Table 1: Earnings Function Estimates, using Sample up to 64-year-old, including Non-regular Workers and Specialists, Variables of Occupation Tenure are not Controlled.

| | OLS | | | | | |
	(1)	(2)	(3)	(4)	(5)	(6)
Employer tenure	0.0117***	0.0116***	0.0193**	0.0061	0.0009	0.0086
	(0.0018)	(0.0040)	(0.0076)	(0.0051)	(0.0082)	(0.0129)
Emp.ten.$^2 \times 100$	-0.0083*	-0.0073	-0.0967	-0.0197	0.0217	-0.0805
	(0.0046)	(0.0235)	(0.0745)	(0.0136)	(0.0526)	(0.1374)
Emp.ten.$^3 \times 100$		-0.0000	0.0034		-0.0008	0.0034
		(0.0004)	(0.0027)		(0.0009)	(0.0052)
Emp.ten.$^4 \times 1000$			-0.0000			-0.0000
			(0.0000)			(0.0000)
Old job	0.0824***	0.0878***	0.0739**	0.0529	0.0650	0.0542
	(0.0252)	(0.0273)	(0.0304)	(0.0392)	(0.0402)	(0.0429)
Total experience	0.0257***	0.0032	0.0002	0.0458***	0.0220	0.0261
	(0.0024)	(0.0061)	(0.0126)	(0.0072)	(0.0152)	(0.0284)
Experience^2	-0.0004***	0.0006**	0.0009	-0.0007***	0.0003	0.0001
	(0.0000)	(0.0003)	(0.0009)	(0.0001)	(0.0006)	(0.0020)
Exp.$^3 \times 100$		-0.0014***	-0.0024		-0.0013	-0.0009
		(0.0003)	(0.0027)		(0.0008)	(0.0058)
N	9529	9529	9529	9529	9529	9529

Notes: Robust standard errors are in parentheses.
*, ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.
 The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (??) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.

- OLS: 2次近似ではテニュアも労働経験もきれいな凸型の関数。係数も有意 OJ ダミーは以前より小さくなったけど1番係数大きくて有意。3次4次と増やすと OJ ダミー以外星が消えていく

- IV: ほぼすべての係数が有意ではない。2次の労働経験のみに星がつく。係数だけで見ても符号が安定しない。

- グラフでリターンを見ても IV はほぼ横ばいで有意に正にもならない

- 職業のテニュアは入れても入れなくてもほぼ結果は変わらない

- その他のテニュアの年数区間をコントロールしたうえでのその年数区間の上昇率？

- OLS: 0-¿1 の上昇率は非有意で係数の値も小さい。25̃ 年で上昇率が上がってその後はテニュアとともに下降するけど有意

- IV: テニュアとともに係数は下降気味だけど 2530̃ 年で上昇している。25 年以降以外非有意。

Table 2: Earnings Function Estimates, using Sample up to 64-year-old, including Non-regular Workers and Specialists, Variables of Occupation Tenure are Controlled.

	OLS					
	(1)	(2)	(3)	(4)	(5)	(6)
Employer tenure	0.0117***	0.0118***	0.0198***	0.0066	0.0006	0.0083
	(0.0018)	(0.0040)	(0.0076)	(0.0051)	(0.0082)	(0.0129)
Emp.ten.$^2 \times 100$	-0.0083*	-0.0080	-0.1015	-0.0211	0.0260	-0.0756
	(0.0046)	(0.0235)	(0.0742)	(0.0138)	(0.0527)	(0.1381)
Emp.ten.$^3 \times 100$		-0.0000	0.0036		-0.0009	0.0033
		(0.0004)	(0.0027)		(0.0009)	(0.0053)
Emp.ten.$^4 \times 1000$			-0.0000			-0.0000
			(0.0000)			(0.0000)
Occupation tenure	-0.0025*	-0.0051	0.0034	-0.0069**	-0.0069	-0.0114
	(0.0015)	(0.0031)	(0.0050)	(0.0034)	(0.0064)	(0.0095)
Occ.ten.$^2 \times 100$	0.0064	0.0251	-0.0924*	0.0165*	0.0200	0.0844
	(0.0039)	(0.0197)	(0.0561)	(0.0087)	(0.0439)	(0.1154)
Occ.ten.$^3 \times 100$		-0.0003	0.0044**		-0.0001	-0.0027
		(0.0003)	(0.0021)		(0.0008)	(0.0045)
Old job	0.0843***	0.0900***	0.0736**	0.0562	0.0683*	0.0583
	(0.0253)	(0.0274)	(0.0305)	(0.0391)	(0.0401)	(0.0430)
Total experience	0.0267***	0.0051	-0.0001	0.0429***	0.0254	0.0303
	(0.0024)	(0.0063)	(0.0128)	(0.0076)	(0.0156)	(0.0292)
Experience^2	-0.0005***	0.0005*	0.0012	-0.0007***	0.0000	-0.0003
	(0.0000)	(0.0003)	(0.0010)	(0.0002)	(0.0007)	(0.0021)
Exp.$^3 \times 100$		-0.0013***	-0.0039		-0.0009	-0.0001
		(0.0004)	(0.0029)		(0.0009)	(0.0059)
N	9529	9529	9529	9529	9529	9529

