

John P. Haisken-DeNew and  
Christoph M. Schmidt

# Nickel and Dimed German Style: The Working Poor in Germany

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Technische Universität Dortmund, Department of Economic and Social Sciences  
Vogelpothsweg 87, 44227 Dortmund, Germany

Universität Duisburg-Essen, Department of Economics  
Universitätsstraße 12, 45117 Essen, Germany

Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI)  
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RWI  
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## **Editorial Office:**

Joachim Schmidt  
RWI, Phone: +49 (0) 201/81 49-292, e-mail: joachim.schmidt@rwi-essen.de

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**John P. Haisken-DeNew and Christoph M. Schmidt\***

## **Nickel and Dimed German Style: The Working Poor in Germany**

### Abstract

Using data from the German SOEP, this paper analyses whether there have been (a) any significant changes in poverty rates and poverty intensities before and after the Hartz IV reforms and (b) whether there have been observable changes in the effect of employment in reducing the threat or intensity of poverty. Using multivariate analyses we can find no evidence of increases in poverty rates comparing the time period 2002–2004 with that of 2005–2006. Further we find no change in the effect of employment in reducing the probability and intensity of poverty during this time period. The “working poor” phenomenon in Germany remains relatively small and statistically unchanged by the Hartz reforms.

JEL Classification: D31, J65, J21

Keywords: Income distribution, unemployment, poverty

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\* John P. Haisken-DeNew, University of Bochum, RWI, McMaster University; Christoph M. Schmidt, RWI, University of Bochum, IZA Bonn, CEPR London. – We gratefully acknowledge financial support from the German Science Foundation (DFG) through the SFB 475-B9 based at the Technical University of Dortmund. We thank David Ribar, Ian Walker and other conference participants at the ESPE Meetings in London 2008 for helpful comments on an earlier draft of this paper. – All correspondence to John P. Haisken-DeNew, Ruhr University of Bochum, Universitätsstr. 150, 44801 Bochum, Germany, e-mail: john.haisken-denew@rub.de.

# 1 Introduction and Background

For many years Germany has been experiencing high and persistent levels of unemployment. In the years 2003-2005, the German government introduced a series of labour market reforms, intending to reduce this high level of unemployment by creating new incentives for those unemployed or simply not participating in the labour market. Jacobi and Kluge (2007) give an excellent and comprehensive overview of the Hartz IV reforms and the changes associated with the unemployment insurance and unemployment benefit system. At the same time, there has been an increasing worry about the seemingly increasing share of the “poor” and more recently the so-called “working poor” as described in Ehrenreich (2001); those indeed working, yet still not earning more than the poverty line (the potential “Americanisation of Germany”) as described in Strengmann-Kuhn (2003), RWI (2005), Nollmann (2009) and Rhein (2009). Nollmann (2009) compares the situation of the working poor in Germany and the United States. He suggests that the risk of being “working poor” has increased recently in Germany, primarily being driven by the full/part-time employment dichotomy, and claims, “A common development is the successive devaluation of fulltime employment by sector risks which are growing into the fulltime labour market even in Germany.”

Since the start of the implementation of the Hartz IV reforms, there has been substantial interest in evaluating the reform effects (see Jacobi and Kluge, 2007, Schmidt, 2001 and Kluge, 2004). Schmitz and Steiner (2007) analyses the Hartz Reforms ex-ante and suggest that the overall effects on the labour market will be small, though significant effects in the reduction of long-term unemployment are to be expected, especially for older workers. Müller and Steiner (2008) analyze the impact of benefit sanctions on the transition from unemployment to employment in Germany. They find, that sanctions can be very effective, but only when they occur early in the unemployment spell. Wilke (2005) uses data up to 1997 to find the major factors contributing to unemployment and unemployment duration in Germany. They show that low education is the greatest risk factor.

The aim of this paper is to analyse whether there have been (a) any significant changes in poverty rates and poverty intensities before and after the Hartz reforms and (b) whether there have been observable changes in the effect of employment in reducing the threat or intensity of poverty in a multivariate analysis. Section 2 introduces the data used in the analysis; section 3 describes the empirical strategy and section 4 reports the empirical results. Finally, section 5 concludes and discusses the implications for

economic policy.

