Fringes of the Migration Industry

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Promoting Inclusion in Economic Research

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- This Paper: What is the effect of policies that eliminate fringe recruiters on the *quantity* and *quality* of labor migration?

- Setting: Philippines (2002-2009)
  - Substantial variation in markets deployed (destination and occupation)
  - Facilitates and regulates migration as national development policy
  - Relies heavily on private recruiters

Data

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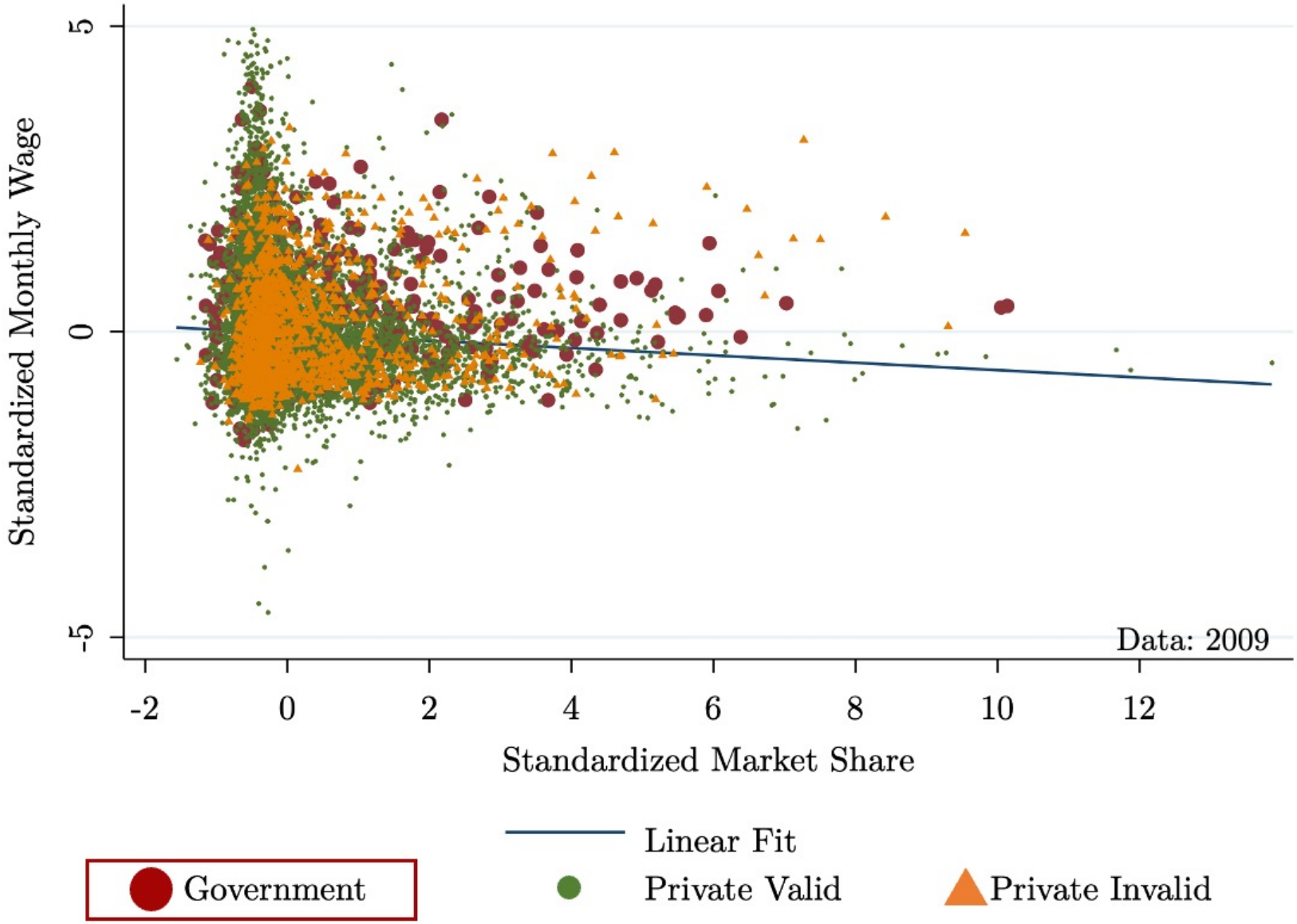
$\rightarrow$ Match each migrant departure to their recruiter's license status

Stylized Facts (1)