Notes: Robust standard errors are in parentheses.
*, ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.
The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (??) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.

Table 3: Earnings Function Estimates, using Sample up to 64-year-old, including Non-regular Workers and Specialists.

	OLS			
	(1)	(2)	(3)	(4)
Employer tenure	0.0117***	0.0117***	0.0061	0.0066
	(0.0018)	(0.0018)	(0.0051)	(0.0051)
Emp.ten.^{2} × 100	-0.0083*	-0.0083*	-0.0197	-0.0211
	(0.0046)	(0.0046)	(0.0136)	(0.0138)
Occupation tenure		-0.0025*		-0.0069**
		(0.0015)		(0.0034)
Occ.ten.^{2} × 100		0.0064		0.0165*
		(0.0039)		(0.0087)
Occ.ten.^{3} × 100				
Old job	0.0824***	0.0843***	0.0529	0.0562
	(0.0252)	(0.0253)	(0.0392)	(0.0391)
Total experience	0.0257***	0.0267***	0.0458***	0.0429***
	(0.0024)	(0.0024)	(0.0072)	(0.0076)
Experience^2	-0.0004***	-0.0005***	-0.0007***	-0.0007***
	(0.0000)	(0.0000)	(0.0001)	(0.0002)
Exp.^{3} × 100				
N	9529	9529	9529	9529

Notes: Robust standard errors are in parentheses.
* , ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.
The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (??) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.

Table 4: Estimated Returns to Employer Tenure, using Sample up to 64-year-old, including Non-regular Workers and Specialists.

	OLS				
	(1)	(2)	(3)	(4)	(5)
2 Years	0.1054***	0.1074***	0.0642*	0.0685*	.1076**
	(0.0242)	(0.0243)	(0.0363)	(0.0363)	(.0492)
5 Years	0.1386***	0.1408***	0.0783**	0.0838**	.2674**
	(0.0235)	(0.0236)	(0.0362)	(0.0364)	(.1227)
10 Years	0.1907***	0.1932***	0.0938**	0.1008**	.5301**
	(0.0237)	(0.0238)	(0.0427)	(0.0430)	(.2444)
15 Years	0.2387***	0.2413***	0.0995*	0.1073**	.7877**
	(0.0245)	(0.0246)	(0.0511)	(0.0515)	(.3659)
20 Years	0.2825***	0.2853***	0.0953	0.1032*	1.0405**
	(0.0250)	(0.0252)	(0.0591)	(0.0595)	(.4884)
25 Years	0.3222***	0.3251***	0.0813	0.0886	1.288**
	(0.0253)	(0.0255)	(0.0678)	(0.0679)	(.6128)
N	9529	9529	9529	9529	9488

Notes: Robust standard errors are in parentheses.

*, ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.

The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (??) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.

Table 5: Estimated Returns to Employer Tenure, Employer Tenure is Treated as Dummy Variables

	OLS	
	(1)	(2)
$1 \leq T_{ij} < 2$	0.0079	0.0199
	(0.0304)	(0.0364)
$2 \leq T_{ij} < 5$	0.0299**	0.0198
	(0.0127)	(0.0175)
$5 \leq T_{ij} < 10$	0.0226***	0.0124
	(0.0051)	(0.0079)
$10 \leq T_{ij} < 15$	0.0161***	0.0084*
	(0.0026)	(0.0046)
$15 \leq T_{ij} < 20$	0.0123***	0.0054
	(0.0017)	(0.0035)
$20 \leq T_{ij} < 25$	0.0103***	0.0035
	(0.0013)	(0.0030)
$25 \leq T_{ij} < 30$	0.0127***	0.0057**
	(0.0012)	(0.0027)
$30 \leq T_{ij}$	0.0095***	0.0044*
	(0.0009)	(0.0025)
Total experience	0.0248***	0.0453***
	(0.0024)	(0.0069)
Experience^2	-0.0004***	-0.0008***
	(0.0000)	(0.0001)
N	9892	9892

Notes: Robust standard errors are in parentheses.
*, ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.
The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (**??**) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.