## 2 Data and Descriptive Results

The German Socio-Economic Panel Study (SOEP) is a representative longitudinal study of private households in Germany. Starting in 1984, the same private households were followed each year. In 1990, after reunification, the panel was extended to the former German Democratic Republic (GDR). Apart from the samples for east and west Germany, the SOEP consists of five other subsamples, such as the Immigrant Sample which was integrated in 1994 (see Haisken-DeNew and Frick, 2005 for more technical information on the SOEP).<sup>1</sup>

As the main household income indicator, we use the net household income from the SOEP portion of the Cross-National Equivalent File (see Frick, Jenkins, Lillard, Lipps, and Wooden, 2007). We equivalise the income variable controlling for the household structure, according to the standardised OECD criteria<sup>2</sup>. Further, we deflate all income measures by the standardised price deflators available from the German Statistical Office. All those households having an equivalized net household income of less than 60% of the yearly median income are considered to be “poor”. All persons in a household have identical equivalised incomes. We use all appropriate person weights for use with the descriptive statistics.

Figure 1 refers to the overall poverty rates for all households (point estimates with confidence intervals), calculated using the year-specific poverty lines, and also based on the poverty line anchored at 1992. Over the 15 year period, 1992 through to 2006, we observe a significant increase from around 12% to about 18% based on the year-specific poverty lines. Anchoring to the poverty line from 1992, we observe an increase from 12% to about 16%, although this increase is not significant (compare the overlapping confidence intervals in 1992 and 2006). Conditioning on the existence of at least one working person in the household, as shown in Figure 2, we see reduced poverty rates over all time periods, going from about 10% to 16%-points over the same time period. Similarly anchoring on the poverty line of 1992, we

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<sup>1</sup>The dataset was extracted using PanelWhiz. See Haisken-DeNew (2007) and Haisken-DeNew and Hahn (2006). For more information on the SOEP, please see <http://www.diw.de/soep>.

<sup>2</sup>Weights are 1.0 for the first adult, 0.5 for all other persons 14 years and older, and 0.3 for all remaining persons 13 years and younger.

observe an almost flat development over time hovering at around the 10% mark, with no significant increases in poverty.

Figure 3 splits the sample of working households into two groups: (a) those households with at least one person working fulltime or a fulltime equivalent, defined to be at least two persons working part time and (b) those households with only one part-time person. We examine case (a) first and observe that the poverty rates increase over time (based on the year-specific poverty lines) from about 8% to 12% over the 15 year period. However only starting in 2005 are the poverty rates significantly higher than in 1997. The years 2002 through 2006 are statistically identical. For case (b), those households exhibiting only one part-time person have poverty rates hovering steadily around the 18% mark over the entire time period. The overlapping confidence intervals indicate that no significant changes have taken place over this time period. It is especially worthy of note that for the entire sample, the working sample, the fulltime sample and the part-time sample, at the descriptive level, there have been no significant changes in poverty rates from 2002-2004 (before the Hartz IV reforms) as compared to 2005-2006 (after the reforms).

### 3 Empirical Strategy

Controlling for many personal and household characteristics in a multivariate setting, we estimate a binary probit model, analogous to the FGT(0)<sup>3</sup> measure or head-count-ratio, for each individual year 1997 and 2002 through 2006 whether the individual, based on his equivalence income as defined by standard OECD criteria, is below the yearly poverty threshold of 60% of each year's median income. The subscript  $i$  represents the  $i$ 'th individual and  $t$  the specific year in the panel dataset.

$$Poor_{it} = a + bX_{it} + e_{it} \tag{1}$$

Given than a person falls below the poverty line ( $Poor_{it} = 1$ ), we estimate by ordinary least squares a measure of poverty intensity ( $Intensity_{it} > 0 | Poor_{it} = 1$ ), analogous to the FGT(1) measure or the absolute mean poverty gap, corresponding to the distance below the poverty line. As the poverty intensity increases, one is further away from the poverty line and closer to zero income. We estimate the correlated factors associated with

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<sup>3</sup>See Foster, Greer, and Thorbecke (1984) for more information.



greater poverty intensity (absolute poverty gap).

$$(Intensity_{it}|Poor_{it} = 1) = \alpha + \beta X_{it} + \epsilon_{it} \quad (2)$$

in which our standard controls  $X_{it}$  include (reference categories in round brackets): an East-West region dummy, foreigner dummy, disabled dummy, years of education (also interacted with foreigner dummy), marital status dummies: married, (single), widow, divorced, separated; children: (no children), 1 child, 2 children, 3+ children (also interacted with foreigner dummy); age categories: (24 and under), 25-49, 50-64, 65+; household typology: Single woman, (Single man), Couple without children, Single parent, Couple with children less than 16, Couple with children at least 16, Couple with children older and younger than 16.