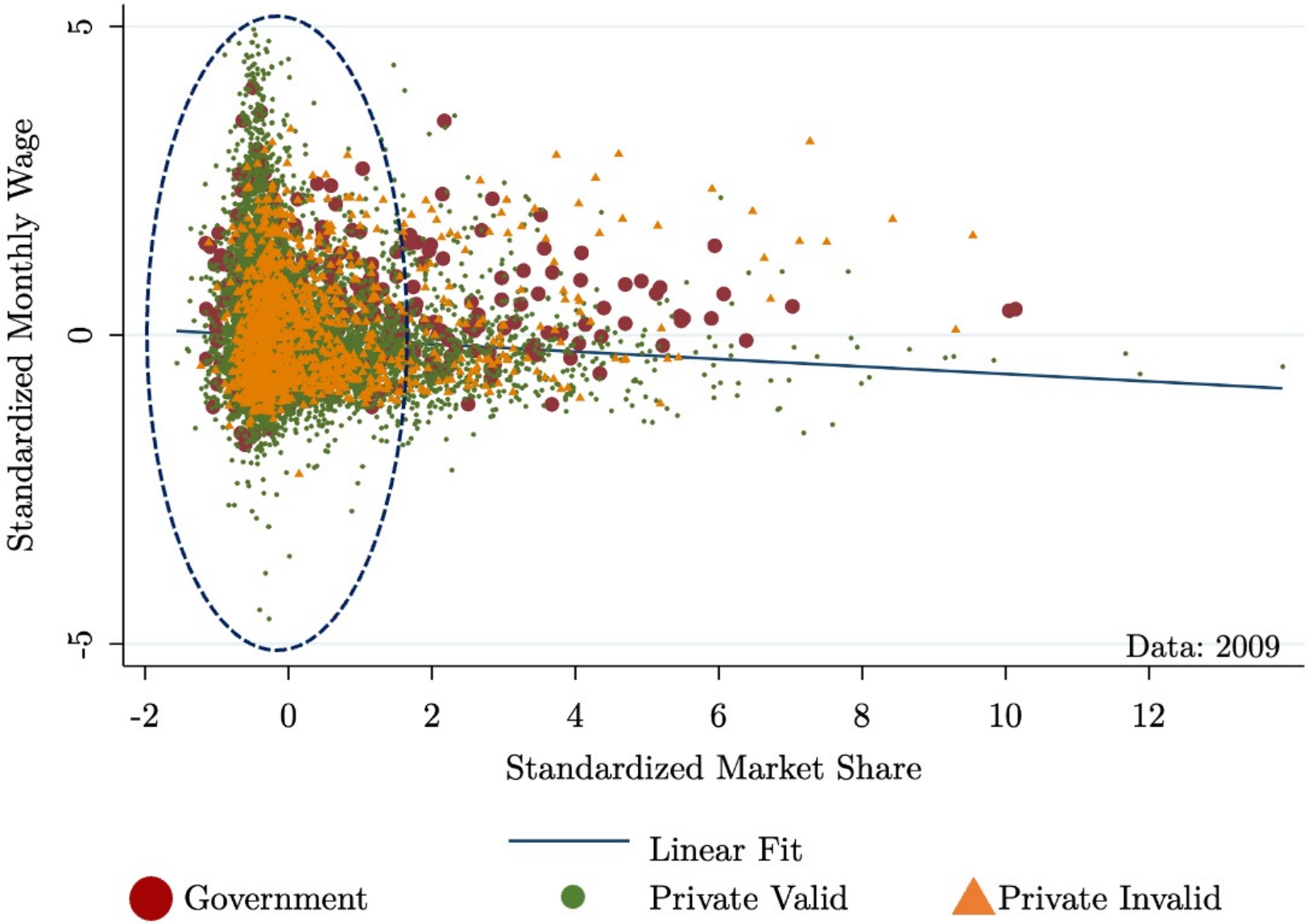
▸ Summary Table ▸ Density Plot 1

1. Private recruiters recruit -95% of migrants, others go through govt.



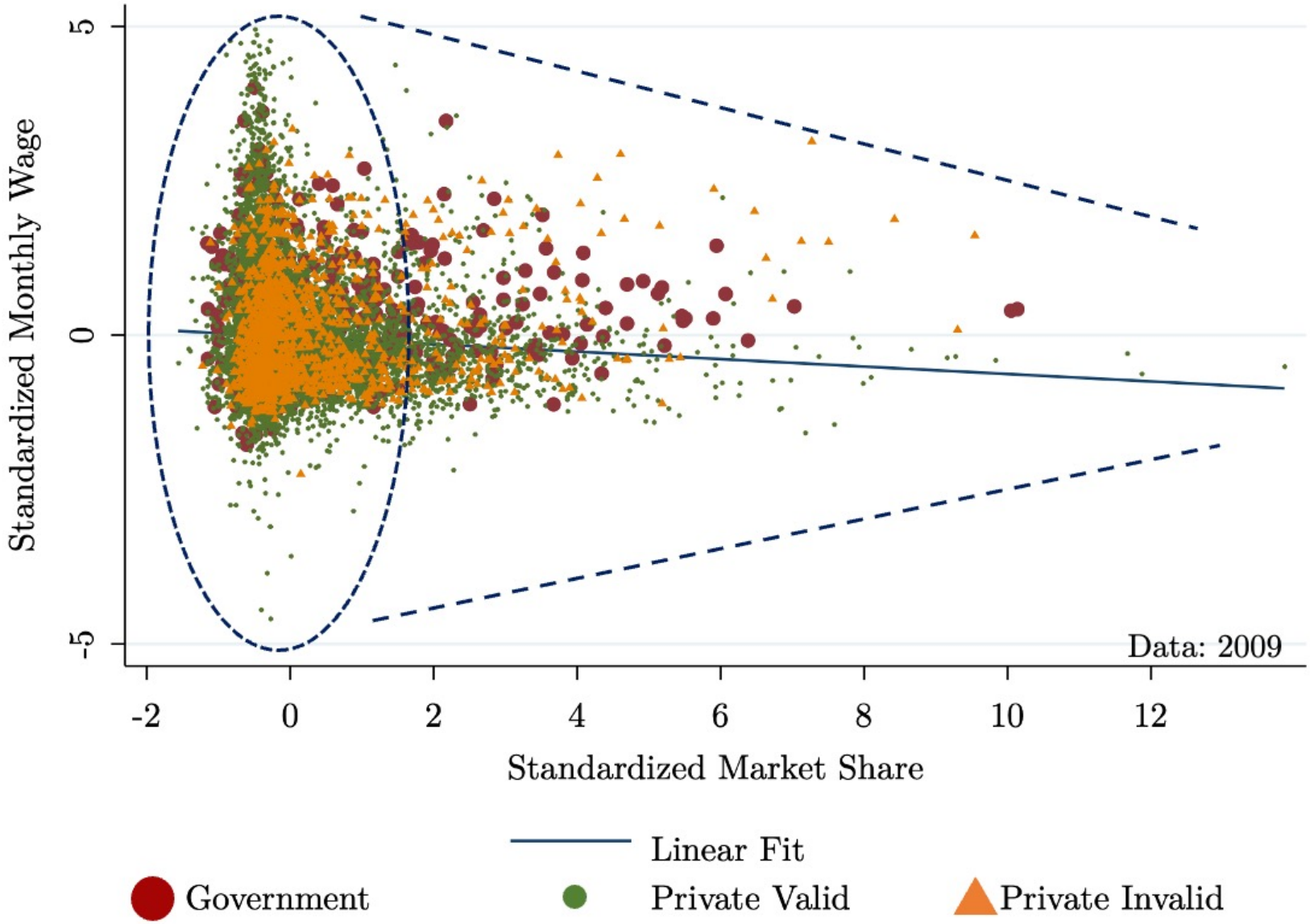
Stylized Facts (2)