Table 6: Earnings Function Estimates, using Sample up to 64-year-old, including Non-regular Workers and Specialists, the Interacti... of Employer Tenure and Proxies of Ability are Added to e.q. (1).

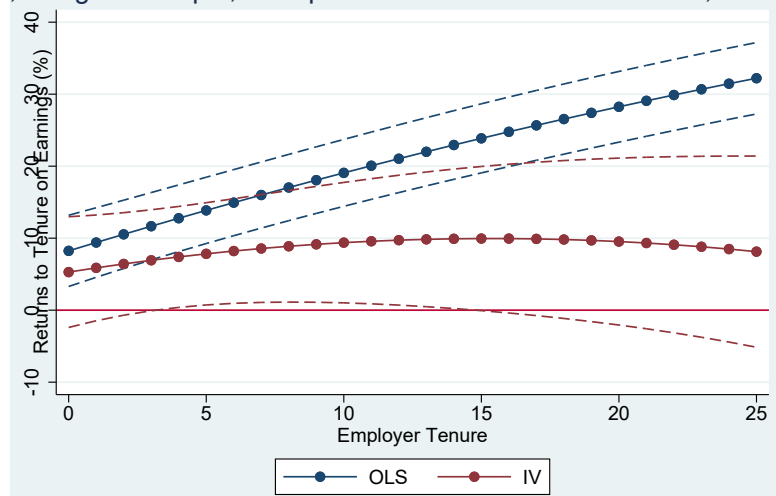|	(1)	(2)	(3)	(4)	(5)	(6)
Employer tenure	0.0083***	0.0058	0.0065***	0.0090*	0.0092***	0.0195**
	(0.0023)	(0.0142)	(0.0021)	(0.0052)	(0.0028)	(0.0097)
Emp.ten.$^2 \times 100$	-0.0082*	-0.0198	-0.0063	-0.0227	-0.0113**	-0.0001
	(0.0047)	(0.0136)	(0.0046)	(0.0140)	(0.0048)	(0.0146)
Old job	0.0841***	0.0526	0.0907***	0.0508	0.0849***	0.0499
	(0.0252)	(0.0393)	(0.0254)	(0.0392)	(0.0253)	(0.0411)
Total experience	0.0258***	0.0456***	0.0247***	0.0467***	0.0247***	0.0490***
	(0.0024)	(0.0073)	(0.0024)	(0.0073)	(0.0024)	(0.0078)
Experience^2	-0.0004***	-0.0007***	-0.0004***	-0.0007***	-0.0004***	-0.0008***
	(0.0000)	(0.0001)	(0.0000)	(0.0001)	(0.0000)	(0.0001)
Employer Tenure $\times$						
High School	0.0035**	-0.0006				
	(0.0016)	(0.0145)				
Some College	0.0064***	0.0071				
	(0.0020)	(0.0155)				
Undergraduate	0.0033*	-0.0004				
	(0.0017)	(0.0147)				
Above Undergraduate	-0.0033	0.0045				
	(0.0029)	(0.0177)				
Regular Employee			0.0052***	-0.0025		
			(0.0012)	(0.0024)		
$5 \leq$ size < 30					0.0020	-0.0086
					(0.0026)	(0.0085)
$30 \leq$ size < 100					0.0024	-0.0085
					(0.0026)	(0.0095)
$100 \leq$ size < 500					0.0027	-0.0133
					(0.0025)	(0.0096)
$500 \leq$ size					0.0055**	-0.0324***
					(0.0024)	(0.0097)
N	9529	9529	9529	9529	9529	9529

