Enlisting Employees in Improving Payroll-Tax Compliance: Evidence from Mexico

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Introduction

- A growing body of work points to lack of \state capacity" as a major constraint on development (Burgess and Stern, 1993; Besley and Persson, 2013).
- In Mexico, as in many developing countries, tax evasion is a rst-order issue.
  - Informal economy estimated at 40+% of GDP (Schneider and Enste, 2000).
  - Mexican social security agency (IMSS) supposed to cover all

Introduction (cont.)

- One well-appreciated dimension of non-compliance: failure to register.
  - Generates a variety of distortions: limited access to credit, limits on employment growth (Gordon and Li, 2009; Levy, 2008).
  - Recent papers have examined e ect of policies/interventions to induce formalization (Fajnzylber, Maloney and Montes-Rojas, 2011; Bruhn, 2011; Kaplan, Piedra and Seira, forthcoming; McKenzie and Sakho, 2010; de Mel, McKenzie and Woodru , 2012)

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- This paper focuses on an under-appreciated form of non-compliance: under-reporting of wages by registered rms.

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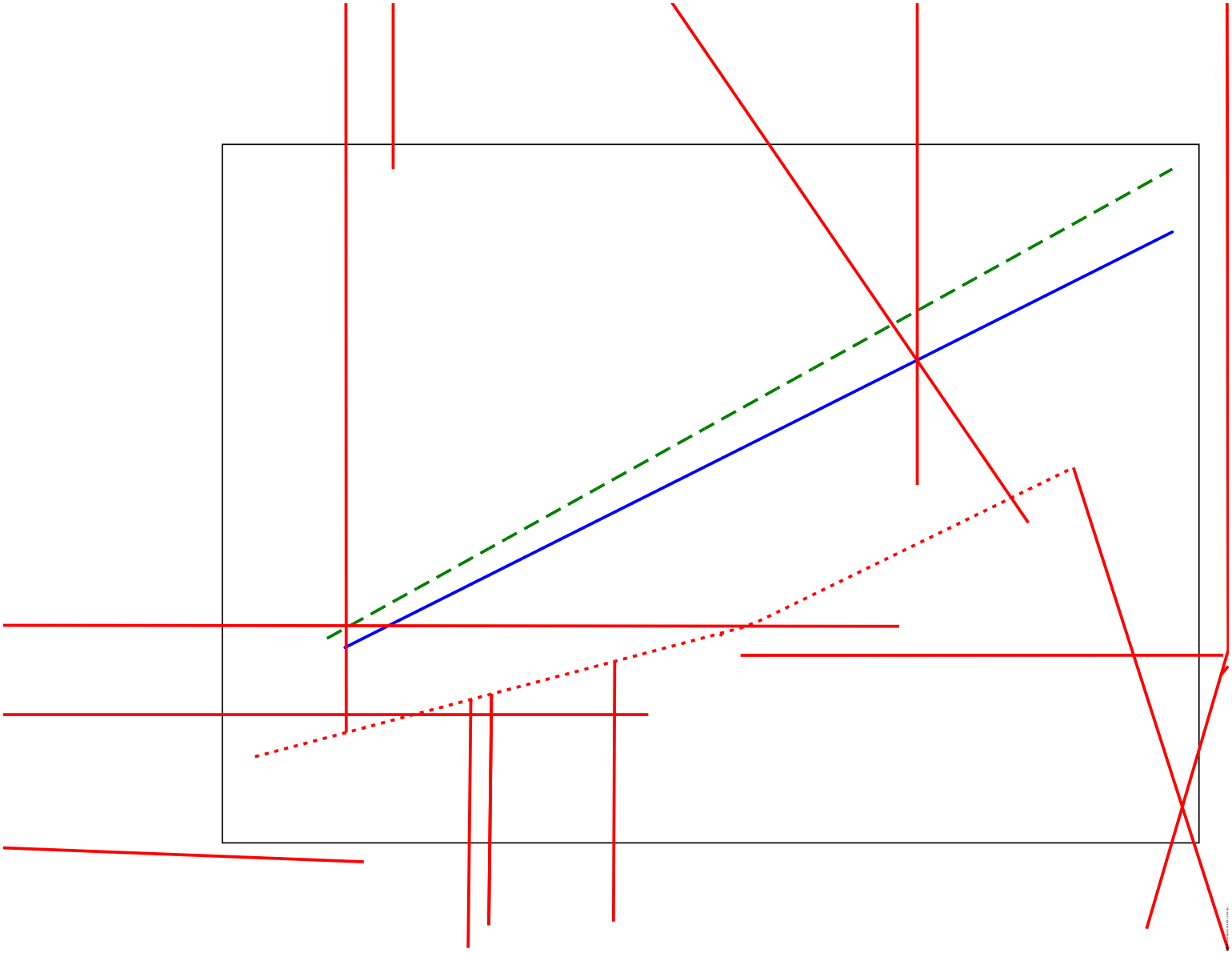
Institutional background

- *Instituto Mexicano del Seguro Social* (IMSS) is main source of social insurance for private-sector employees.
  - Public-sector workers, PEMEX workers have separate systems.
- Components:
  - Health care: free to covered employees and their families in IMSS clinics and hospitals.
  - Child care: free for children ages 7 weeks-4 years to mothers and single fathers covered in their jobs.
  - Retirement pension (more below)
  - Disability
  - Worker's compensation
  - Housing fund
- Health care, child care, disability, worker's compensation are available to all covered workers, spouses and dependents, *independent of wage reported*.
- Health care, child care, disability, worker's compensation changed little over study period.

▸ More on housing account ▸ Other dimensions of tax system

Fig. 2: Employee contribution schedule (low wages)



- Employee contribution: 2-5% of wage, for most workers.

Institutional background (cont.)

- Pension bene ts, pre-reform (PAYGO pension):
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    - Gradually raised to 100% of minimum wage in 1995.

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    - 70% of minimum wage in 1989.
    - Gradually raised to 100% of minimum wage in 1995.
  - Many retirees near minimum 10 years of contributions.
  - Upshot: 80+% of retirees were getting minimum pension prior to 1997 reform.

Fig. 3C: Value of pension, men ages 60-65

- Pension vs. level of nal avg. wage
- Pension vs. IMSS wage percentile
- Women

Institutional background (cont.)

- In 1992, personal accounts created in parallel with PAYGO system. Plagued by administrative problems.
- In Dec. 1995, law passed creating new system of personal retirement accounts (PRAs). Implemented July 1, 1997.
- Pension bene ts, post-reform:
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  - Employer, employee contributions similar to pre-reform.
  - Accounts managed by investment institutions known as AFOREs.
  - Employees also have access to voluntary savings account.

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Table 1: Pension wealth simulation, by age in 1997

Age in 1997	Years of Expected PRA Contributions	Plan	Real Daily Wage 43	100	200	300	500	1079
25	35	PRA	398.6	*815.0*	*1626.2*	*2437.3*	*4059.7*	*8751.9*
		PAYGO	398.6	*398.6*	*603.8*	*890.2*	*1483.6*	*3200.1*
30	30	PRA	398.6	*523.4*	*1044.3*	*1565.3*	*2607.1*	*5620.5*
		PAYGO	398.6	*398.6*	*603.8*	*890.2*	*1483.6*	*3200.1*
35	25	PRA	398.6	398.6	*659.1*	*987.8*	*1645.3*	*3546.9*
		PAYGO	398.6	398.6	*603.8*	*890.2*	*1483.6*	*3200.1*
40	20	PRA	398.6	398.6	403.9	605.4	1008.4	2173.9
		PAYGO	398.6	398.6	603.8	890.2	1483.6	3200.1
45	15	PRA	398.6	398.6	398.6	398.6	586.6	1264.7
		PAYGO	398.6	398.6	603.8	890.2	1483.6	3200.1
50	10	PRA	398.6	398.6	398.6	398.6	398.6	662.6
		PAYGO	398.6	398.6	603.8	890.2	1483.6	3200.1
55	5	PRA	398.6	398.6	398.6	398.6	398.6	398.6
		PAYGO	398.6	398.6	603.8	890.2	1483.6	3200.1

Data

- IMSS administrative records:
  - Full set of employers' reports of employees' wages, 1985-2005.
  - Variables: age, sex, daily wage, state and year of first registration with IMSS, employer id (location, industry)
  - Wages reported as spells; we draw for June 30.
  - Reports for temporary workers not captured electronically prior to 1997; we drop them.
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  - "Permanent" legally defined as having written contract of indefinite duration, but employers have latitude.
- *Encuesta Nacional de Empleo Urbano* (ENEU)
  - CPS-like household survey, households surveyed quarterly for 5 quarters.
  - Began in 1987, some weirdness in first year.
  - Initial sample from 16 cities, expanded over time.
  - Questionnaire modified in 1994.
  - More extensive re-design in 2003.
  - Asks if workers receive IMSS coverage.
  - Contract type available 1994 on.

Data (cont.)

- Goal: samples that are as comparable as possible.
- Sample selection (both sources):
  - Years: 1988-2003
  - Ages: 16-65
  - Cities: 16 cities in original ENEU sample
  - Sectors: manufacturing, construction, retail/hotel/restaurant (sectors in which IMSS is only social security agency.)
  - Main (highest-wage) job, if more than one.
  - Impose 1991 IMSS topcode (lowest real value).

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- Focus on men.
  - Reasons:
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    - Women often covered through husband. (Incentive to remain informal? Topic for future.)
    - Small N problem in ENEU, especially for older women by metro area.

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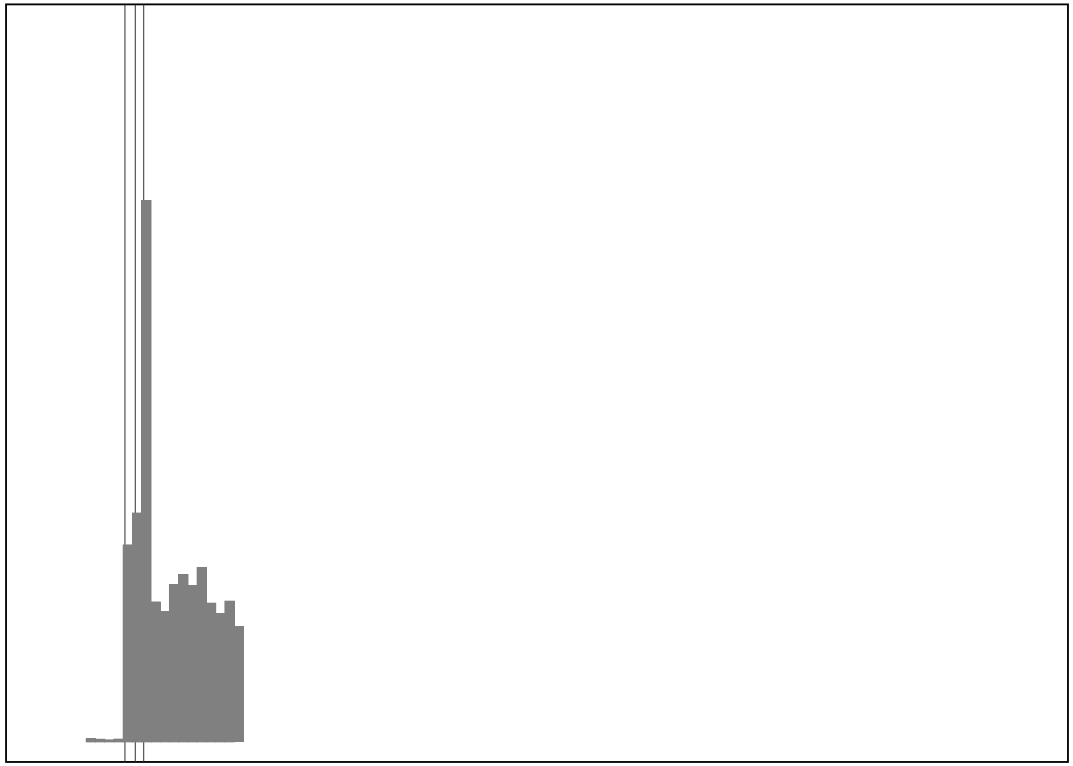
    - Small N problem in ENEU, especially for older women by metro area.
  - Summary: cross-sectional results for women similar to those for men. D-in-D noisier, no clear pattern.