## 4 Empirical Results

The probit and linear regression results are summarised in Table 1. To illustrate the movements before and after the Hartz IV reforms, the coefficients with respect to poverty probability and poverty intensity together with their respective confidence intervals are shown in Figure 4 and Figure 5.

In Figure 4 (referring to column 1 of Table 1) we observe that employment is crucial to reduce the probability of poverty. Especially the existence of a fulltime equivalent job reduces the probability of poverty by around 30%-points (as compared to no employment) over the entire time period 1997-2006. Although from year to year, there are some slight (and significant) movements up or down, the general development is a simple flat line. There is no evidence that the positive effect full time employment in reducing the risk of poverty has changed since the Hartz reforms. With respect to part-time work, poverty is reduced by anywhere from 2.5 to 4.5%-points (as compared to no employment), also with some significant changes over the years. Part-time work significantly reduces the probability of poverty by 4.5%-points in 2006, which is significantly lower than in 2002, however this is unchanged compared to 1997. All in all, it must be concluded that the effect part-time work has in reducing the probability of poverty is very small and unchanged over the time period. Focussing on households in which at least on person works (in column 3 of Table 1), given that the household has only one person working part-time, we observe a 22 to 26%-point higher

probability of poverty.

Figure 5 displays graphically the results of column 2 in Table 1, such that the intensity of poverty is analysed. Given that the household is by definition poor, how far under the poverty line is it? Given that a poor household works fulltime, it is between €1,266 and €1,466 *less* poor (i.e. better off) than by not having any employment. Similarly, only having one person in the household with a part-time job reduces the intensity of poverty from €475 to €661 as compared to not having any employment. We can identify no significant changes in the effect of employment affecting the intensity of poverty comparing the time period before the Hartz reforms to that afterwards. Focussing now only on working households (in column 3 of Table 1), the intensity of poverty *increases* for those household only having one part-time job by a factor anywhere from €610 to €888 over this period, although there is no steady pattern.

Employment remains a strongly dominant factor in determining the probability and intensity of poverty. Especially fulltime employment reduces the risk and intensity of poverty dramatically (as compared to part-time or no work). To a much lesser extent, only a single part-time worker in a household does very little to reduce the probability and intensity of poverty in Germany. These effects and indeed the poverty rates themselves appear not to have changed by any noticeable degree since the years prior to the Hartz reforms, indicating that the so-called “working poor” problem is unchanged, relatively small and indeed, in no way acute.

## 5 Conclusions

For many years Germany has been experiencing high and persistent levels of unemployment. In the years 2003-2005, the German government introduced a series of labour market reforms, intending to reduce this high level of unemployment by creating new incentives for those unemployed or simply not participating in the labour market. At the same time, there has been an increasing worry about the seemingly increasing share of the “poor” and more recently the so-called “working poor”; those indeed working, yet still not earning more than the poverty line.

This paper uses data from the German SOEP to analyse whether there have been (a) any significant changes in poverty rates and poverty intensi-

ties before and after the reforms and (b) whether there have been observable changes in the effect of employment in reducing the threat or intensity of poverty. We compare the time period before the Hartz reforms and thereafter. At the descriptive level, we find no evidence of any change in overall poverty rates comparing before (from 2002) and after the Hartz reforms (either using year-specific poverty lines or anchoring at the poverty line from 1992). Conditioning on part-time or fulltime employment being prevalent in the household, there is also no evidence of any change in poverty rates since 2002.