Notes: Robust standard errors are in parentheses.
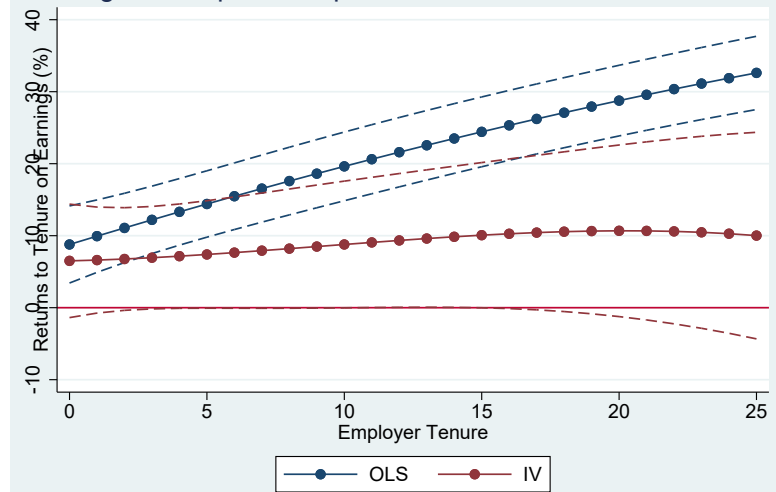* , ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.
The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummie... union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficient... earnings function (**??**) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.
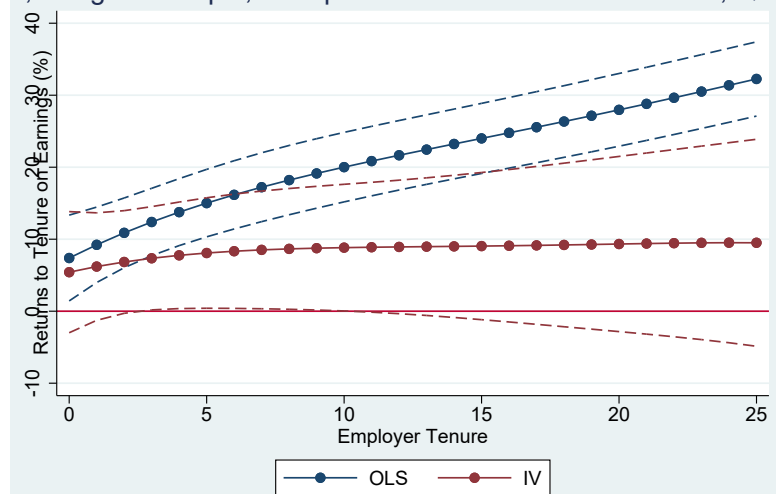
Table 7: Estimated Returns to Employer Tenure, using Sample up to 64-year-old, including Non-regular Workers and Specialists, the Interactions of Employer Tenure and Proxies of Ability are Added to e.q. (1).

	Years of Education					
	(1)	(2)	(3)	(4)	(5)	(6)
2 Years	0.1005***	0.0634	0.1036***	0.0680*	0.1028***	0.0890**
	(0.0243)	(0.0457)	(0.0241)	(0.0365)	(0.0246)	(0.0410)
5 Years	0.1238***	0.0766	0.1219***	0.0903**	0.1280***	0.1475***
	(0.0245)	(0.0769)	(0.0235)	(0.0368)	(0.0258)	(0.0551)
10 Years	0.1593***	0.0907	0.1499***	0.1184***	0.1654***	0.2451***
	(0.0278)	(0.1415)	(0.0249)	(0.0435)	(0.0320)	(0.0926)
15 Years	0.1908***	0.0948	0.1748***	0.1351***	0.1971***	0.3425**
	(0.0327)	(0.2087)	(0.0278)	(0.0513)	(0.0408)	(0.1338)
20 Years	0.2182***	0.0891	0.1965***	0.1405**	0.2232***	0.4400**
	(0.0380)	(0.2767)	(0.0310)	(0.0579)	(0.0505)	(0.1758)
25 Years	0.2415***	0.0734	0.2150***	0.1346**	0.2437***	0.5374**
	(0.0435)	(0.3453)	(0.0344)	(0.0642)	(0.0606)	(0.2185)
N	9529	9529	9529	9529	9529	9529

Notes: Robust standard errors are in parentheses.

*, ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.

The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (**??**) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.

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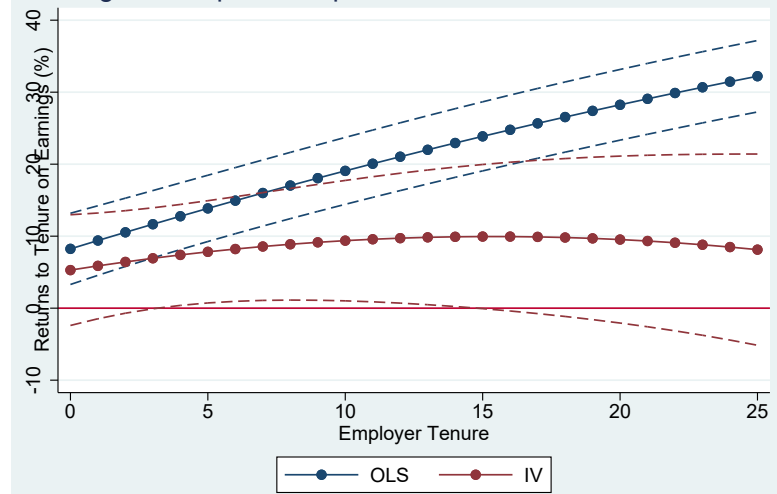es, using All Sample, Occupation Tenure are Controlled, Quadra...