Table 2: Comparison of IMSS and ENEU, men

	IMSS baseline sample (1)	full ENEU sample (2)	ENEU w/ IMSS (3)	ENEU w/o IMSS (4)	ENEU permanent w/ IMSS (5)	ENEU full-time w/ IMSS (6)
A. 1990						
real avg. daily post-tax wage	121.02	163.88	172.98	143.88		166.73
	(0.07)	(1.58)	(1.94)	(2.62)		(1.85)
age	31.75	31.46	32.13	29.98		32.22
	(0.01)	(0.15)	(0.17)	(0.29)		(0.17)
fraction employed in ests >100 employees	0.52	0.43	0.55	0.18		0.55
	(0.00)	(0.01)	(0.01)	(0.01)		(0.01)
N (raw observations)	1691417	16169	11592	4577		10978
N (population, using weights)	1691417	2578847	1772523	806324		1645229
B. 2000						
real avg. daily post-tax wage	123.60	148.20	161.15	120.78	166.42	155.80
	(0.07)	(1.31)	(1.60)	(2.16)	(1.80)	(1.59)
age	32.70	32.22	32.82	30.94	33.22	32.88
	(0.01)	(0.14)	(0.16)	(0.28)	(0.17)	(0.16)
fraction employed in ests >100 employees	0.58	0.44	0.59	0.10	0.63	0.59
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N (raw observations)	2420307	19171	14063	5108	11918	13246
N (population, using weights)	2420307	3509828	2384267	1125561	2042988	2225318

▸ Women

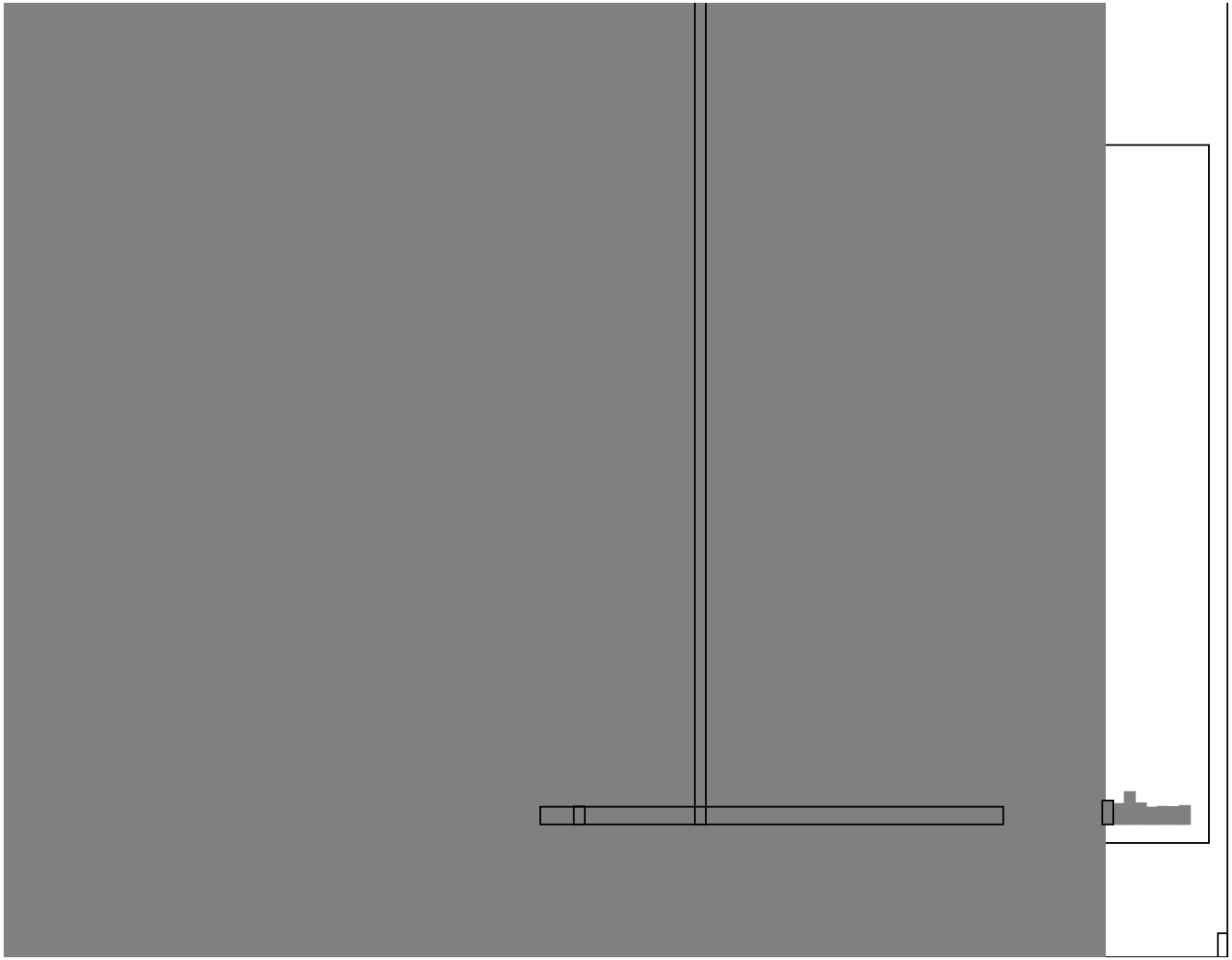
Fig. 6: Wage histograms, men, 1990



Notes: Bins are 5 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar. Vertical lines represent the three region-speci c minimum wages. IMSS reported wage is pre-tax.

▸ Women

Fig. 7: Wage histograms, men, 1990, low wages



Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar. Vertical lines represent the three region-speci c minimum wages. IMSS reported wage is pre-tax.

▸ Women

Fig. 8: Wage histograms, men, 1990, by rm size

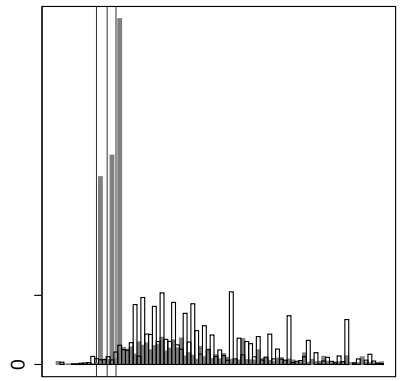
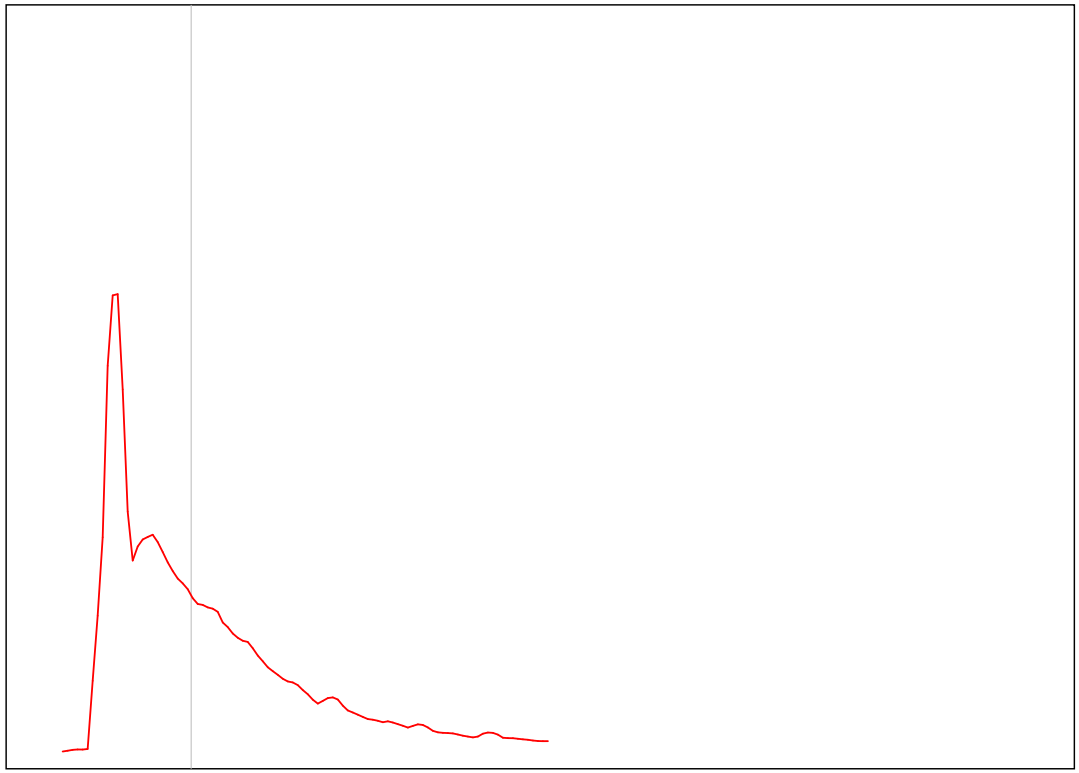


Fig. 9: Excess mass calculation



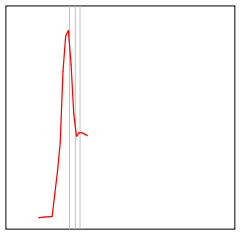
Notes: IMSS wage is post-tax. Densities estimated using 1990 Q2 data and an Epanechnikov kernel with bandwidth 3 pesos for IMSS data and 6 pesos for ENEU data. Vertical line is at 25th percentile of the ENEU wage distribution. Excess mass for 25th percentile de ned as (area under red, left of vertical line) - (area under blue, left of vertical line).

Table 4: Cross-sectional patterns of evasion, 1990, men

	wage gap (medians)			wage gap (means)			exc. mass (25th percentile)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
age 26-35	-0.054*		-0.054**	-0.081***		-0.081***	-0.145***		-0.145***
	(0.029)		(0.021)	(0.024)		(0.019)	(0.015)		(0.013)
age 36-45	-0.072**		-0.073***	-0.149***		-0.150***	-0.167***		-0.168***
	(0.034)		(0.027)	(0.028)		(0.024)	(0.016)		(0.013)
age 46-55	-0.029		-0.026	-0.154***		-0.151***	-0.145***		-0.144***
	(0.035)		(0.031)	(0.031)		(0.027)	(0.017)		(0.014)
age 56-65	-0.026		-0.034	-0.165***		-0.172***	-0.108***		-0.112***
	(0.044)		(0.040)	(0.037)		(0.034)	(0.019)		(0.016)
11-50 employees		-0.332***	-0.333***		-0.173***	-0.173***		-0.129***	-0.128***
		(0.026)	(0.023)		(0.025)	(0.023)		(0.011)	(0.009)
51-100 employees		-0.480***	-0.478***		-0.281***	-0.281***		-0.218***	-0.214***
		(0.033)	(0.031)		(0.030)	(0.028)		(0.015)	(0.014)
101-250 employees		-0.393***	-0.374***		-0.242***	-0.233***		-0.214***	-0.203***
		(0.039)	(0.037)		(0.035)	(0.032)		(0.017)	(0.015)
> 250 employees		-0.499***	-0.465***		-0.231***	-0.200***		-0.237***	-0.218***
		(0.035)	(0.034)		(0.030)	(0.029)		(0.017)	(0.016)
construction			0.128***			0.122***			0.064***
			(0.029)			(0.025)			(0.013)
retail/services			-0.073***			-0.108***			-0.045***
			(0.024)			(0.021)			(0.010)
constant	0.559***	0.854***	0.639***	0.501***	0.574***	0.505***	0.483***	0.524***	0.495***
	(0.017)	(0.018)	(0.047)	(0.016)	(0.018)	(0.039)	(0.009)	(0.006)	(0.019)
metro area e ects	N	N	Y	N	N	Y	N	N	Y
R-squared	0.00	0.20	0.31	0.03	0.08	0.27	0.09	0.20	0.42
N	1068	1068	1068	1068	1068	1068	1068	1068	1068

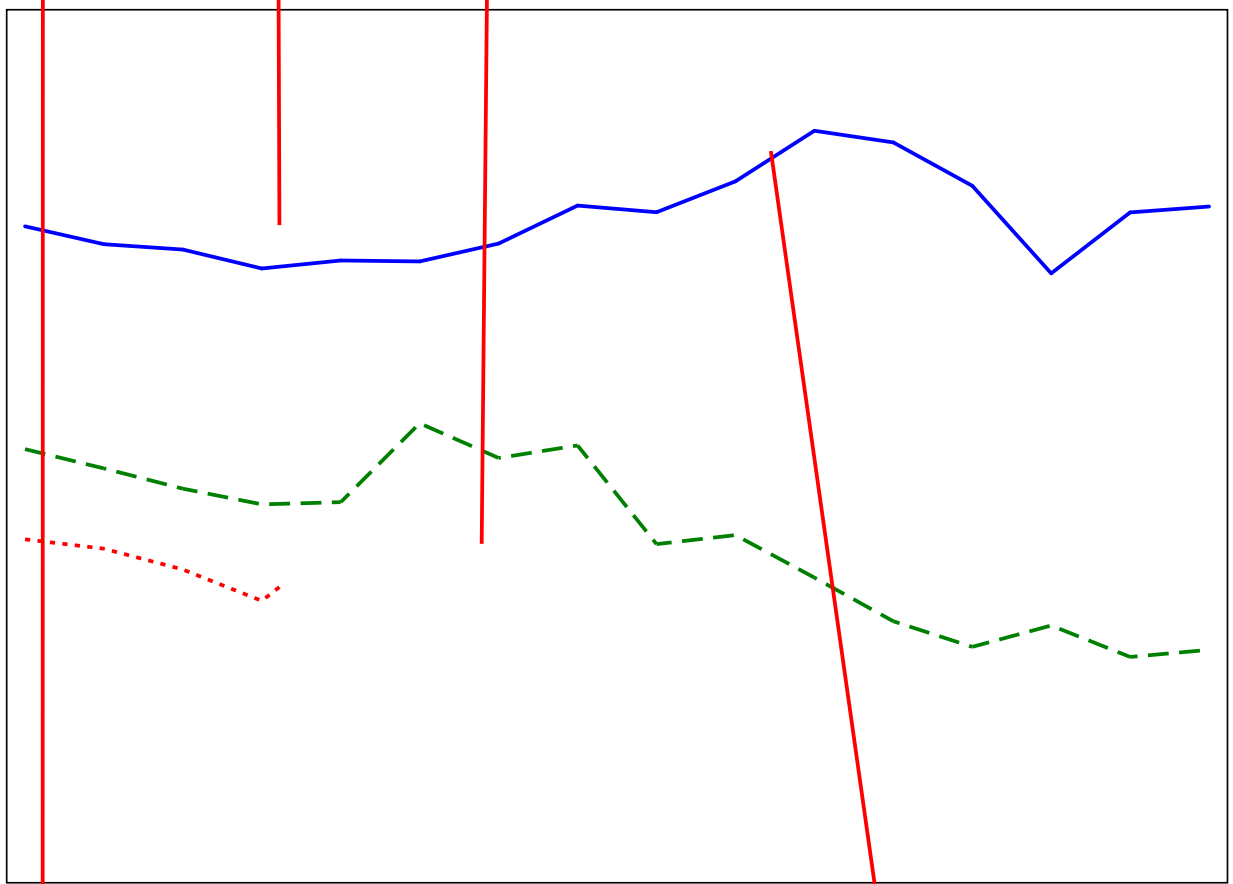
Notes: Data are from IMSS and ENEU baseline samples, collapsed to metro area/age group/ rm-size category/sector level for 1990. The omitted category for age is 16-25, for rm size is 1-10 employees, and for sector is manufacturing. The wage gap (medians) is log median real daily take-home wage from the ENEU minus log median real daily post-tax reported wage from IMSS, calculated. Wage gap (means) is analogous, using mean in place of median.