2. Many agencies are "fringe" ▸ Lorenz Curve



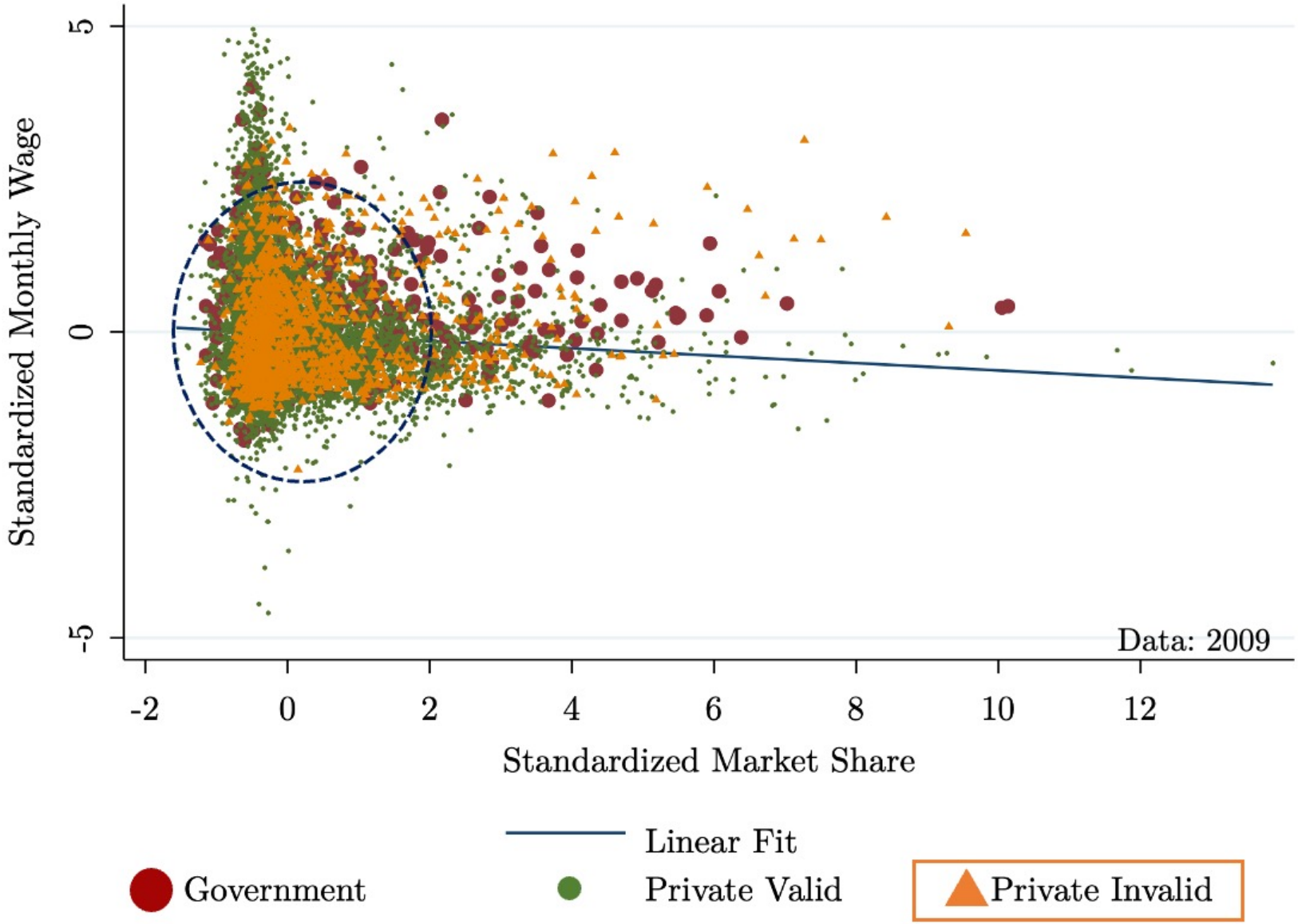
Stylized Facts (3)