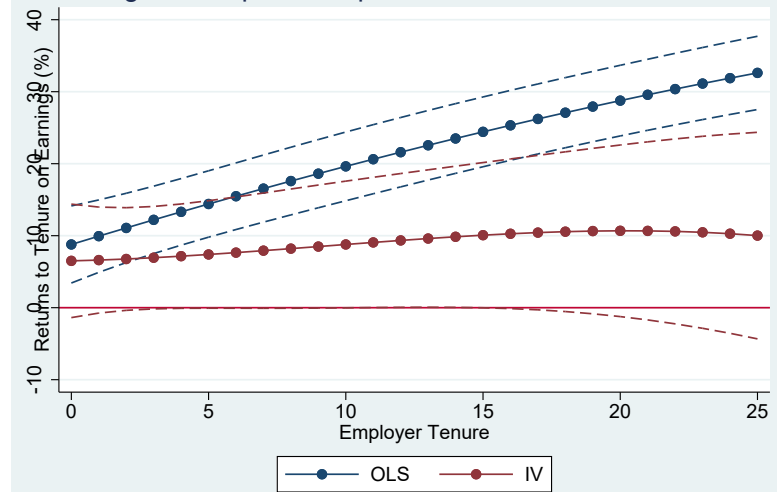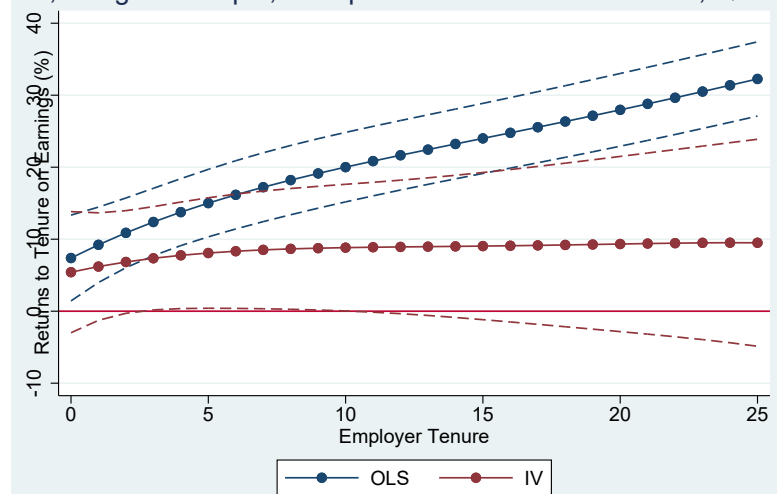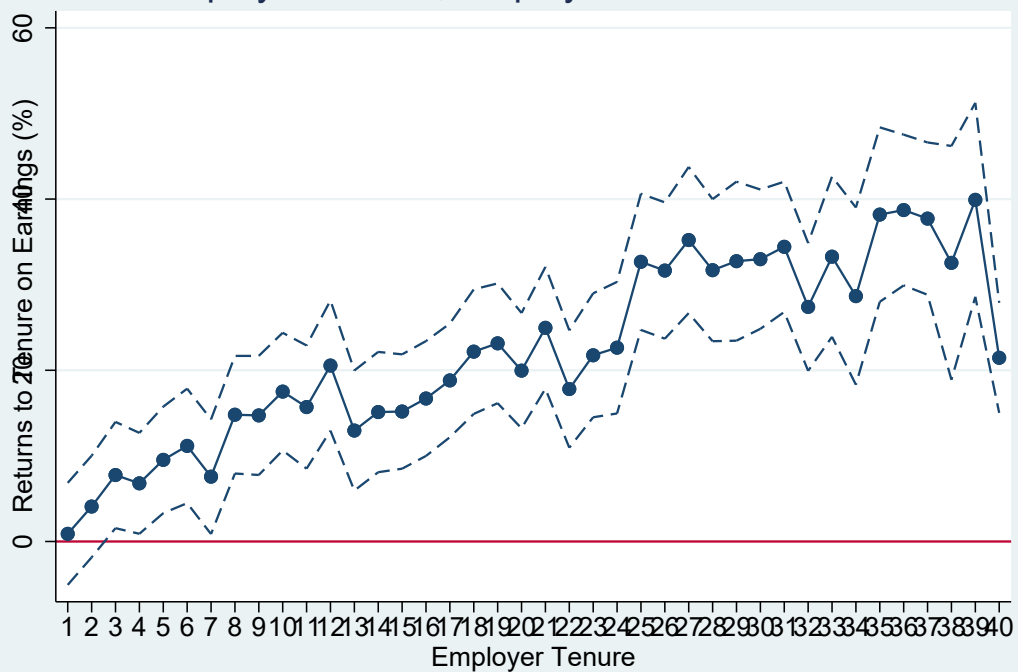ates, using All Sample, Occupation Tenure are Controlled, Cubic...