Fig. 12: Wage densities by age group, men



Women

Fig. 14: Wage gaps (medians) by age group, men, deviated from metro-year means



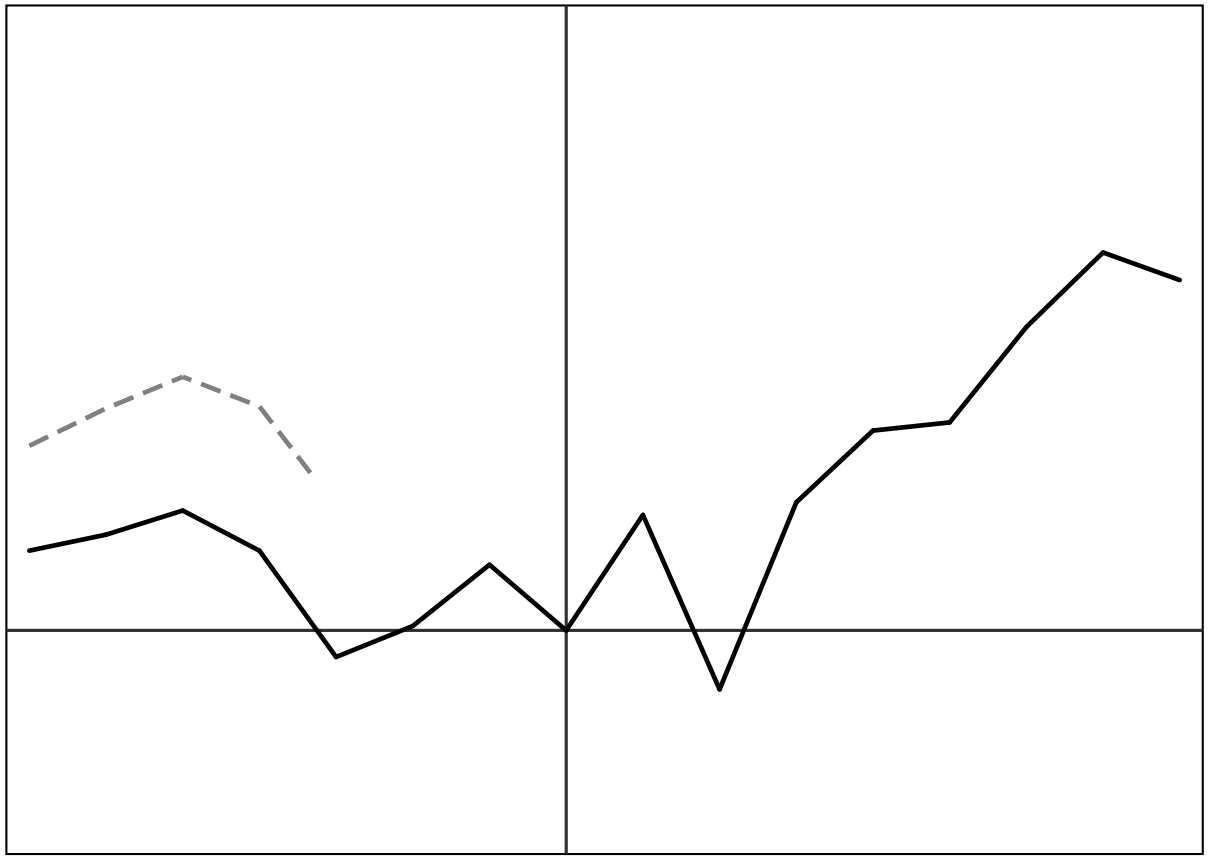
Notes: Wage gap (medians) = log median net wage (ENEU) - log median post-tax reported wage (IMSS), calculated at age-group/metro area/year level. Shown are average residuals from regressions of wage gaps on metro-year dummies. ENEU data pooled across quarters within year.

Table 5: Di erential e ects on evasion, men

	wage gap (medians)		wage gap (means)		excess mass (25^{th} perc.)	
	(1)	(2)	(3)	(4)	(5)	(6)
1(age > 55)*1988	0.056	0.056	0.040	0.040	0.022	0.022
	(0.040)	(0.037)	(0.035)	(0.027)	(0.024)	(0.019)
1(age > 55)*1989	0.076*	0.076*	0.048	0.048	0.026	0.026
	(0.045)	(0.042)	(0.039)	(0.032)	(0.021)	(0.016)
1(age > 55)*1990	0.067	0.067*	0.060	0.060*	0.027	0.027
	(0.044)	(0.039)	(0.041)	(0.034)	(0.022)	(0.017)
1(age > 55)*1991	0.058	0.058	0.040	0.040	0.042**	0.042***
	(0.039)	(0.038)	(0.036)	(0.037)	(0.019)	(0.014)
1(age > 55)*1992	0.037	0.037	-0.013	-0.013	0.029	0.029*
	(0.042)	(0.043)	(0.042)	(0.038)	(0.021)	(0.016)
1(age > 55)*1993	0.039	0.039	0.002	0.002	0.015	0.015
	(0.040)	(0.040)	(0.036)	(0.034)	(0.018)	(0.015)
1(age > 55)*1994	0.095**	0.095**	0.033	0.033	0.002	0.002
	(0.045)	(0.045)	(0.035)	(0.031)	(0.019)	(0.016)
1(age > 55)*1996	0.124***	0.124***	0.058	0.058	0.053**	0.053***
	(0.048)	(0.040)	(0.048)	(0.043)	(0.021)	(0.018)
1(age > 55)*1997	0.106**	0.106**	-0.029	-0.029	0.037*	0.037**
	(0.052)	(0.045)	(0.039)	(0.031)	(0.022)	(0.017)
1(age > 55)*1998	0.147***	0.147***	0.064	0.064**	0.054***	0.054***
	(0.043)	(0.037)	(0.040)	(0.031)	(0.018)	(0.013)
1(age > 55)*1999	0.154***	0.154***	0.100***	0.100***	0.062***	0.062***
	(0.045)	(0.041)	(0.032)	(0.033)	(0.017)	(0.013)
1(age > 55)*2000	0.146***	0.146***	0.104***	0.104***	0.053***	0.053***
	(0.044)	(0.039)	(0.030)	(0.024)	(0.017)	(0.014)
1(age > 55)*2001	0.201***	0.201***	0.151***	0.151***	0.074***	0.074***
	(0.049)	(0.047)	(0.041)	(0.035)	(0.018)	(0.015)
1(age > 55)*2002	0.243***	0.243***	0.188***	0.188***	0.071***	0.071***
	(0.046)	(0.039)	(0.033)	(0.030)	(0.018)	(0.013)
1(age > 55)*2003	0.192***	0.192***	0.175***	0.175***	0.051***	0.051***
	(0.044)	(0.040)	(0.035)	(0.031)	(0.018)	(0.014)
age group e ects	Y		Y		Y	
age group-metro area e ects	N	Y	N	Y	N	Y
metro-year e ects	Y	Y	Y	Y	Y	Y
R-squared	0.85	0.92	0.83	0.89	0.91	0.96
N	1280	1280	1280	1280	1280	1280

Notes: Data collapsed to metro area/age group/year level. ENEU data pooled across quarters within year.

Fig. 16: Di erential e ect of reform on wage gap (means), ages 55-65, men



Notes: Figure plots coe cients for 1(age > 55)*year interaction term from Column 4 of Table 5. The dotted lines indicate the 95 percent con dence interval.

Conclusion

- Future work:
  - To what extent are workers aware of under-reporting by employers?
    - Empirically, need setting with independent variation in incentives and information.
  - Does greater compliance on intensive margin (less under-reporting by registered firms) induce lower compliance on extensive margin (fewer firms registering)?

References I

References II

Melitz, Marc J., \The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," Econometrica, Nov. 2003, 71 (6), 1695{1725.

OECD, OECD Economic Surveys: Mexico 1992, OECD Publishing, 1992.

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Schneider, Friedrich and Dominik H. Enste, \Shadow Economies: Size, Causes, and Consequences," Journal of Economic Literature, 03// 2000, 38 (1), 77{114.

Housing account

- Employer contributes 5% of worker's wage to housing fund (INFONAVIT), to which workers can apply for loans.
- Workers can claim unused funds at retirement.
  - Prior to 1992: *nominal* contributions, real value low.
  - 1992-1997: nominal contributions + interest, but real rate of return negative.
  - Post-reform: Funds administered by AFORE, can be claimed by workers who choose PRA.
  - Grandfathered workers who choose PAYGO only receive unused housing funds from 1992-1997.
- Changes reinforce pension changes.

▸ Return

Other dimensions of tax system

- VAT: 15% for 1988-2003 period.
- Corporate income taxes:
  - 39.2% in 1988, 34% in 2003
  - Widspread evasion: e.g. in early 1990s, 70% of corporations declared no income (OECD, 1992).
- Personal income taxes:
  - 3-50% in 1988, 3-34% in 2003.
  -

Fig. 3A: Value of pension, men ages 60-65

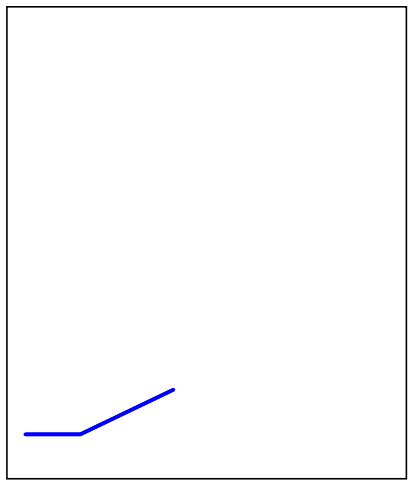

Fig. 3B: Value of pension, men ages 60-65

Return

Table A5: Pension wealth simulation, worker entering June 30, 1997

Years of Contributions	Plan	Real Daily Wage					
		43	100	200	300	500	1079
35	PRA	398.6	*815.0*	*1626.2*	*2437.3*	*4059.7*	*8751.9*
	PAYGO	398.6	*398.6*	*603.8*	*890.2*	*1483.6*	*3200.1*
30	PRA	398.6	*523.4*	*1044.3*	*1565.3*	*2607.1*	*5620.5*
	PAYGO	398.6	*398.6*	*510.7*	*743.3*	*1238.9*	*2672.1*
25	PRA	398.6	398.6	*659.1*	*987.8*	*1645.3*	*3546.9*
	PAYGO	398.6	398.6	*406.9*	*579.5*	*965.8*	*2083.2*
20	PRA	87.9	202.4	*403.9*	*605.4*	*1008.4*	*2173.9*
	PAYGO	398.6	398.6	*398.6*	*449.6*	*749.3*	*1616.2*
15	PRA	51.1	117.8	235.0	352.2	*586.6*	*1264.7*

Theoretical framework

- Simple model of payroll-tax compliance by heterogeneous rms.

Theoretical framework

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- Simple model of payroll-tax compliance by heterogeneous rms.
- Shares features with models in Yaniv (1992), Kopczuk and Slemrod (2006), Kleven et al. (2009), and Besley and Persson (2013), but these papers do not focus on heterogeneity across rms.
- Model is special in a number of ways. Goal is to spell out in a precise way why empirical exercise makes sense.

Theoretical framework (cont.)

- Payroll taxes:
  - $_f$ on rms, $_w$ on workers (statutorily).
  - Let = $_f$ + $_w$, assuming 0 < < 1.
- Wages:
  - w_r = pre-tax wage reported by rm to government
  - w_u = unreported wage.
  - Total wage paid by rm: $w_f = w_r + w_u$.
  - Net take-home wage to worker: $w_{net} = w_u + (1 \quad)w_r$.
  - \E ective" wage: $w_e = w_{net} + bw_r = w_u + (1 \quad (\quad b))w_r$, where b is \bene t rate."

Theoretical framework (cont.)

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- w_r, w_{net} observable to econometrician in IMSS, ENEU data, respectively (at cell level).
  - Can infer unreported wage from them: $w_u = w_{net} \quad (1 \quad)w_r$

Theoretical framework (cont.)

- Payroll taxes:
  - $_f$ on rms, $_w$ on workers (statutorily).
  - Let = $_f$ + $_w$, assuming 0 < < 1.
- Wages:
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Theoretical framework (cont.)

- Firm side based on one-country version of Melitz (2003):
  - Firms heterogeneous in productivity parameter, $'$, with density $g(')$.

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  - Firms heterogeneous in productivity parameter, $'$, with density $g(')$.
  - CES demand: $x(') = Ap(')$
  - Cost of evasion: $xc(w_u)$, where $c(0) = 0$, $c^{0}(w_u) > 0$, $c^{00}(w_u) > 0$
- Labor market competitive; rms are price-takers of w_e.

Theoretical framework (cont.)

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  - Firms heterogeneous in productivity parameter, $'$, with density $g(')$.
  - CES demand: $x(') = Ap(')$
  - Cost of evasion: $xc(w_u)$, where $c(0) = 0$, $c^0(w_u) > 0$, $c^{00}(w_u) > 0$
- Labor market competitive; rms are price-takers of w_e.
- Firm's problem: choose w_u, p to maximize

$$(w_u; p; '; w_e) = fp \quad \frac{1}{'} \underbrace{\frac{w_e \quad (\quad b)w_u}{1 \quad (\quad b)}}_{w_f} \quad c(w_u)gx \quad f$$

Theoretical framework (cont.)

