salary - BD) \times 0.316$
	$0.79 \times PBA - 2.72 \times PBA$	$(0.79 \times PBA + 0.2 \times (Salary - 0.79 \times PBA - Basic\ Deduction) \times 0.316$
	$2.72 \times PBA -$	$(1.176 \times PBB - Basic\ Deduction) \times 0.316$
2008	$- 0.91 \times PBA$	$(Salary - Basic\ Deduction) \times 0.316$
	$0.91 \times PBA - 2.72 \times PBA$	$(0.91 \times PBA + 0.2 \times (Salary - 0.91 \times PBA) - Basic\ Deduction) \times 0.316$
	$2.72 \times PBA - 7.0 \times PBA$	$(1.272 \times PBA + 0.033 \times (Salary - 2.72 \times PBA) - Basic\ Deduction) \times 0.316$
	$7.00 \times PBA -$	$(1.413 \times PBA - Basic\ Deduction) \times 0.316$
2009	$- 0.91 \times PBA$	$(Salary - Basic\ Deduction) \times 0.316$
	$0.91 \times PBA - 2.72 \times PBA$	$(0.91 \times PBA + 0.25 \times (Salary - 0.91 \times PBA) - Basic\ Deduction) \times 0.316$

	$2.72 \times PBA - 7.0 \times PBA$	$(1.363 \times PBA + 0.065 \times (Salary - 2.72 \times PBA) - Basic\ Deduction) \times 0.316$
	$7.00 \times PBA -$	$(1.642 \times PBA - Basic\ Deduction) \times 0.316$
2010	$-\ 0.91 \times PBA$	$(Salary - Basic\ Deduction) \times 0.316$
	$0.91 \times PBA - 2.72 \times PBA$	$(0.91 \times PBA + 0.304 \times (Salary - 0.91 \times PBA) - Basic\ Deduction) \times 0.316$
	$2.72 \times PBA - 7.0 \times PBA$	$(1.461 \times PBA + 0.095 \times (Salary - 2.72 \times PBA) - Basic\ Deduction) \times 0.316$
	$7.00 \times PBA -$	$(1.868 \times PBA - Basic\ Deduction) \times 0.316$

The table shows how the EITC was calculated for any yearly salary in all relevant years. PBA is short for Price Basic Amount (Prisbasbelopp) For all calculations of the EITC the PBA for 2006 was used.

Source: Finansdepartementet (Proposition 2006/07:1, 2007/08:22, 2008/09:39, 2009/10:3)

Table 6 *Income tax formulas*

Income Brackets	*Formulas*
0 – 317 700	$(\text{Salary} - \text{Basic deduction}) \times 0.316) - \text{EITC}$
317 700 – 472 300	$(\text{Salary} - \text{Basic deduction}) \times 0.416) - \text{EITC}$
472 300 –	$(\text{Salary} - \text{Basic deduction}) \times 0.466) - \text{EITC}$

The table shows the tax brackets of 2006 and the corresponding formula for computing the income tax.

Source: Swedish Tax Agency, Kommunal och statlig inkomstskatt