3. Fringe recruiters are highly heterogeneous ▸ Density Plot 2



Stylized Facts (4)

4. Fraudulent recruiters are fringe and recruit at low wages ▸ Density Plot 3



- **Effects of Minimum Wage Policy (Event Study)**
- Effects of License Requirements (Demand Model)

Empirical Strategy

- Idea: minimum wage increase 'prices out' fringe agencies that recruit at low wages. How does this affect composition of recruiters?

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- In December 2006, the Philippines:
  a. increased min. wage of domestic workers abroad from \$200 to \$400
  b. prohibited recruiters from charging domestic workers for service

→ Min. wage policy only impacts $Domestic_o$ workers in $Binding_c$ countries after 2006 $(Post_t)$

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- Attempt 1 - Double Difference: Use only domestic worker markets, and compare binding countries vs non-binding countries

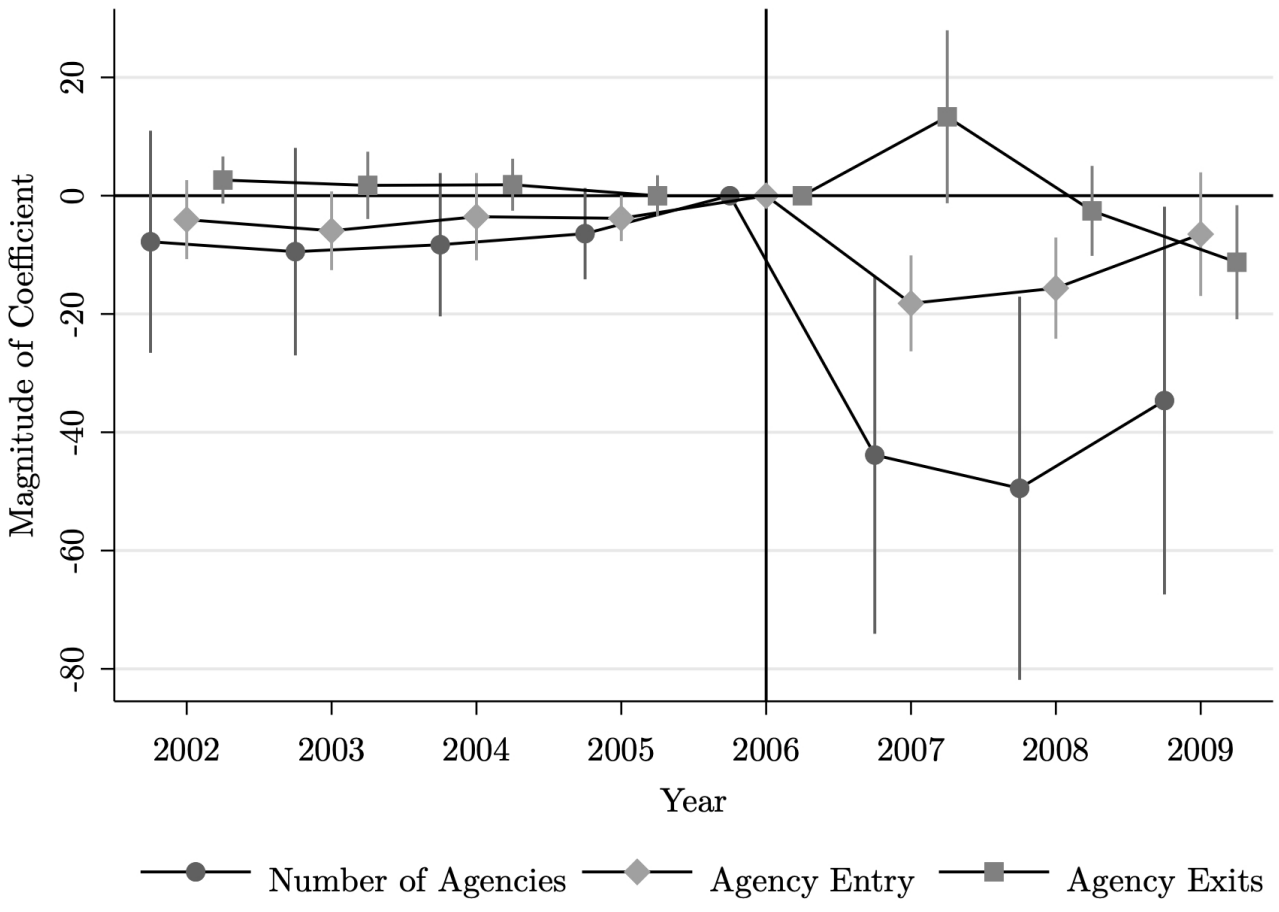
$$Y_{c,t} = \gamma_0 + \sum_{t=2002}^{2009} \gamma_{1,t} Binding_c + \lambda_c + \mu_t + \eta_{c,t}$$