- First order conditions yield:

Theoretical framework (cont.)

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  - Optimal evasion $w_u(\ ')$ depends on neither p nor w_e:

$$c^{0}(w_u) = \frac{b}{\ '(1 \quad (\quad b))}$$

  - Price is xed mark-up over costs:

$$p\ (w_e;\ ') = \frac{w_e \quad (\quad b)b w_e}{1}$$

Theoretical framework (cont.)

- First order conditions yield:
  - Optimal evasion $w_u(\theta')$ depends on neither p nor w_e:

$$c'(w_u) = \frac{b}{\theta'(1 \quad (\quad b))}$$

  - Price is xed mark-up over costs:

$$p\ (w_e; \theta') = \frac{1}{\quad} \quad \frac{w_e \quad (\quad b) w_u(\theta')}{\theta'(1 \quad (\quad b))} + c(w_u(\theta'))$$

- Aggregate labor demand:

$$L^D_{agg}(w_e) = \int_{\theta' min}^{\theta' max} \frac{A p\ (w_e; \theta')}{\theta'} g(\theta') d\theta'$$

- Assume constant elasticity of labor supply (with > 0 and $B > 0$):

$$L^S_{agg} = B w_e$$

Incidence (Appendix B)

- Di erentiating labor-market-clearing condition with respect to b and re-arranging:

$$\frac{dw_e}{db} = \frac{\int_{\theta_{min}}^{\theta_{max}} [w_r(w_e;\theta)] \frac{(p\ )}{\theta_2}^{1} g(\theta)d\theta}{\frac{1}{A}^{1+b} \quad \frac{1}{} \quad Bw_e^{\ 1} + \int_{\theta_{min}}^{\theta_{max}} \frac{(p\ )}{\theta_2}^{1} g(\theta)d\theta}$$

- E ect can be bounded:

$$\lim_{b \to 1} \frac{dw_e}{db} = 0$$

$$\lim_{b \to 0} \frac{dw_e}{db} = \int_{\theta_{min}}^{\theta_{max}} (\theta)[w_r(w_e;\theta)]g(\theta)d\theta \quad \overline{w}_r(w_e)$$

where $(\theta) = \frac{\frac{(p\ )}{\theta_2}^{1}}{\int_{\theta_{min}}^{\theta_{max}} \frac{(p\ )}{\theta_2}^{1} g(\theta)d\theta}$

Table A6: Comparison of IMSS and ENEU, 1990, women

IMSS baseline sample	full ENEU sample	ENEU w/ IMSS	ENEU w/o IMSS	ENEU permanent w/ IMSS	ENEU full-time w/ IMSS

Fig. A1: Employment, IMSS vs. ENEU samples, women

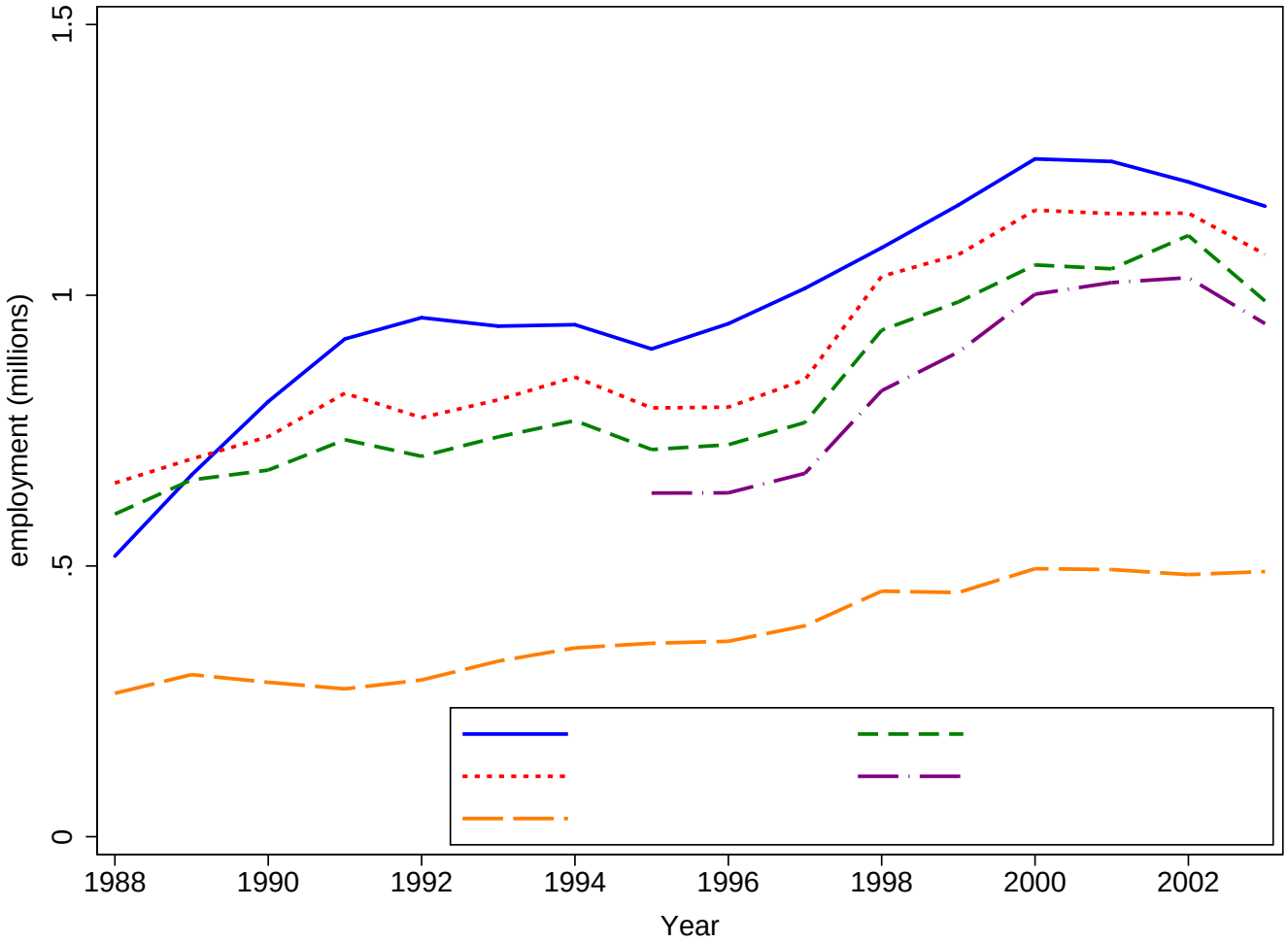

Fig. A2: Wage histograms, women, 1990

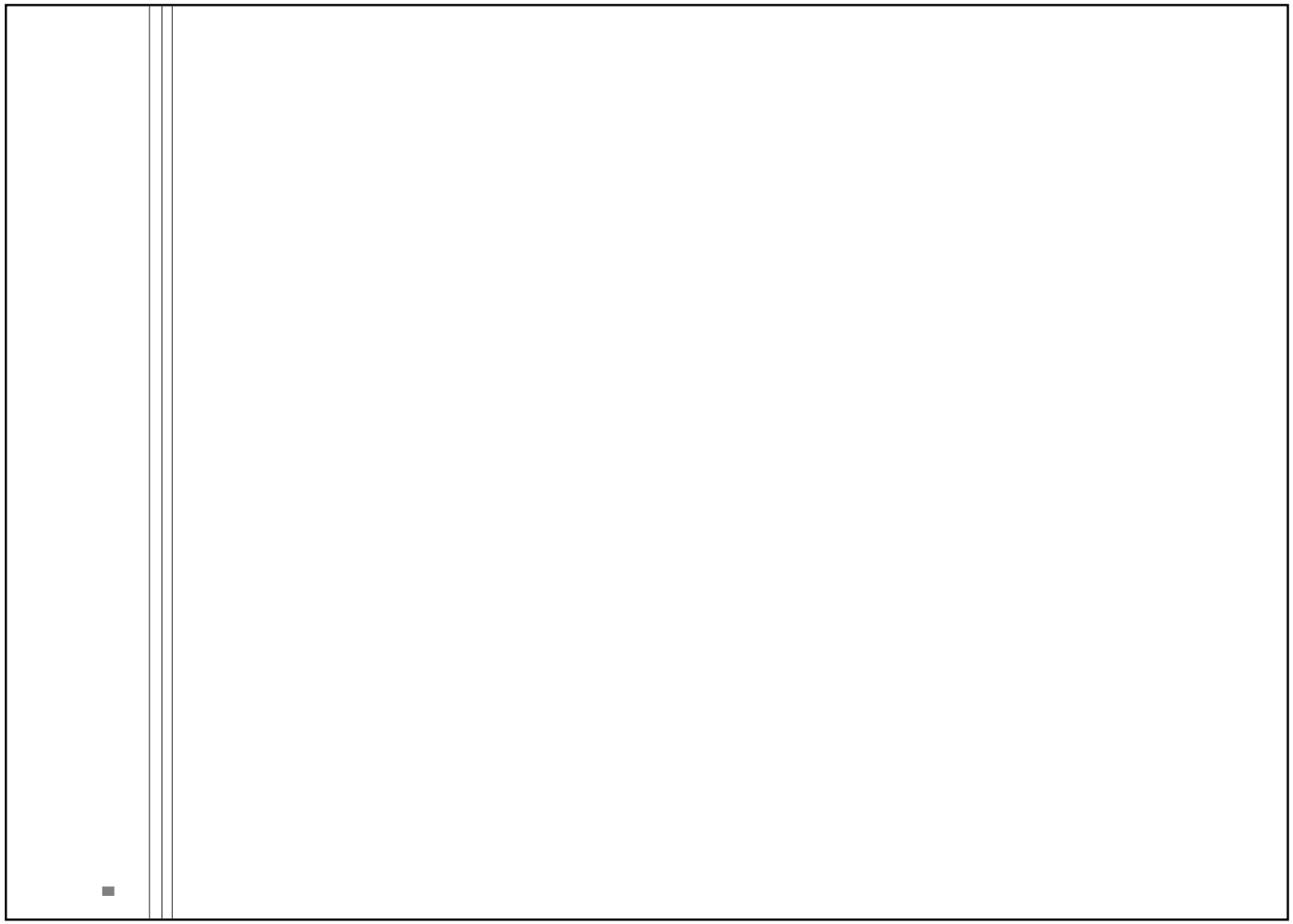

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Fig. A3: Wage histograms, women, 1990, low wages