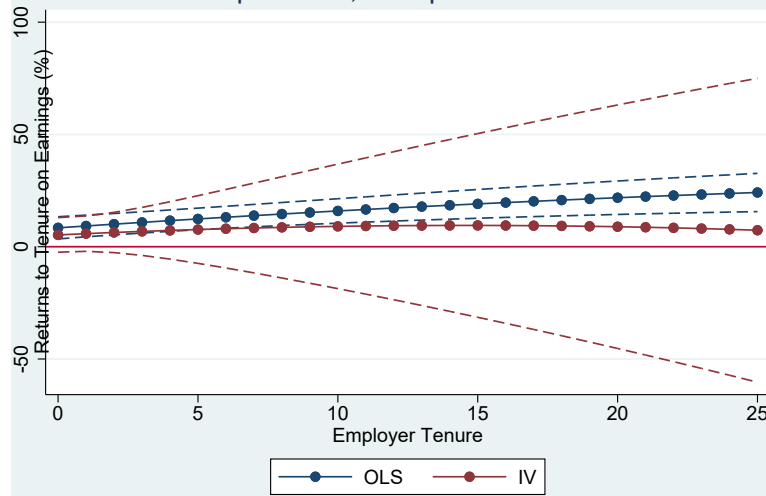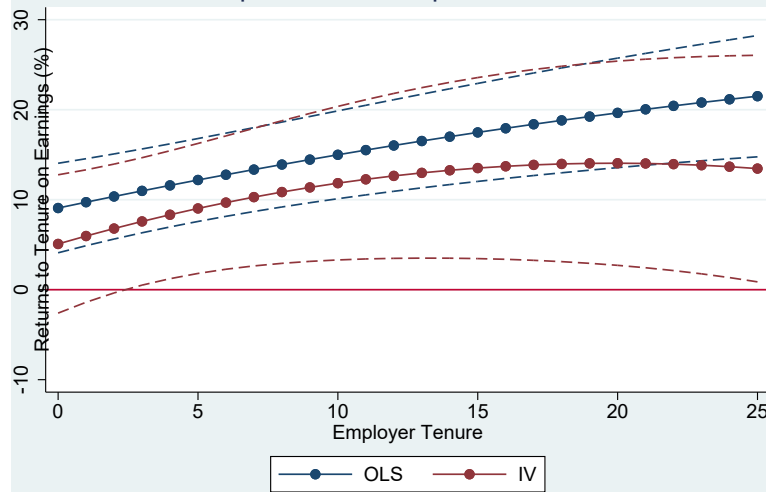tes, using All Sample, Occupation Tenure are Controlled, Quarti...

Returns to Employer Tenure, Employer Tenure is Treated as Du...

Returns to Tenure on Earnings (%)

Employer Tenure

— OLS   — IV

Returns to Tenure on Earnings (%)

Employer Tenure

— OLS   — IV

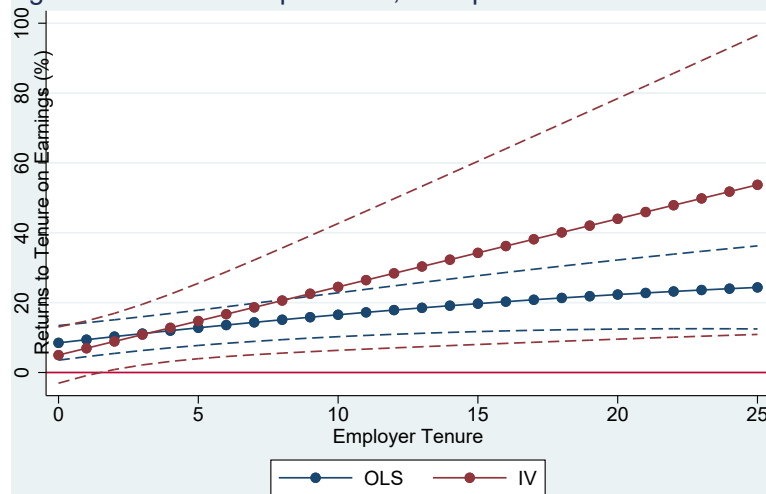Returns to Tenure on Earnings (%)