→ differential pre-trends ▸ Event Study Plot

Triple Difference

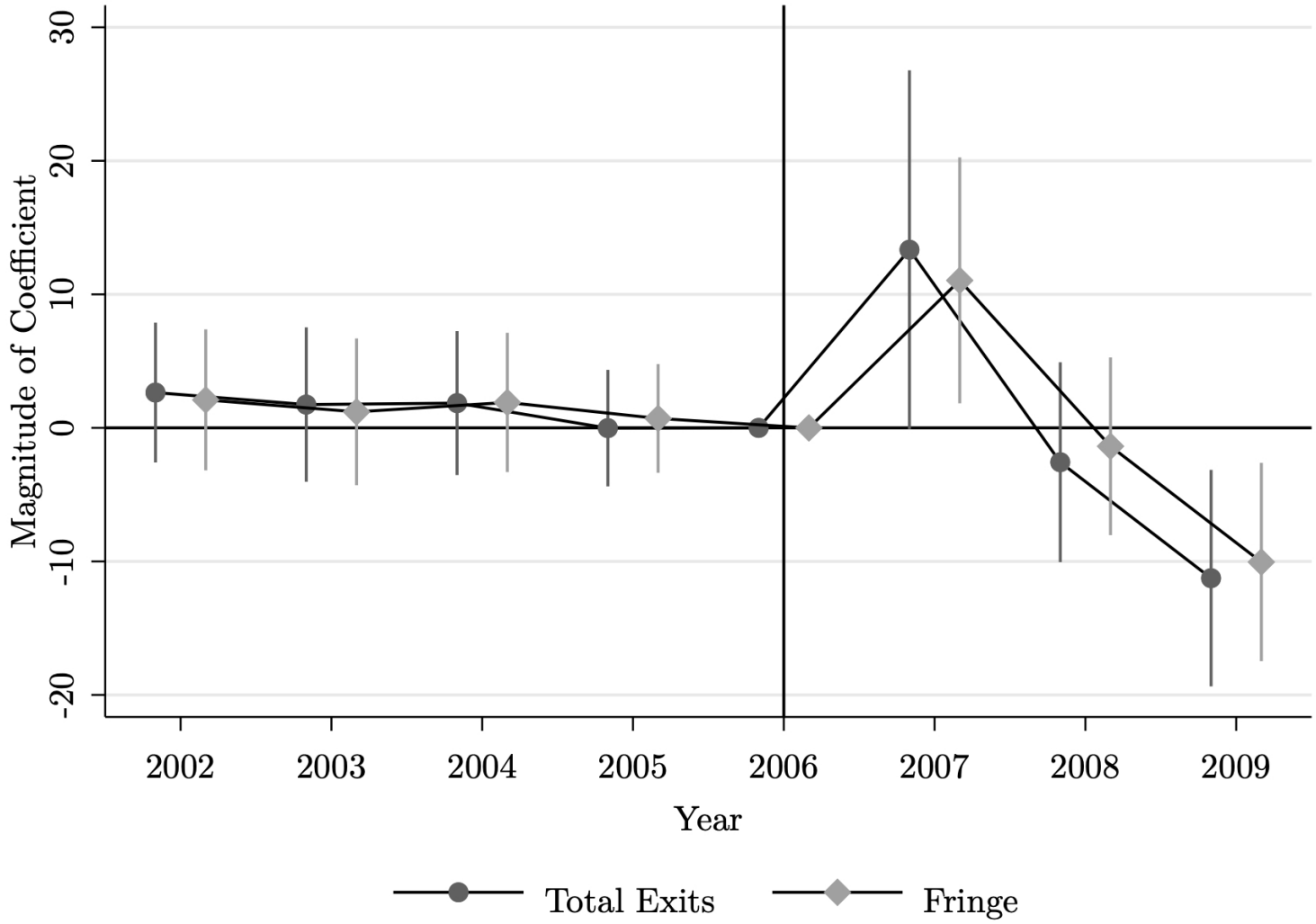
▸ DDD Results ▸ Robustness

$$
\begin{aligned}
Y_{o,c,t} =& \delta_0 + \delta_1 Domestic_o \times Binding_c \times Post_t + \delta_2 Domestic_o \times Binding_c \\
&+ \delta_3 Domestic_o \times Post_t + \delta_4 Binding_c \times Post_t \\
&+ \kappa_o + \lambda_c + \mu_t + \eta_{o,c,t}
\end{aligned}
$$



Heterogeneity in Exits (1)