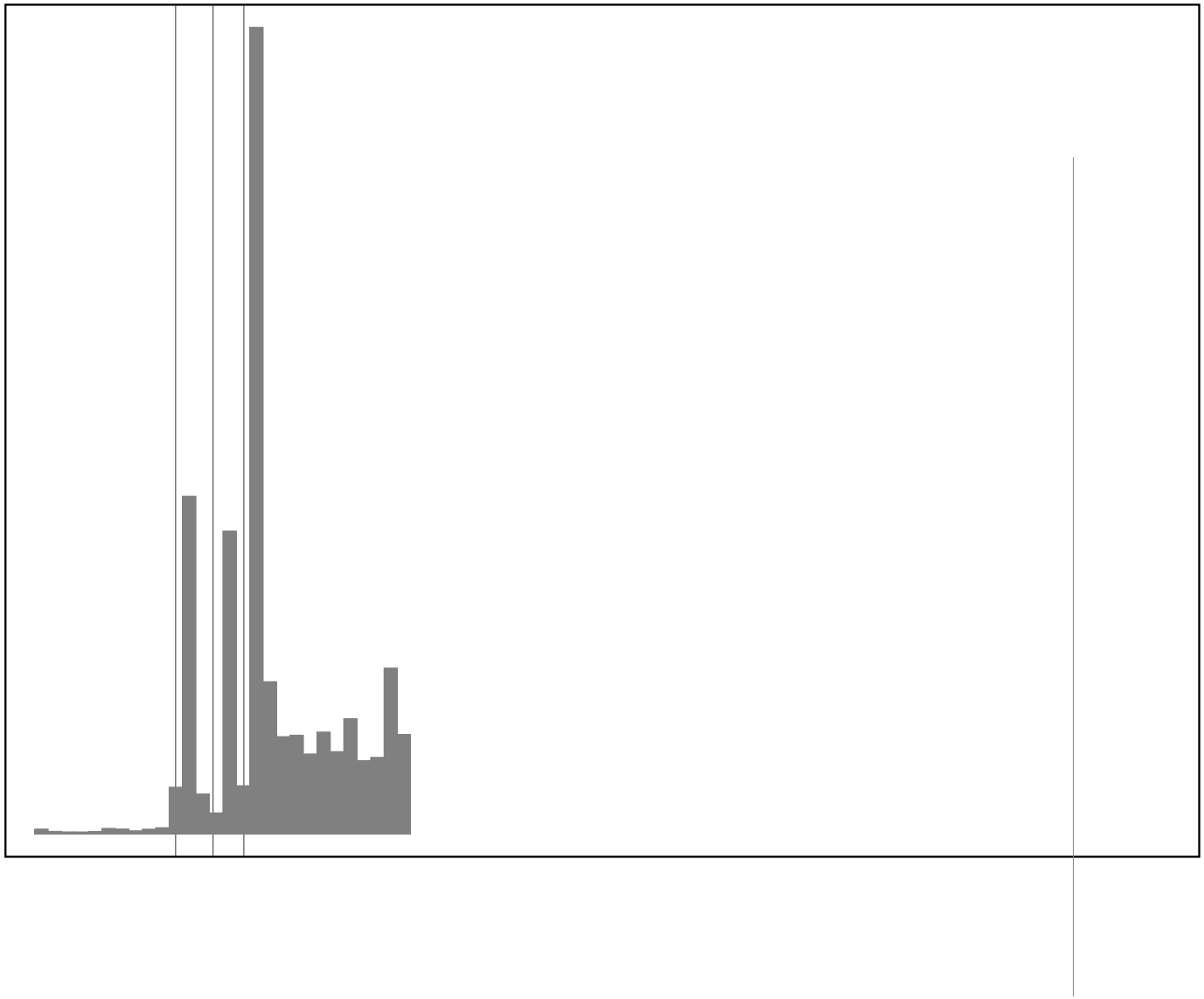

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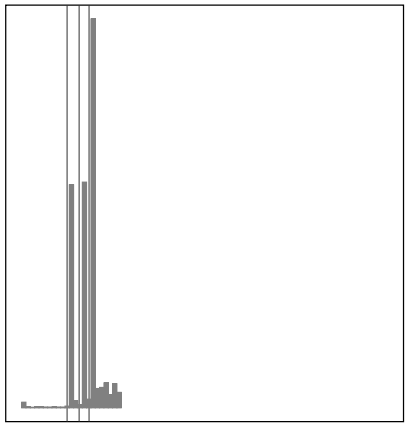
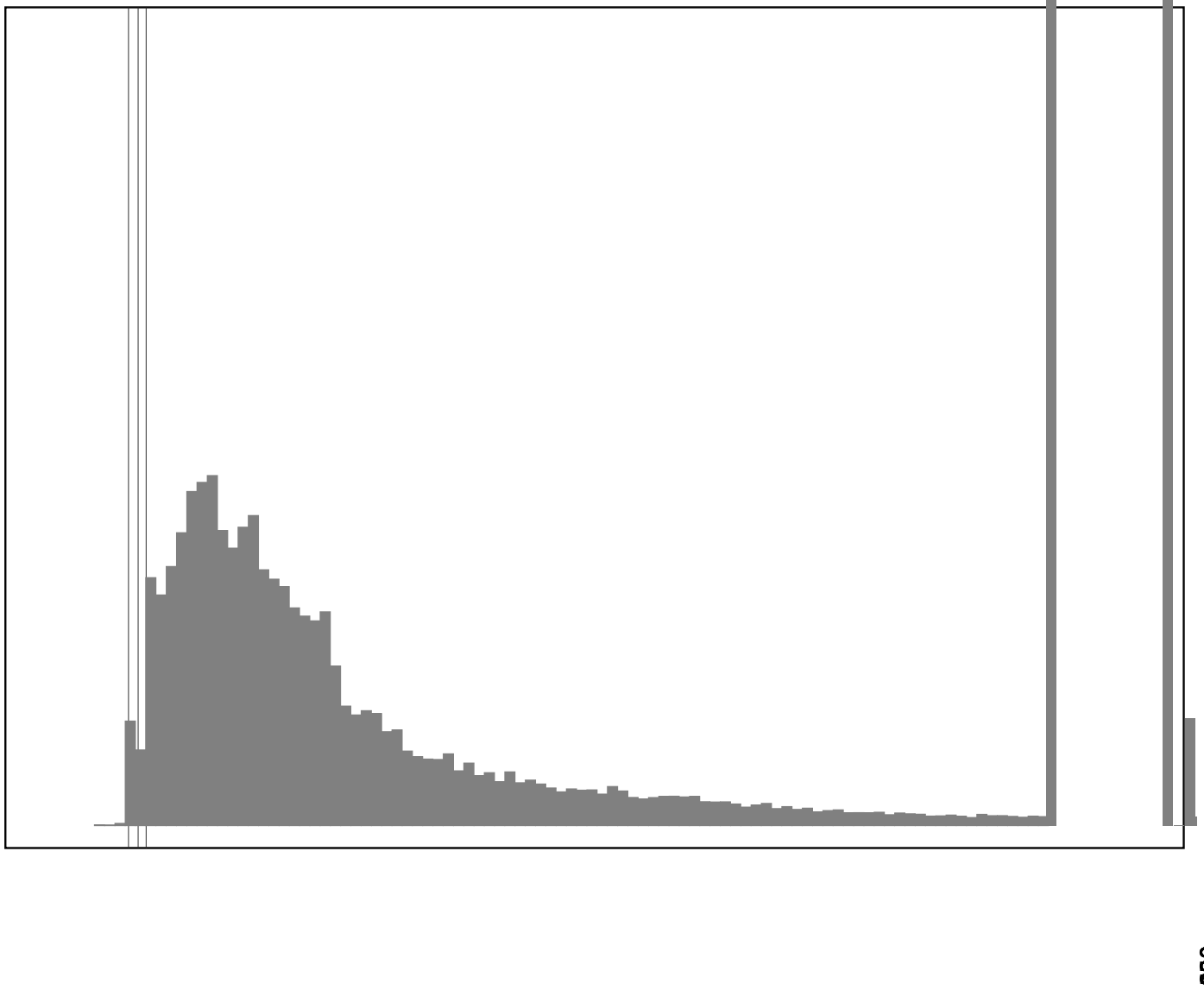
Fig. A4: Wage histograms, women, 1990, by rm size



Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar.

Return

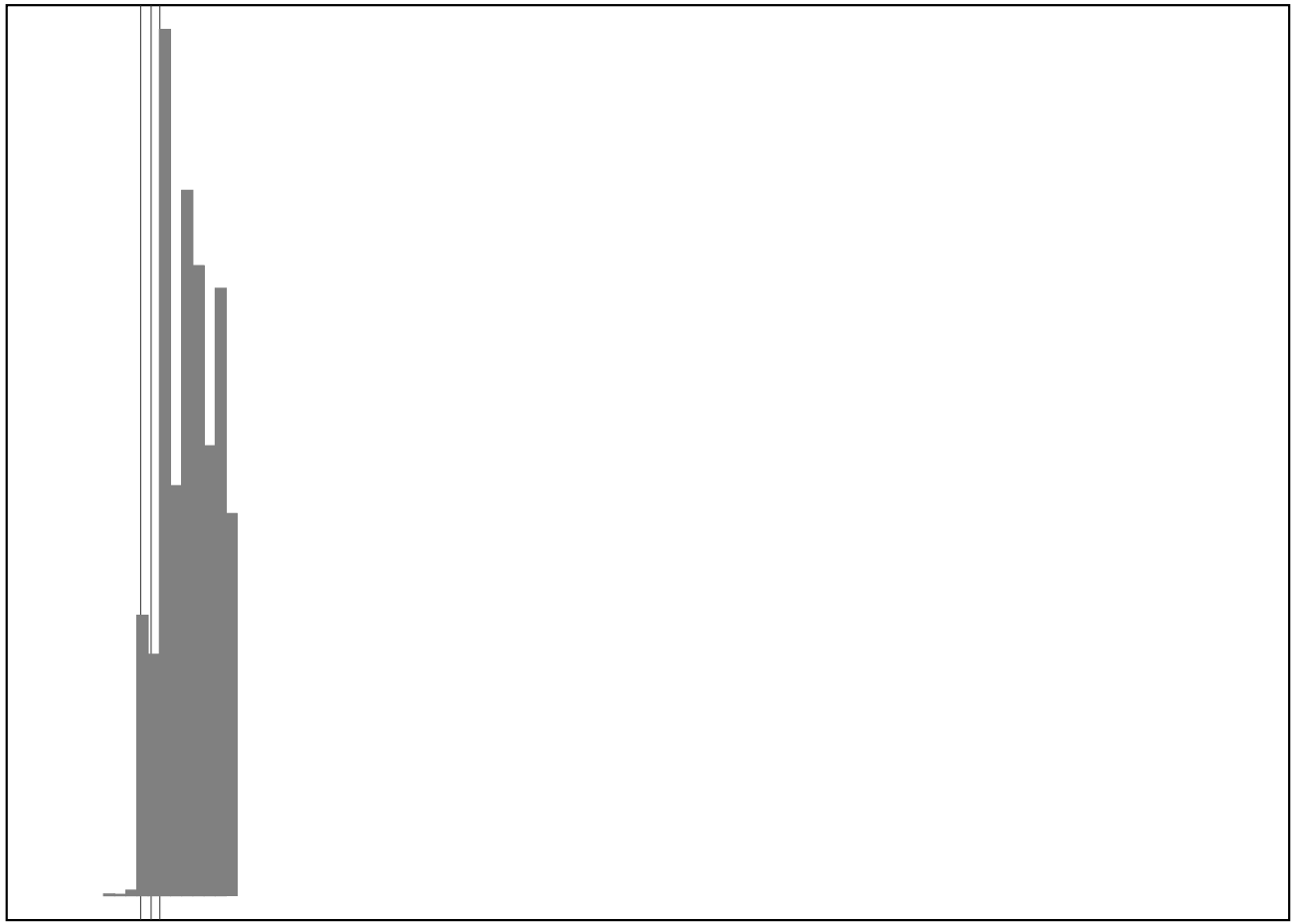
Fig. A5: Wage histogram, women, 1993, EIA plants



Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar.

Return

Fig. A6: Wage histogram, women, 1993, EMIME plants



Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar.

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Fig. ??: Wage densities by age group, women

Return

Fig. B17: Average age by rm size, men

Return

Fig. B11: Excess mass (below 50th perc.) by rm size

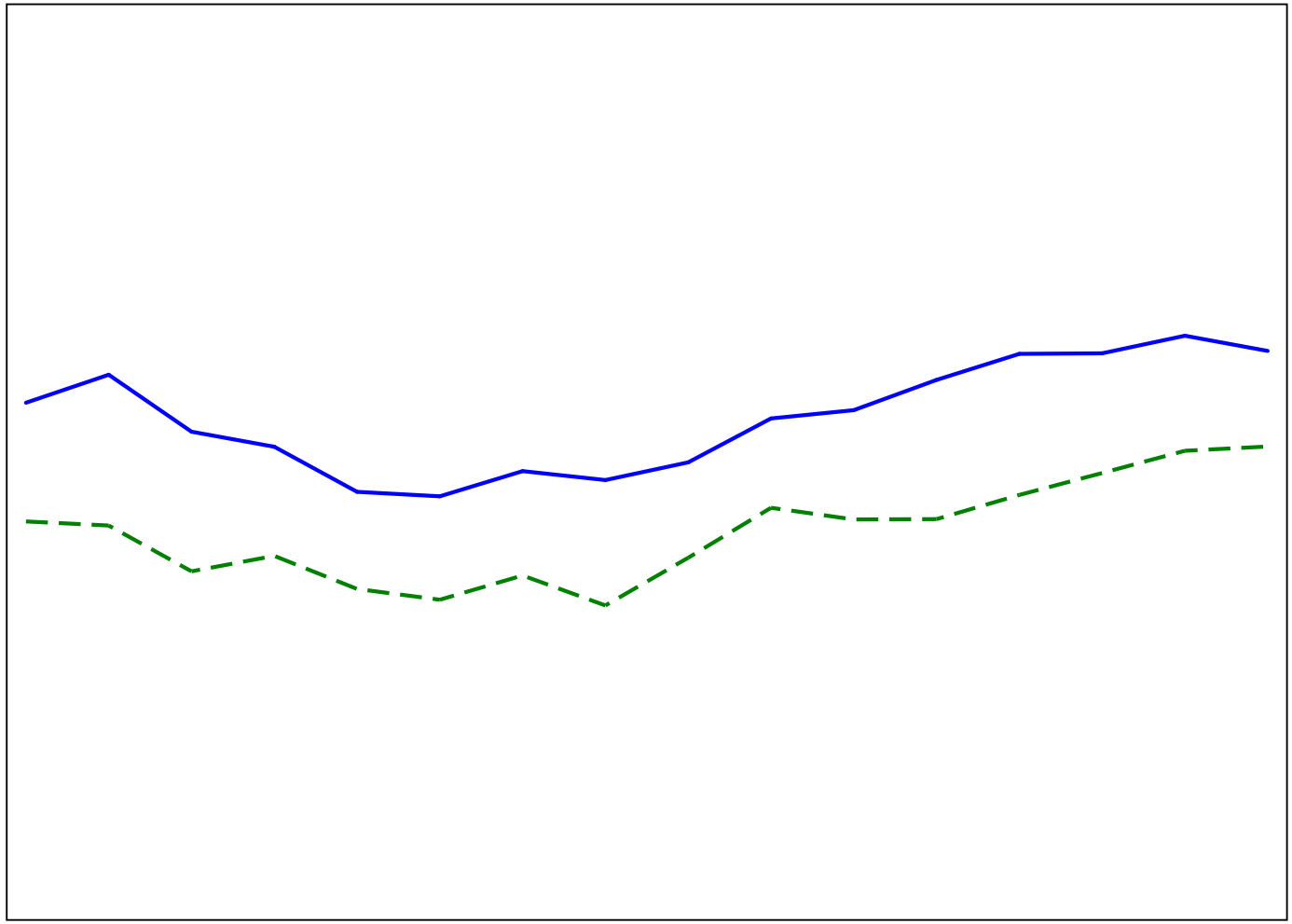

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Fig. **??**: Wage gaps by age group, women