Employer Tenure

— OLS   — IV

Table 8: Earnings Function Estimates, using Various Subsamples.

| | Under 59-year-old | | Large firms ($\geq$ 500) | | Small Firms ($<$ 500) | | Non-Professional | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Employer tenure	0.0098***	0.0020	0.0156***	0.0145	0.0106***	0.0049	0.0162***	0.0066
	(0.0020)	(0.0057)	(0.0031)	(0.0089)	(0.0022)	(0.0068)	(0.0018)	(0.0057)
Emp.ten.$^2 \times 100$	0.0000	-0.0064	-0.0151**	-0.0421*	-0.0088	-0.0055	-0.0185***	-0.0206
	(0.0055)	(0.0163)	(0.0075)	(0.0239)	(0.0062)	(0.0185)	(0.0048)	(0.0148)
Old job	0.0983***	0.0585	0.0212	0.0293	0.1130***	0.0521	0.0540**	0.0366
	(0.0283)	(0.0449)	(0.0506)	(0.0672)	(0.0294)	(0.0475)	(0.0274)	(0.0437)
Total experience	0.0227***	0.0411***	0.0248***	0.0545***	0.0250***	0.0401***	0.0205***	0.0447***
	(0.0028)	(0.0081)	(0.0040)	(0.0123)	(0.0030)	(0.0101)	(0.0026)	(0.0081)
Experience^2	-0.0004***	-0.0006***	-0.0004***	-0.0008***	-0.0004***	-0.0007***	-0.0003***	-0.0007***
	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0000)	(0.0001)
N	8579	8579	3646	3646	5883	5883	8090	8090

Notes: Robust standard errors are in parentheses.
$*$, $**$ and $***$ Denote statistical significance at the 10%, 5% and 1% level, respectively.
The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (??) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.

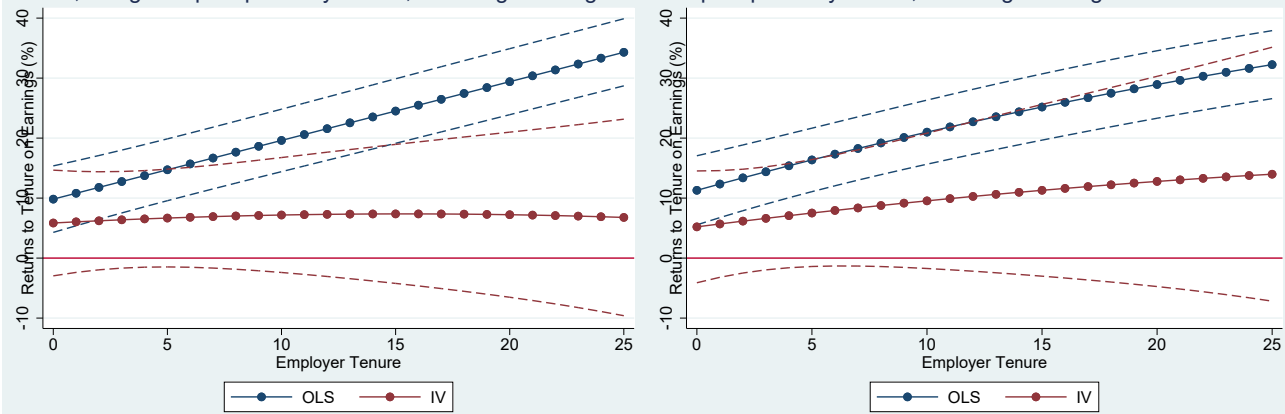Table 9: Estimated Returns to Employer Tenure, using Various Subsamples.