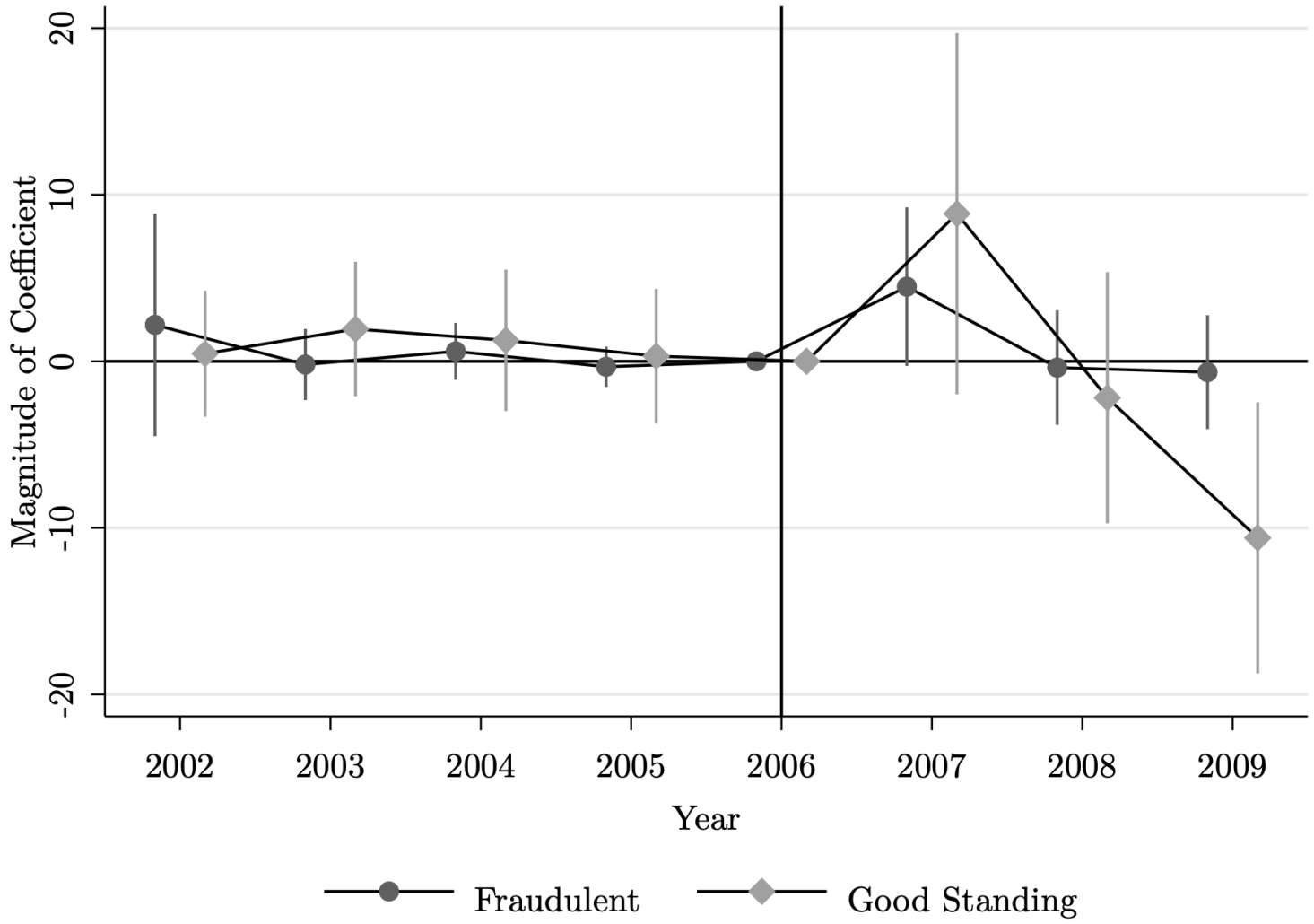
- Mostly fringe agencies ($<$1% market share*) exit



* robust to different thresholds in defining fringe

Heterogeneity in Exits (2)