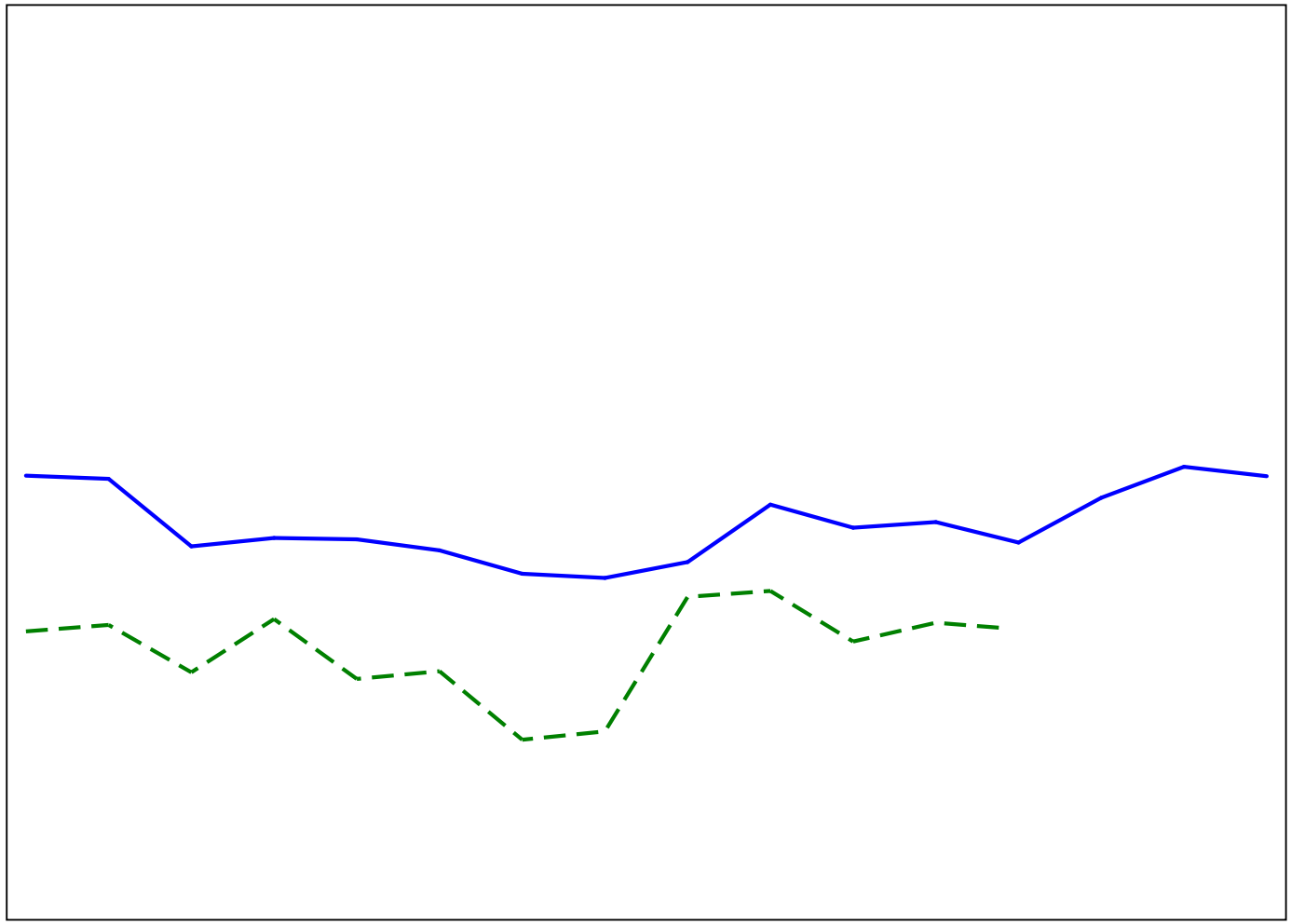

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Fig. **??**: Wage gaps by age group, women, deviated from metro-year means

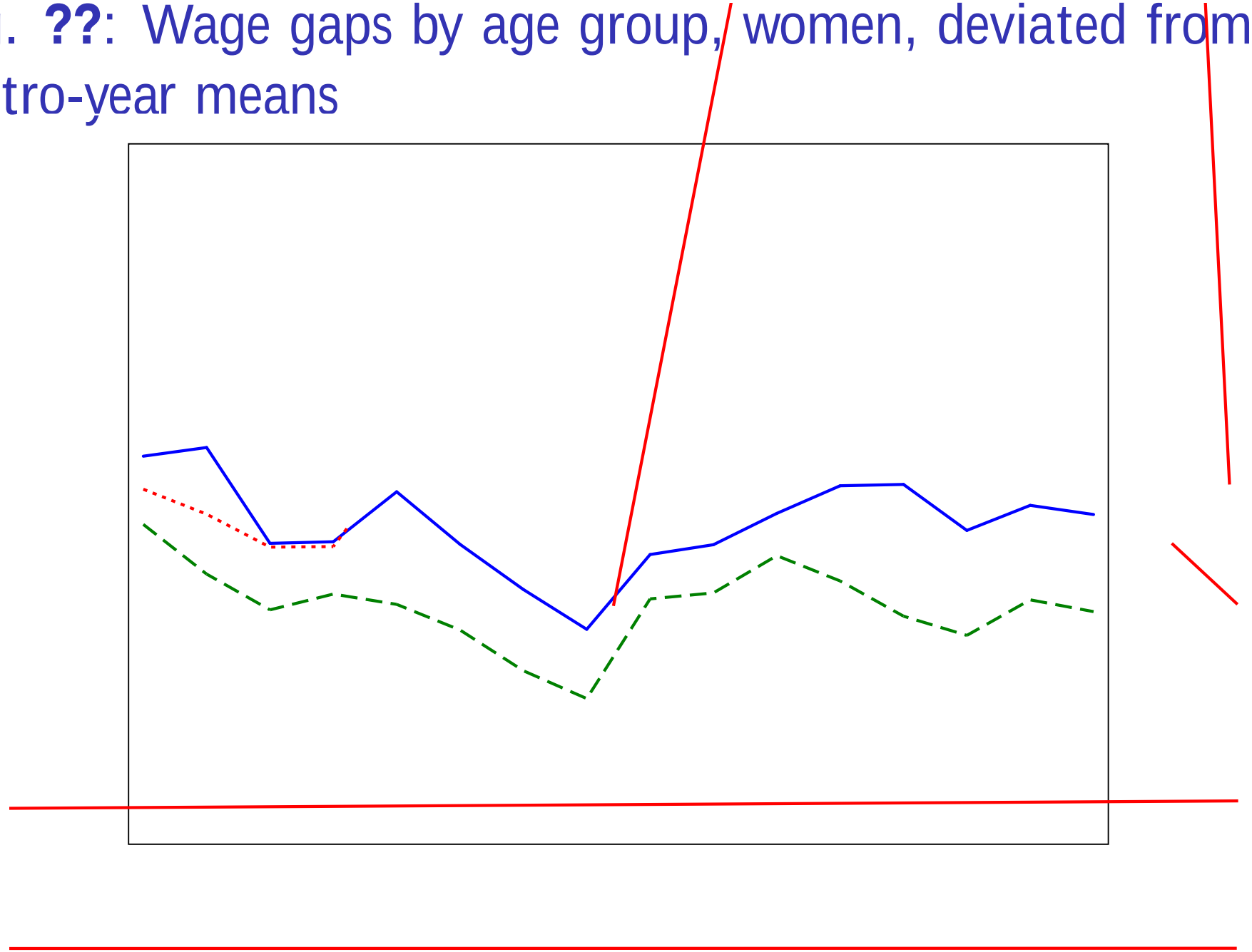

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Fig. **??**

Table

Fig. **??**: Coe s. on age*year interaction (Table 4 Col 3)

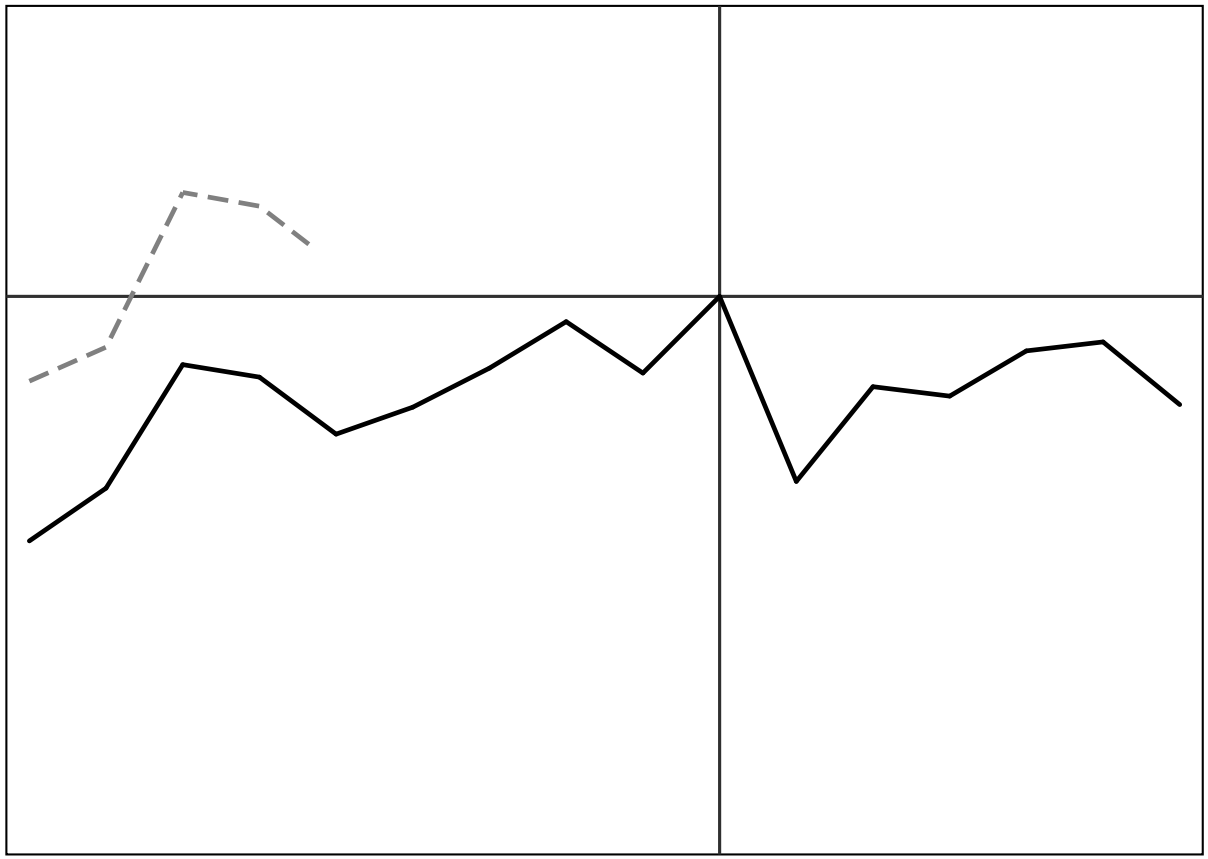

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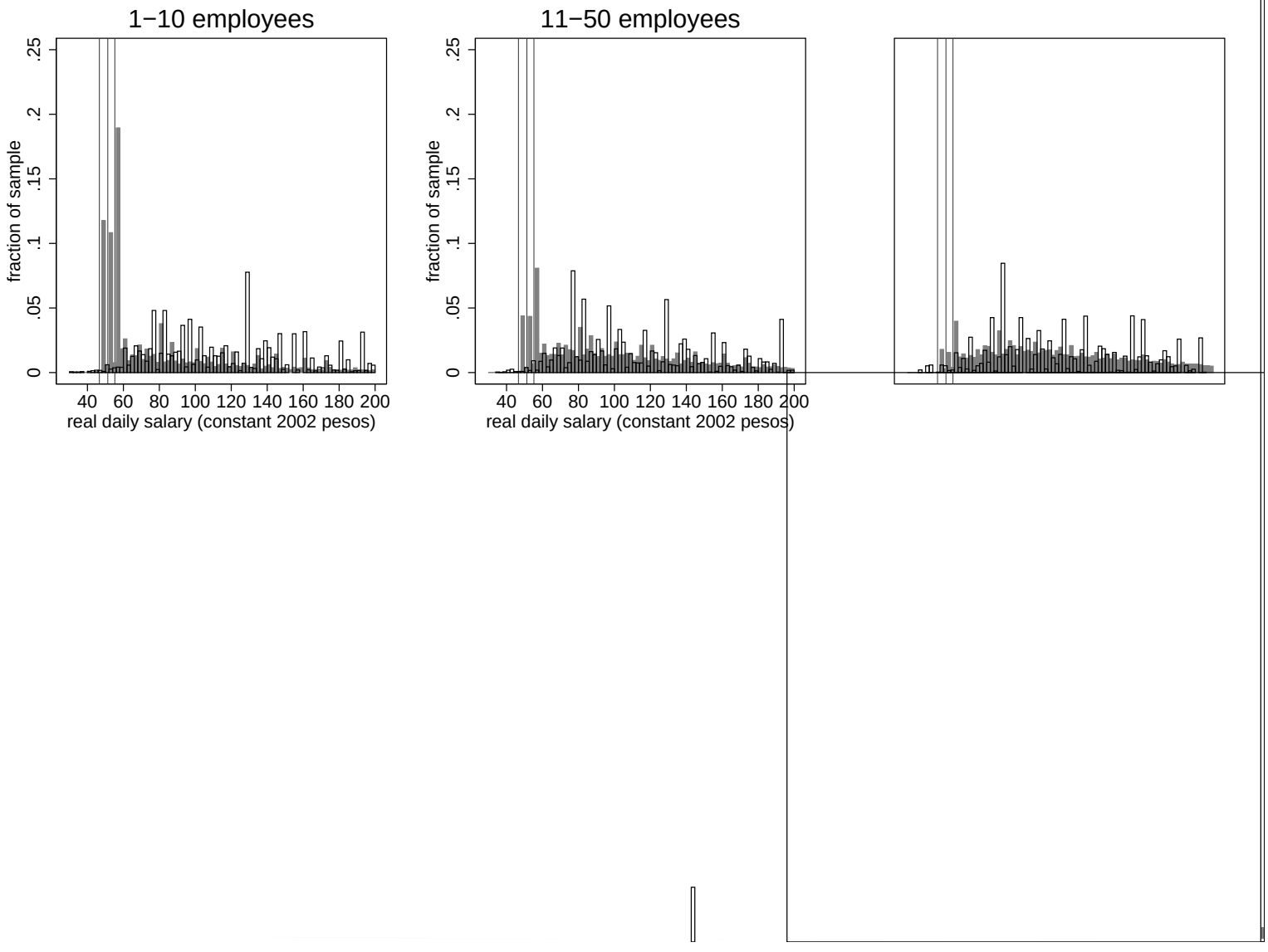
Table ??