Using binary probit models to estimate the probability of poverty, the importance of fulltime employment remains strong over the entire time period, reducing the probability by approximately 30%-points. Substantially smaller is the effect of part-time employment, reducing the probability of employment by around 3%-points. For both fulltime and part-time employment, there is no evidence that the Hartz reforms have had any impact in changing the magnitude of the effect of employment on the poverty probability. Fulltime employment has steadily reduced the intensity of poverty (given that one is poor) by about €1,400 of yearly equivalised income. With only one person having part-time employment, the intensity of poverty is reduced by around €600 of equivalised income. For both fulltime and part-time employment, there is no evidence that the Hartz reforms have had any impact in changing the magnitude of the effect of employment on the poverty intensity. Thus, fulltime employment remains a strong and unchanging factor in reducing the probability and intensity of poverty in Germany. Even if those working fall under the poverty line, Kassenboehmer and Haisken-DeNew (2009) show that own-earned income is valued by the recipients so much more than simple welfare payments due to the negative externalities of stigma and social jealousy.

Figure 1: Overall Poverty Rates: Current Year and Anchoring

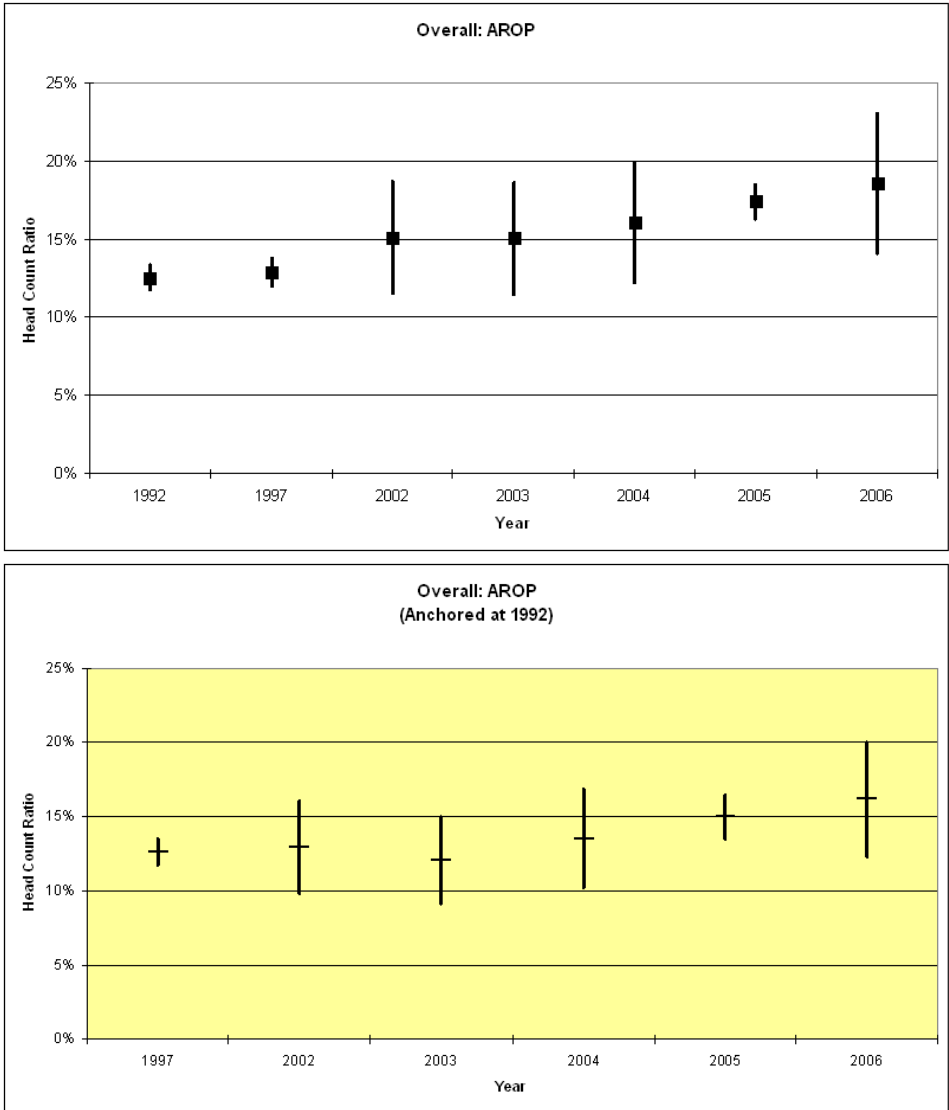


Figure 2: Working HH Poverty Rates: Current Year and Anchoring

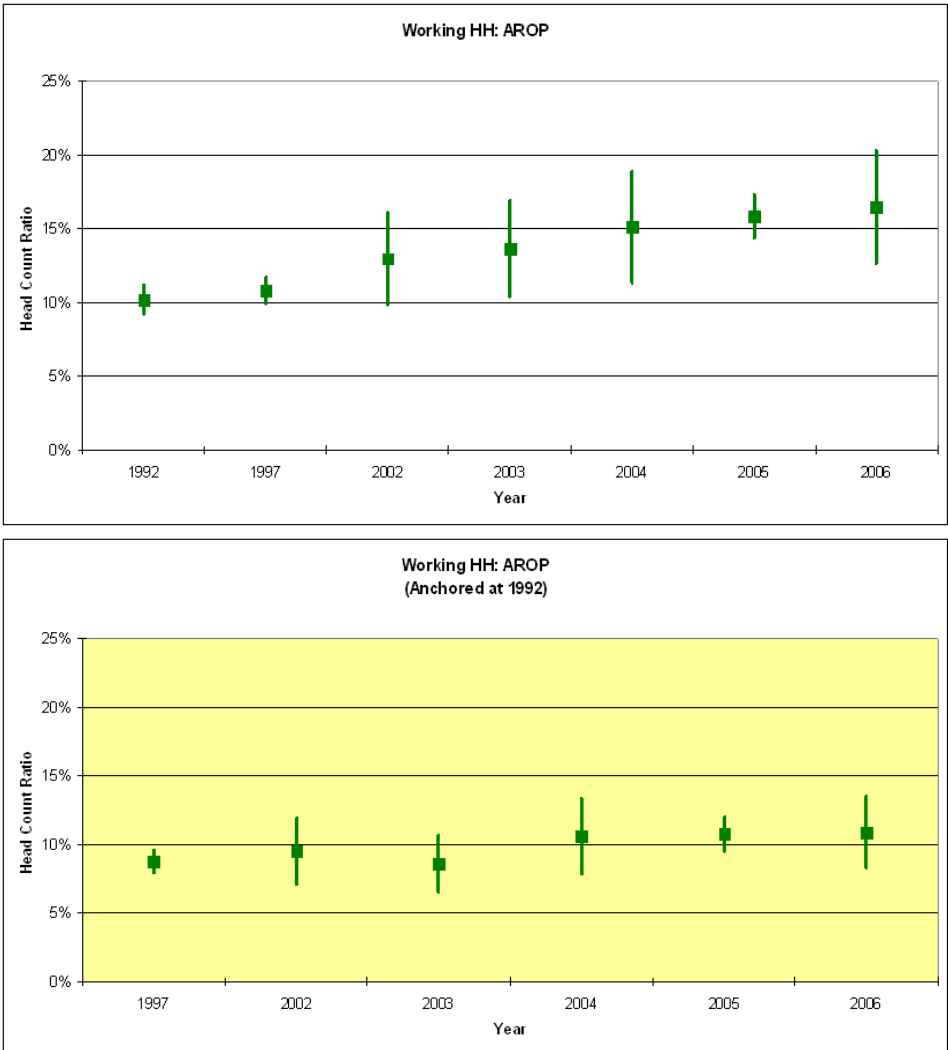


Figure 3: Fulltime and Part-time HH Poverty Rates: Current Year

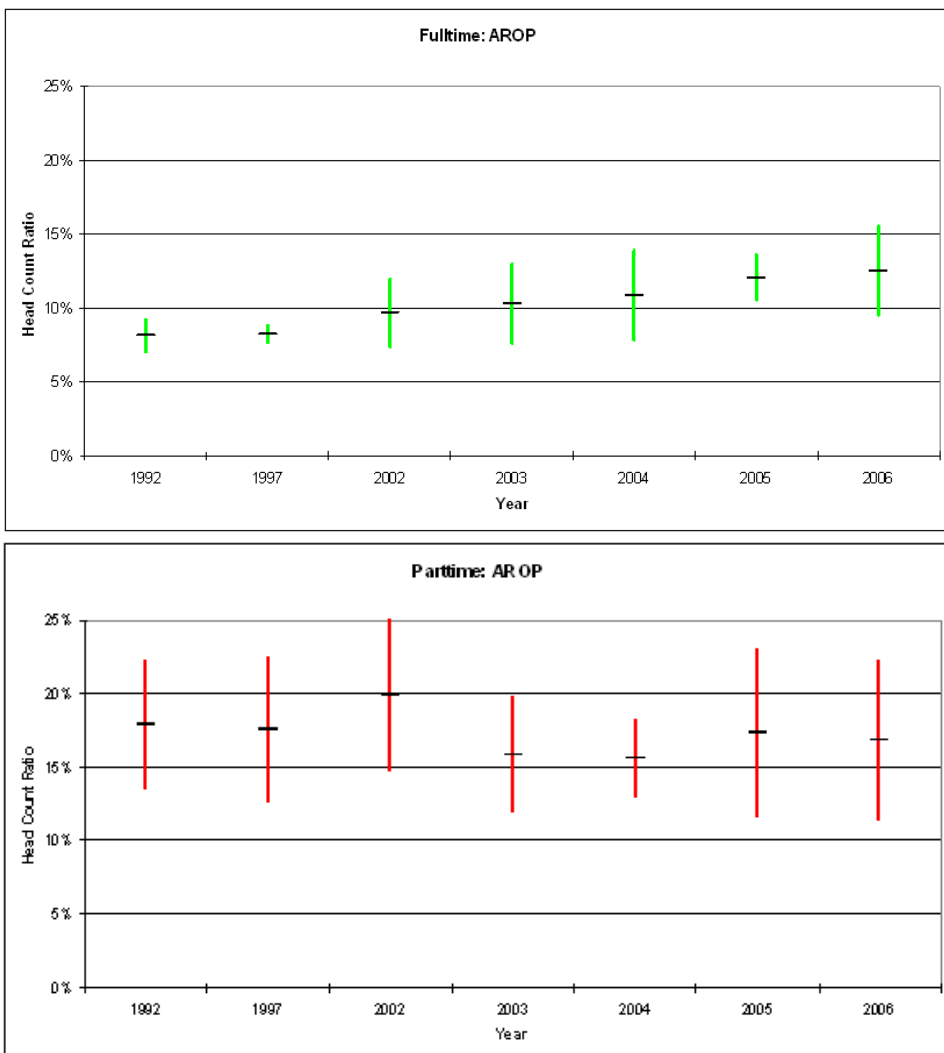


Table 1: Poverty Probability and Intensity: Current Year and Anchoring

Year	Determinant	Yearly			Anchoring 1992		
		All Households Probability	Working Households Probability	All Households Probability	All Households Probability	Working Households Probability	Working Households Probability
1997	HH has Employment: Only 1x PT	-0.036 [6.16]**	0.224 [21.80]**	-0.036 [6.21]**	-0.036 [6.21]**	0.219 [21.60]**	809.229 [6.83]**
	HH has Employment: 1x FT, 2+ PT	-0.338 [27.62]**	-1.401.56 [10.54]**	-0.334 [27.52]**	-1.395.64 [10.49]**	--	--
2002	HH has Employment: Only 1x PT	-0.024 [5.91]**	-475.691 [4.33]**	-0.02 [6.22]**	-423.232 [3.75]**	0.186 [29.05]**	810.315 [7.18]**