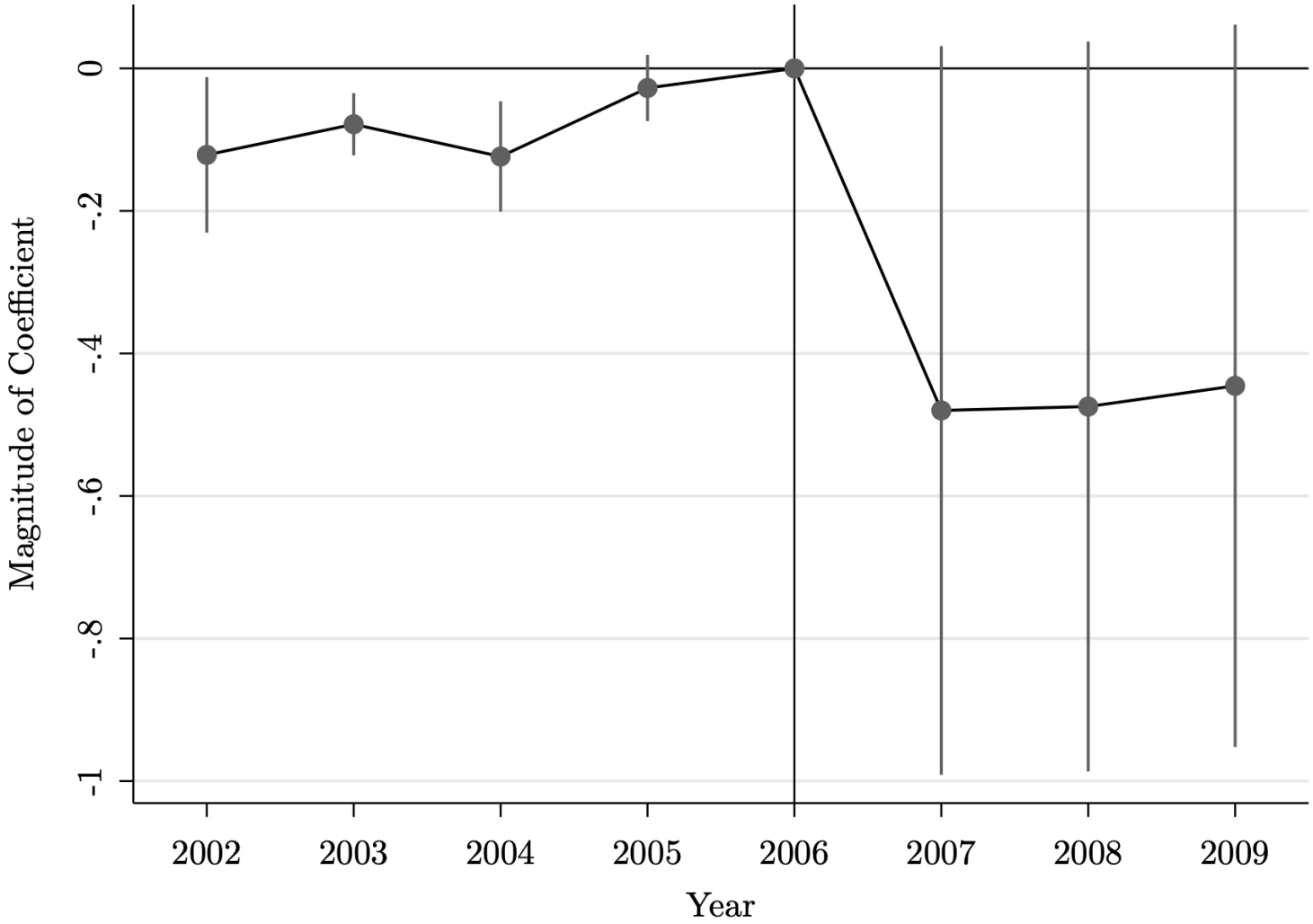
- Both good and bad agencies exit



Proportion of Fraudulent Agencies

▸ DDD Results

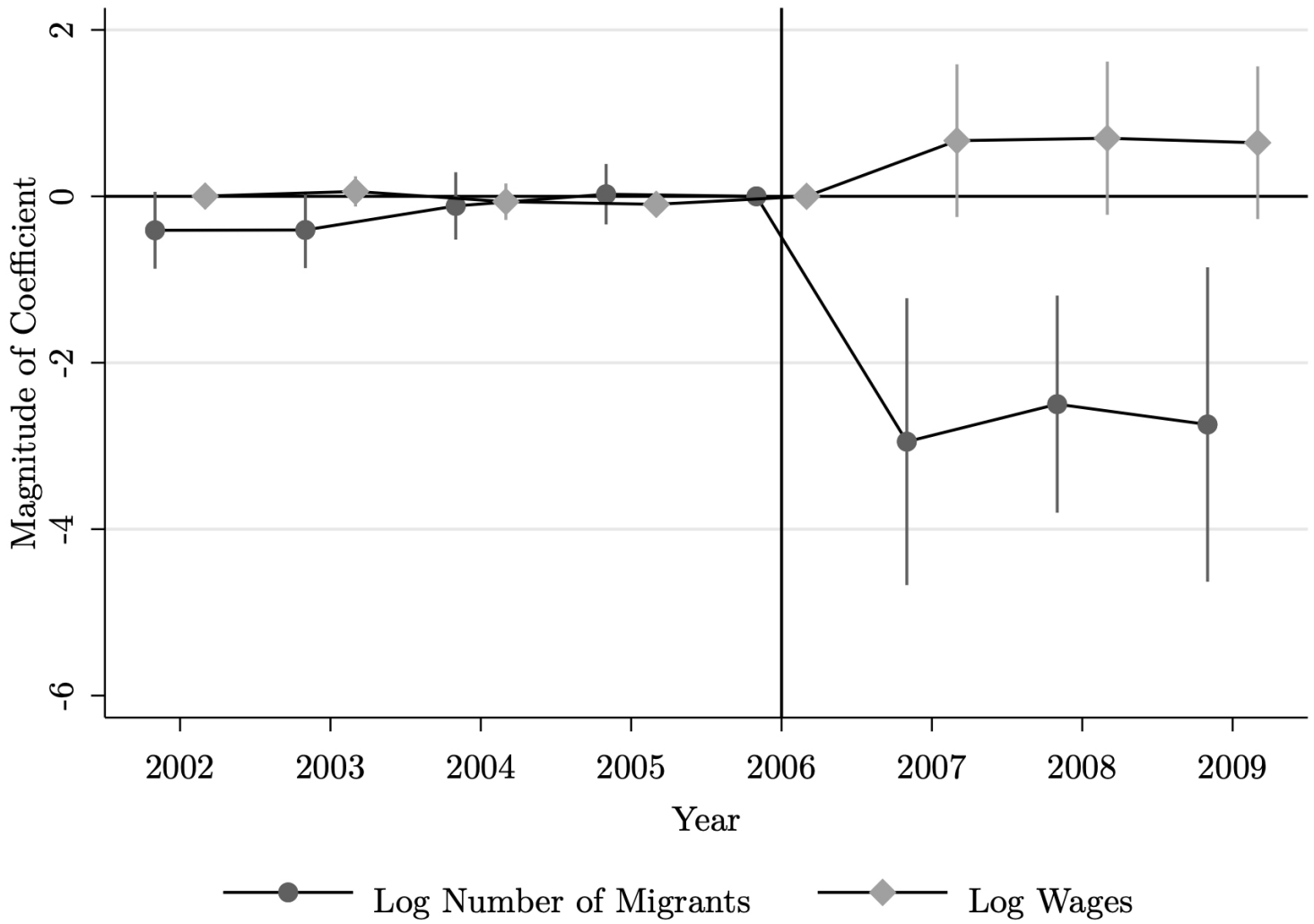
- ... but bad agencies ↓ in proportion
  - Fraudulent agencies contract workers at lower wages, so may have been disproportionately affected