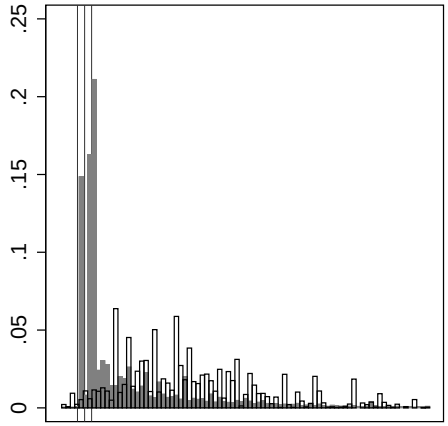
Wage histograms, men, 1993, by rm size



Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar.

▸ Return

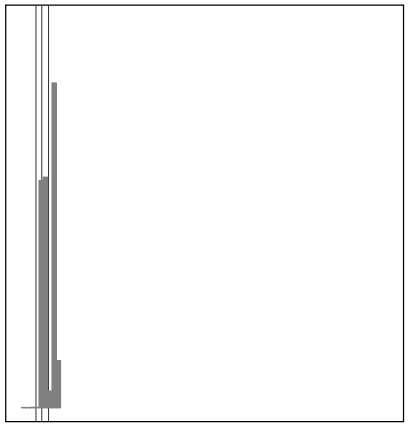
Wage histograms, men, 1997, by rm size



Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar.

Return

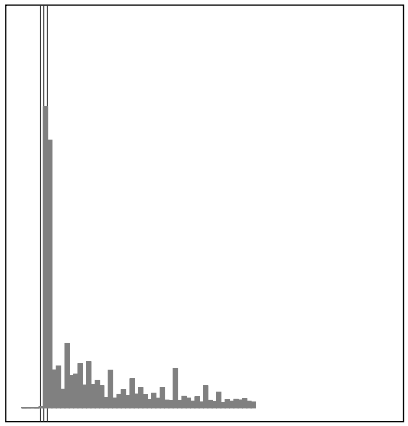
Wage histograms, men, 2000, by firm size



Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar.

Return

Wage histograms, men, 2003, by firm size



Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar.

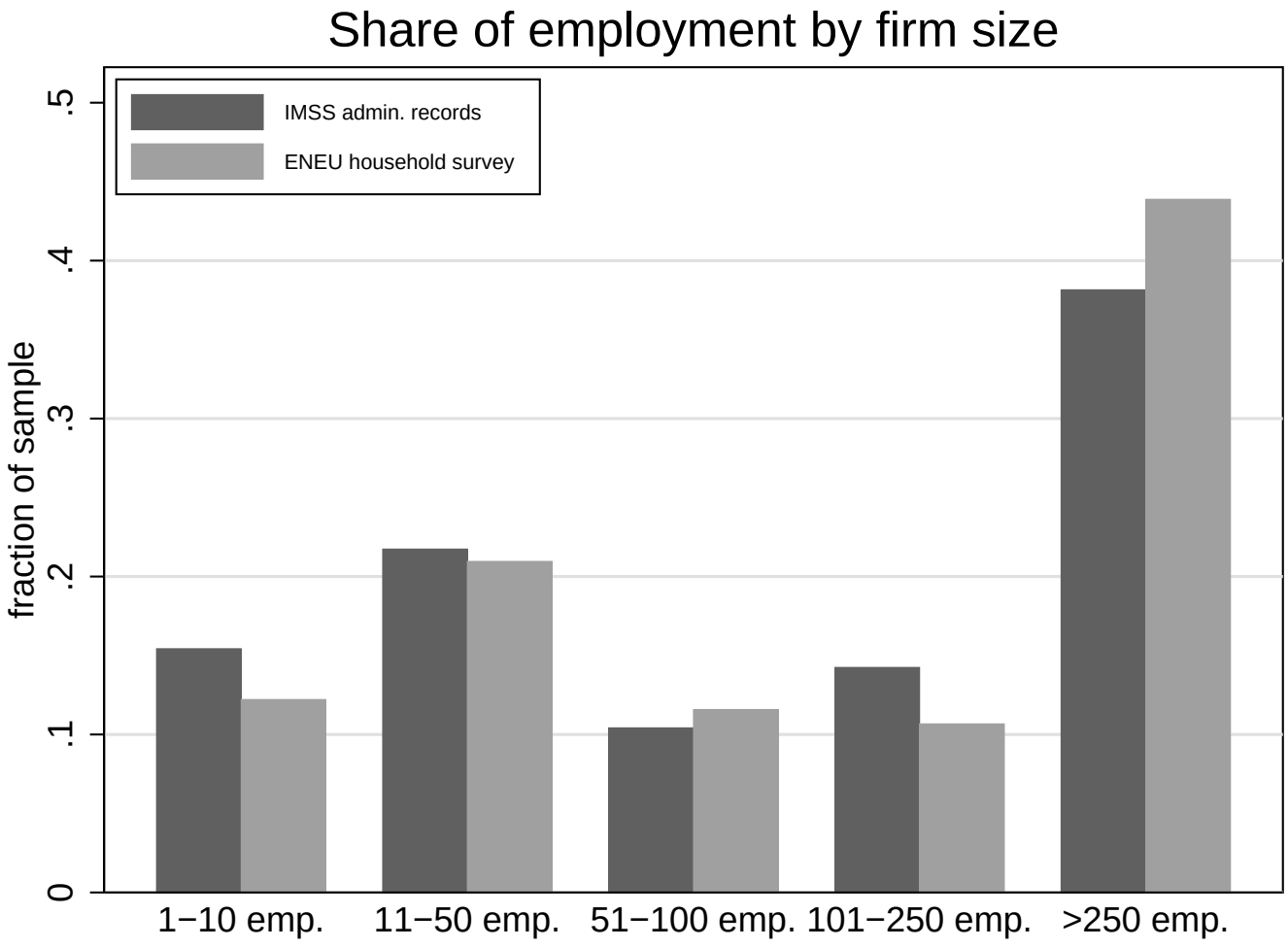
Return

Wage histograms, men, 1993, by firm size, non-EIA plants

Notes: Bins are 2 pesos wide. Average 2002 exchange rate: 9.66 pesos/dollar.

Return

Firm size distributions, IMSS vs. ENEU, 1990



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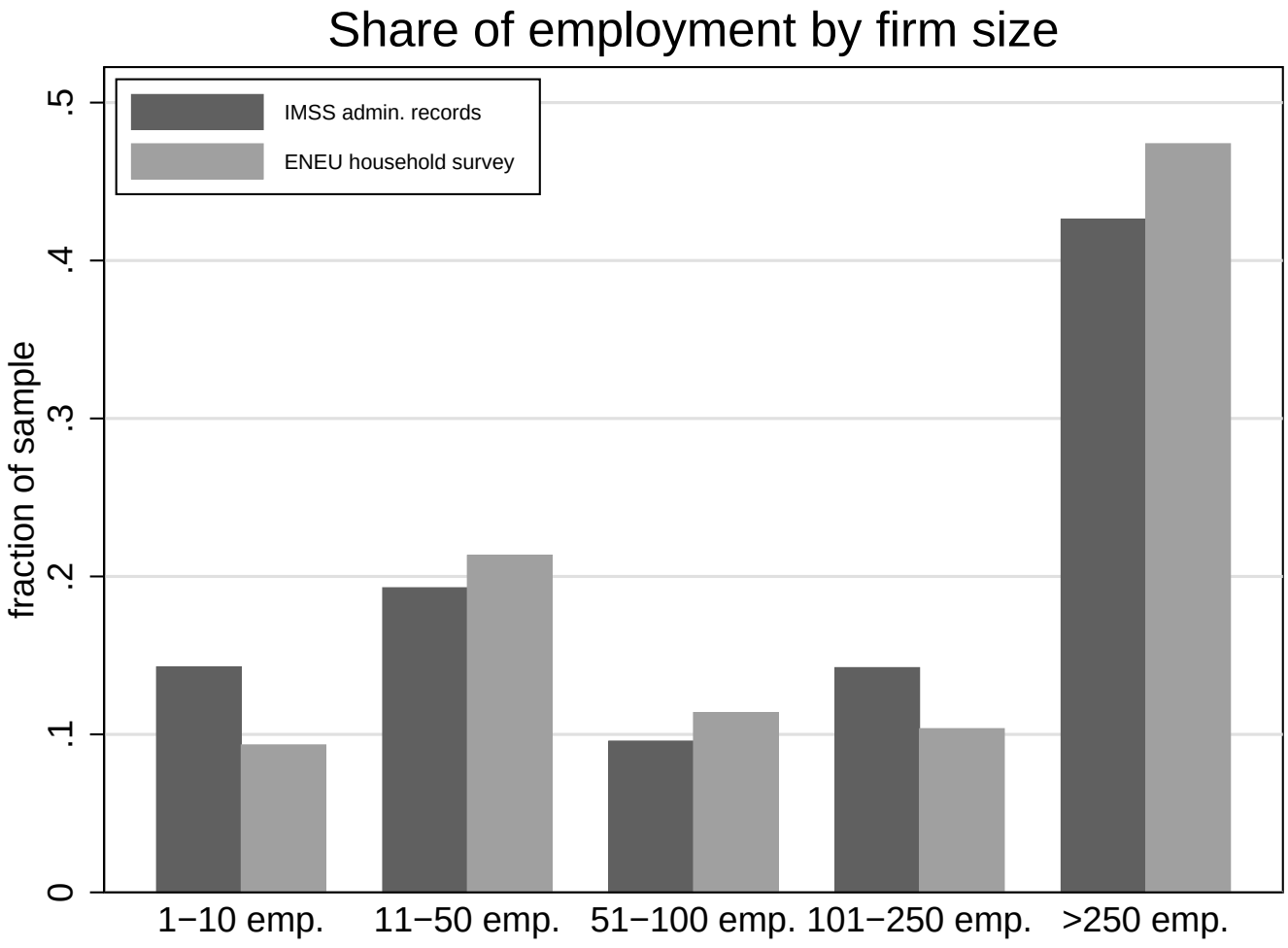
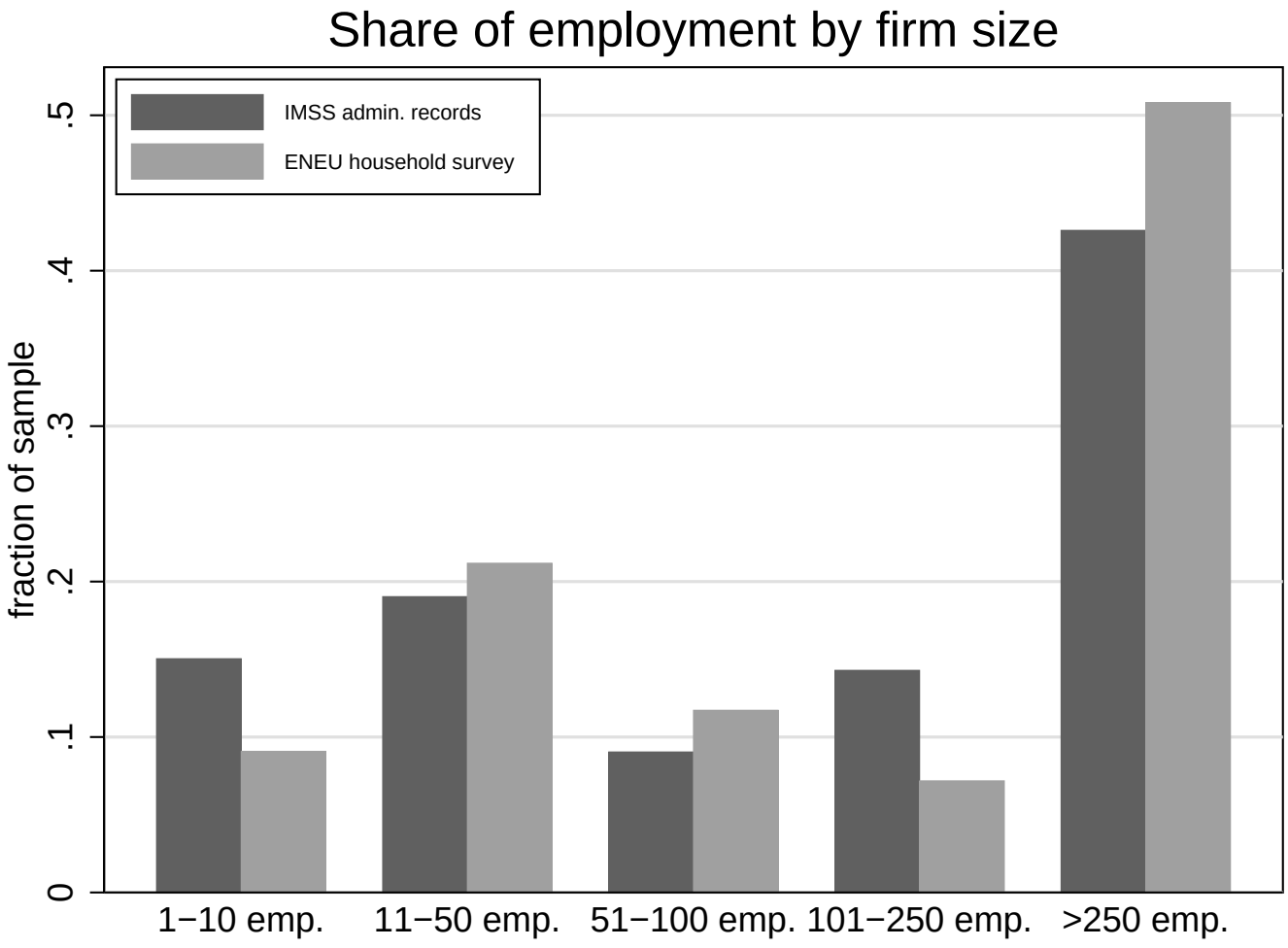
Firm size distributions, IMSS vs. ENEU, 1997