	HH has Employment: 1x FT, 2+ PT	-0.269 [35.21]**	-1.435.77 [12.80]**	-0.249 [33.91]**	-1.267.30 [10.78]**	--	--
2003	HH has Employment: Only 1x PT	-0.029 [6.93]**	-594.04 [5.60]**	-0.025 [6.21]**	-425.025 [3.87]**	0.197 [29.10]**	749.867 [6.45]**
	HH has Employment: 1x FT, 2+ PT	-0.316 [36.50]**	-1.466.67 [13.19]**	-0.269 [35.18]**	-1.261.07 [10.70]**	--	--
2004	HH has Employment: Only 1x PT	-0.03 [6.63]**	-661.071 [6.42]**	-0.024 [6.73]**	-629.872 [6.02]**	0.211 [30.31]**	407.717 [3.81]**
	HH has Employment: 1x FT, 2+ PT	-0.32 [35.99]**	-1.325.74 [12.13]**	-0.269 [34.41]**	-1.17.35 [9.78]**	--	--
2005	HH has Employment: Only 1x PT	-0.037 [9.01]**	-539.186 [5.47]**	-0.03 [8.61]**	-525.832 [5.25]**	0.193 [28.89]**	793.21 [7.96]**
	HH has Employment: 1x FT, 2+ PT	-0.319 [39.11]**	-1.402.50 [13.84]**	-0.277 [37.64]**	-1.347.47 [12.69]**	--	--
2006	HH has Employment: Only 1x PT	-0.046 [11.04]**	-627.972 [6.55]**	-0.04 [11.58]**	-573.938 [5.89]**	0.192 [28.20]**	590.123 [5.85]**
	HH has Employment: 1x FT, 2+ PT	-0.335 [42.46]**	-1.285.88 [13.21]**	-0.302 [41.55]**	-1.184.34 [11.77]**	--	--