	Under 59-year-old		Large firms (≥ 500)		Small Firms (< 500)		Non-Professional	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2 Years	0.1179***	0.0622	0.0518	0.0566	0.1338***	0.0616	0.0856***	0.0489
	(0.0271)	(0.0417)	(0.0493)	(0.0633)	(0.0280)	(0.0441)	(0.0264)	(0.0404)
5 Years	0.1472***	0.0668	0.0953**	0.0914	0.1637***	0.0751*	0.1303***	0.0642
	(0.0263)	(0.0416)	(0.0485)	(0.0647)	(0.0270)	(0.0455)	(0.0258)	(0.0403)
10 Years	0.1961***	0.0718	0.1617***	0.1325*	0.2099***	0.0954*	0.1973***	0.0816*
	(0.0266)	(0.0489)	(0.0493)	(0.0766)	(0.0273)	(0.0575)	(0.0261)	(0.0479)
15 Years	0.2451***	0.0737	0.2207***	0.1526*	0.2518***	0.1130	0.2552***	0.0886
	(0.0274)	(0.0591)	(0.0510)	(0.0892)	(0.0282)	(0.0730)	(0.0269)	(0.0581)
20 Years	0.2940***	0.0723	0.2720***	0.1516	0.2893***	0.1278	0.3037***	0.0854
	(0.0281)	(0.0702)	(0.0523)	(0.0983)	(0.0287)	(0.0894)	(0.0275)	(0.0682)
25 Years	0.3430***	0.0678	0.3158***	0.1296	0.3225***	0.1398	0.3431***	0.0718
	(0.0285)	(0.0836)	(0.0530)	(0.1055)	(0.0289)	(0.1080)	(0.0278)	(0.0787)
N	8579	8579	3646	3646	5883	5883	8090	8090

Notes: Robust standard errors are in parentheses.
*, ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.
The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (??) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.

Estimates, using Sample up to 60-year-old, including Non-regular Workers ... Sample up to 64-year-old, including Non-regular Workers and S... Sample up to 64-year-old, including Non-regular Workers and Spes, using Sample up to 64-year-old, including Non-regular Worke...
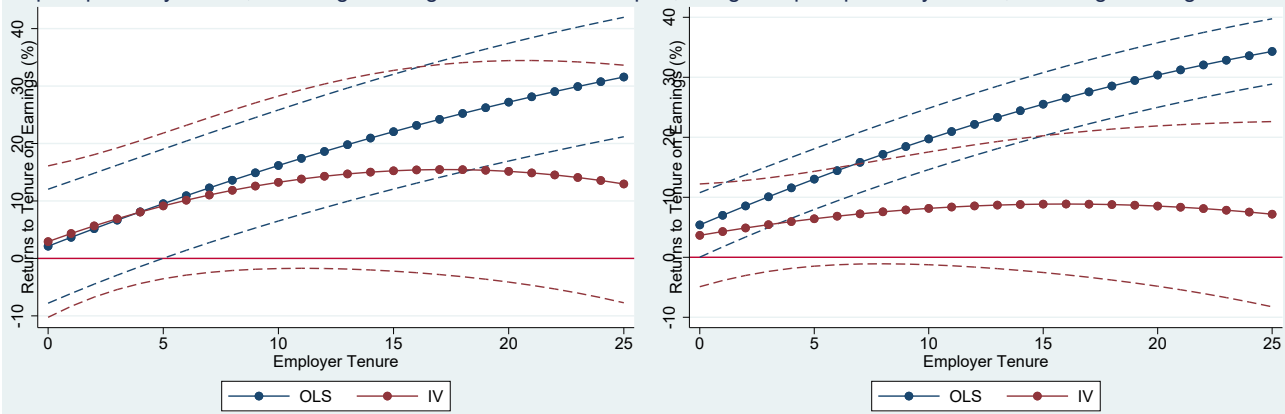
Table 10: Estimation Results, using the Method of 2SFD Estimation.

	(1)	(2)	(3)
1st stage			
Constant	0.1084***	0.1584***	0.1407***
	(0.0213)	(0.0247)	(0.0354)
Emp.ten.$^2 \times 100$		-0.0098	0.0468
		(0.0272)	(0.0953)
Emp.ten.$^3 \times 1000$			-0.0114
			(0.0174)
Experience$^2 \times 100$		-0.0982***	-0.0485
		(0.0285)	(0.1357)
Experience$^3 \times 1000$			-0.0055
			(0.0176)
2nd stage			
Total Experience	.0556***	.1044***	.0922***
	(.0009)	(.0008)	(.0008)
Employer Tenure	0527**	.0539**	.0484
	(.0209)	(.0247)	(.0382)
N	6942	6696	6696
N	9366	9366	9366

Notes: Robust standard errors are in parentheses.
* , ** and *** Denote statistical significance at the 10%, 5% and 1% level, respectively.
The dependent variable is log real hourly wages. Other covariates include an intercept, education dummies, occupation and industry dummies, a union member dummy, a marital status dummy, firm size dummies, and regular employee dummy. Columns (1) and (2) denote the coefficients of earnings function (**??**) which is estimated by the OLS, and columns (3) and (4) denote those by AS's IV method.