Firm size distributions, IMSS vs. ENEU, 2003



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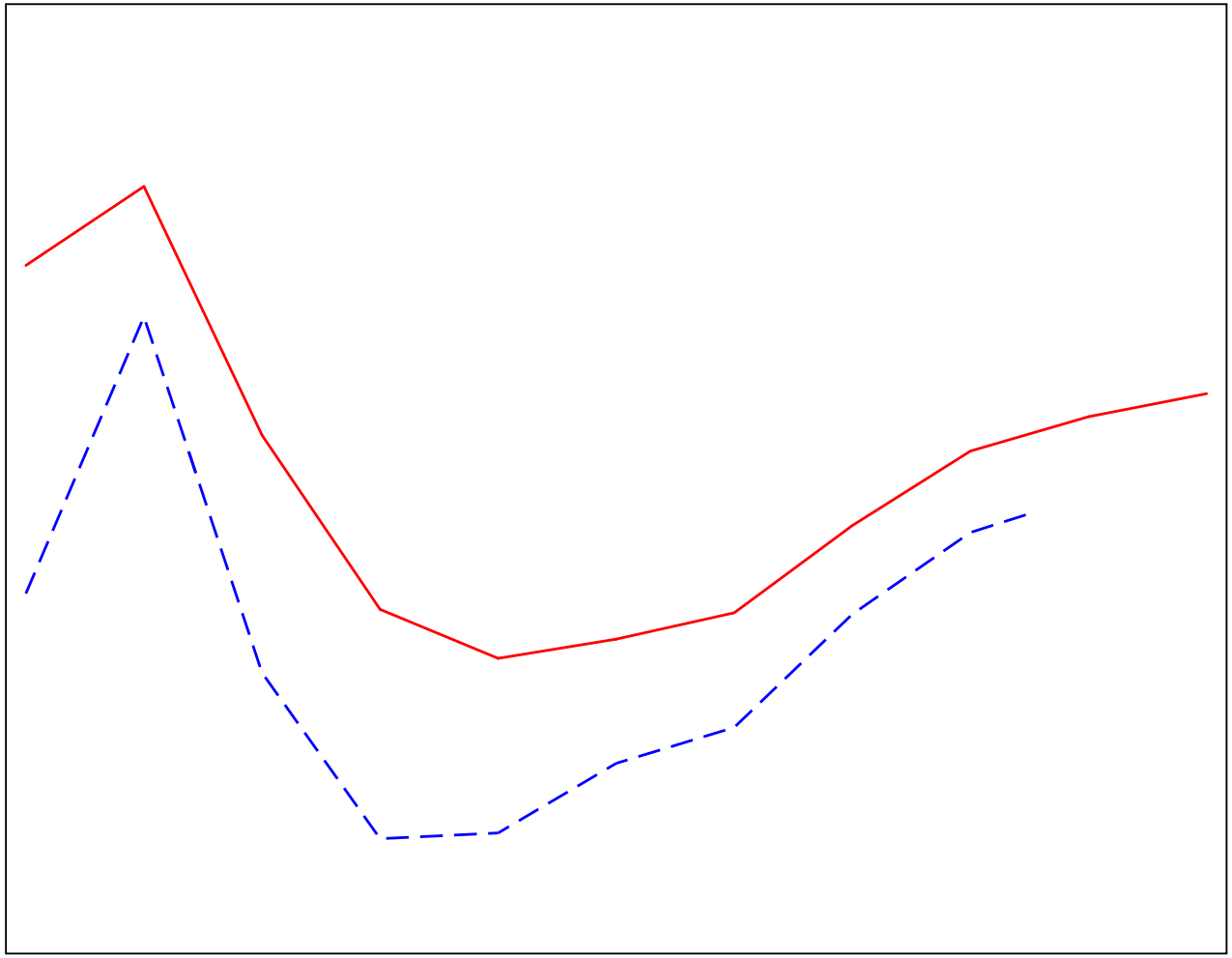
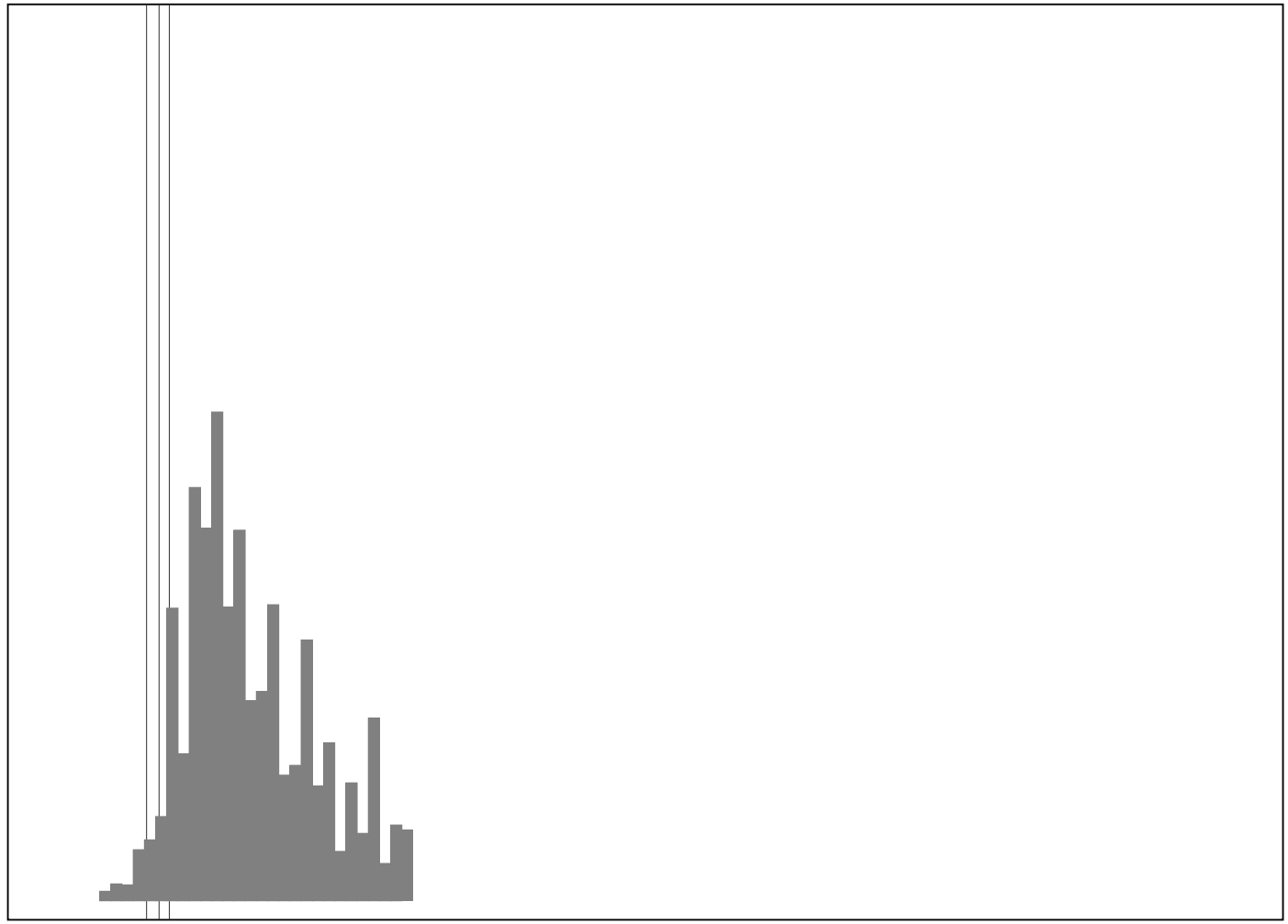
Wages, IMSS vs. EIA



Mean,G0ET4 10 um0ET823w

Log median daily wages, men, IMSS data, by age group

Wage histograms, covered vs. not covered by IMSS, men, 1990



Wage distributions, by metro area, men, 1990

Wage gaps (in means) by age group, men

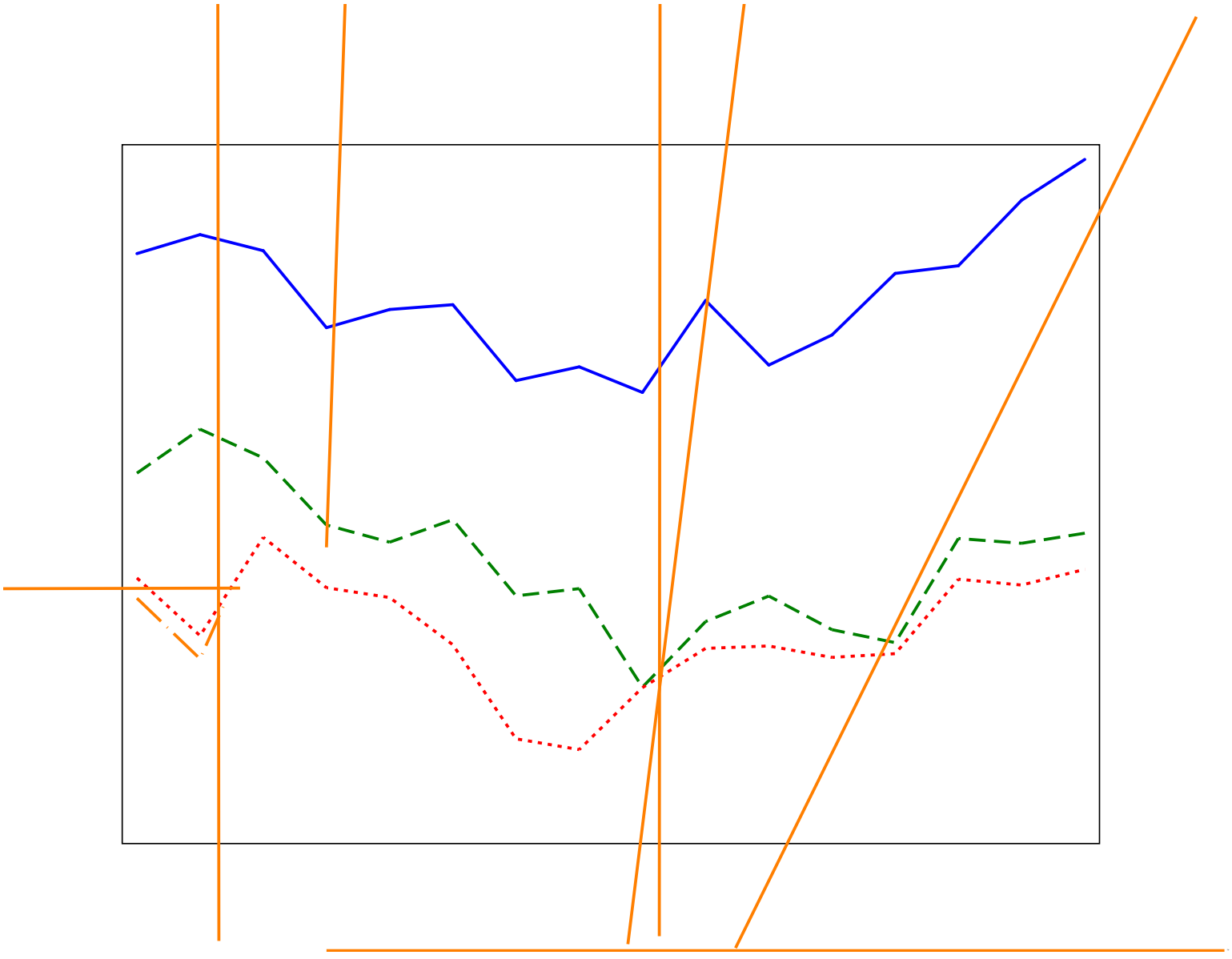


Table 1: Tenure in IMSS system, 1997 Q2, baseline sample

	Men					Women				
Years in IMSS	16-25 (%)	26-35 (%)	36-45 (%)	46-55 (%)	56-65 (%)	16-25 (%)	26-35 (%)	36-45 (%)	46-55 (%)	56-65 (%)
0	27.9	6.7	4.4	4.4	6.1	29.6	10.0	8.0	5.9	6.3
1	23.0	8.0	4.6	4.4	5.8	24.0	11.2	8.4	5.8	6.1
2	14.1	7.4	4.1	3.7	4.4	14.4	9.4	6.8	4.7	4.4
3	11.7	8.0	4.4	3.7	4.1	11.5	9.5	7.1	5.3	5.5
4	8.9	8.3	4.6	3.9	4.3	8.3	9.2	6.9	5.3	5.3
5	6.7	9.1	5.2	4.3	4.5	5.9	9.4	]TJ 0 -10.95 -10.95 -5 735(9I(]TJ 0		

Table B3: Di erential e ects on excess mass, women

dep. var.: excess mass (below indicated ENEU percentile)						
10^{th}	20^{th}	25^{th}	30^{th}	40^{th}	50^{th}	60^{th}
(1)	(2)	(3)	(4)	(5)	(6)	(7)