Figure 4: Poverty Rates (Binary Probit): Fulltime and Part-time

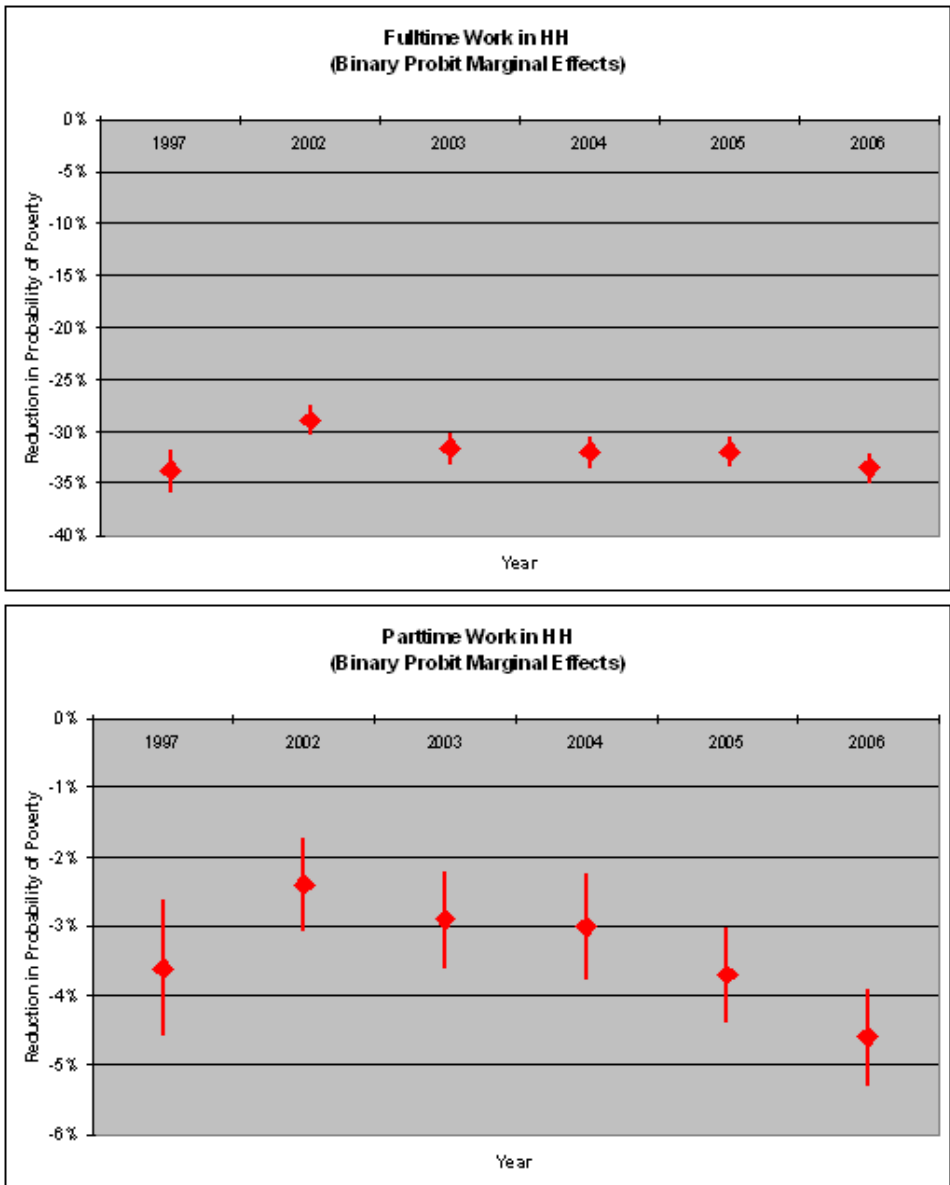
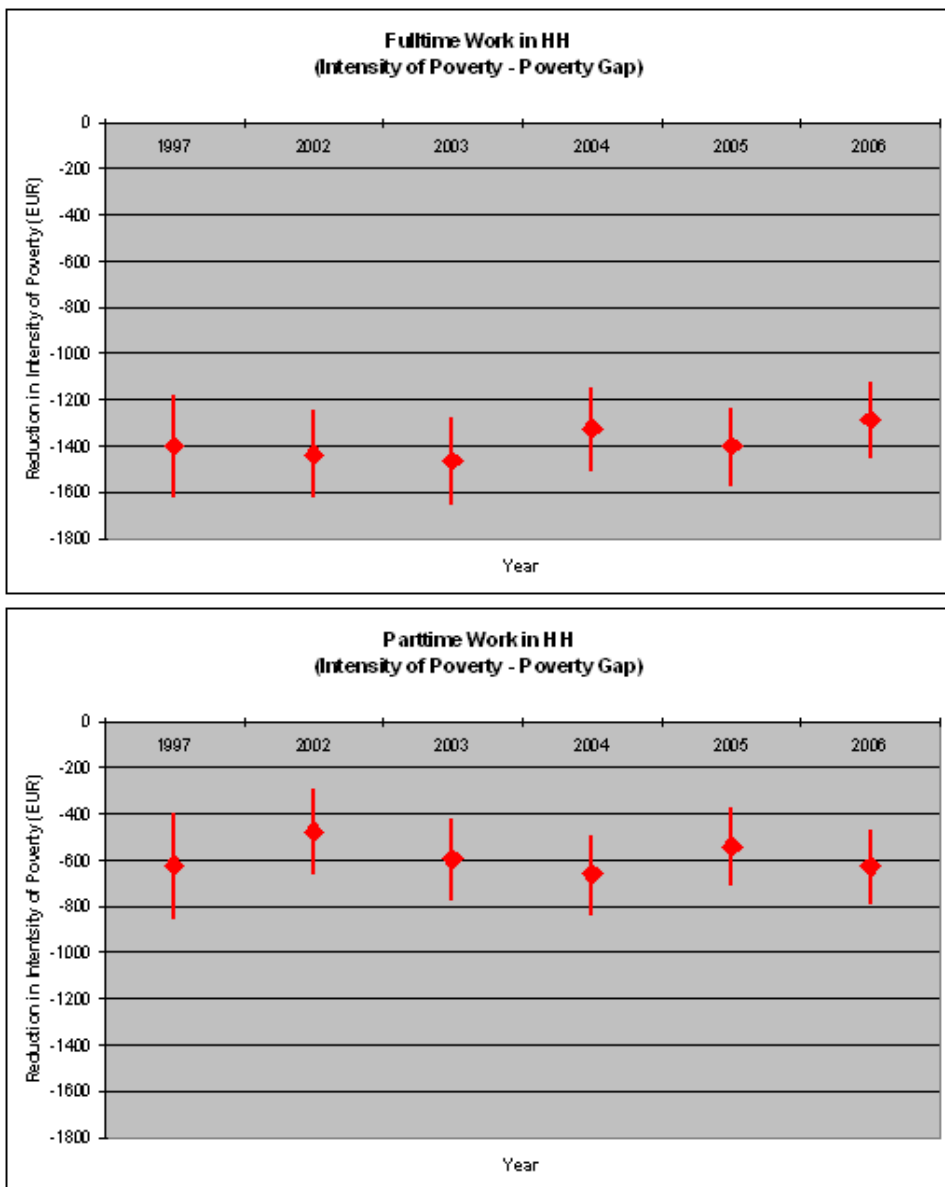




Figure 5: Poverty Intensity (OLS): Fulltime and Part-time



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