Migration Outcomes

▸ DDD Results

- Migration ↓ while wages ↑. So quantity-quality tradeoff



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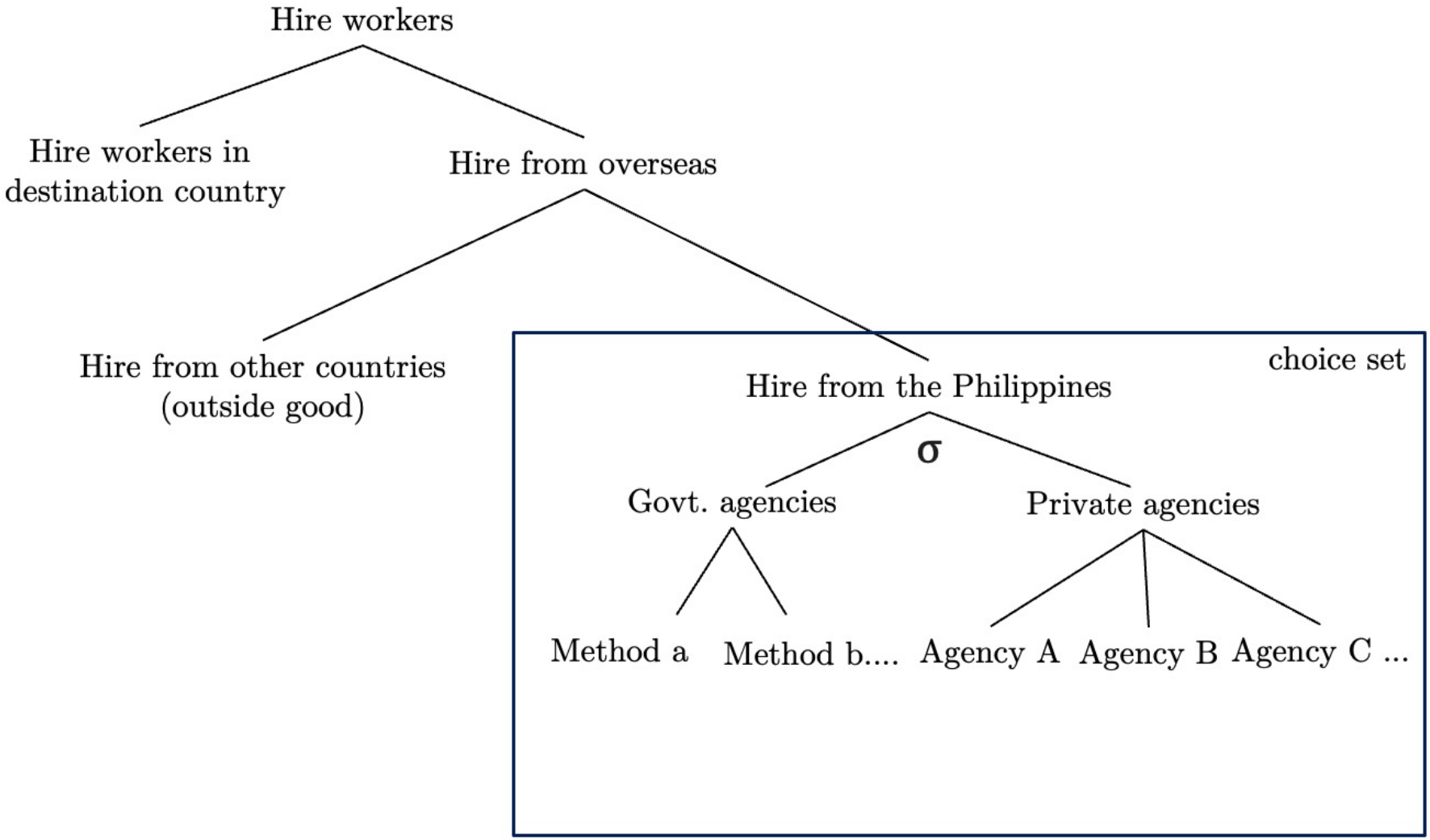
Model Idea

- Idea: License requirements affect migration through employers' choices of recruiters. How do they reallocate?



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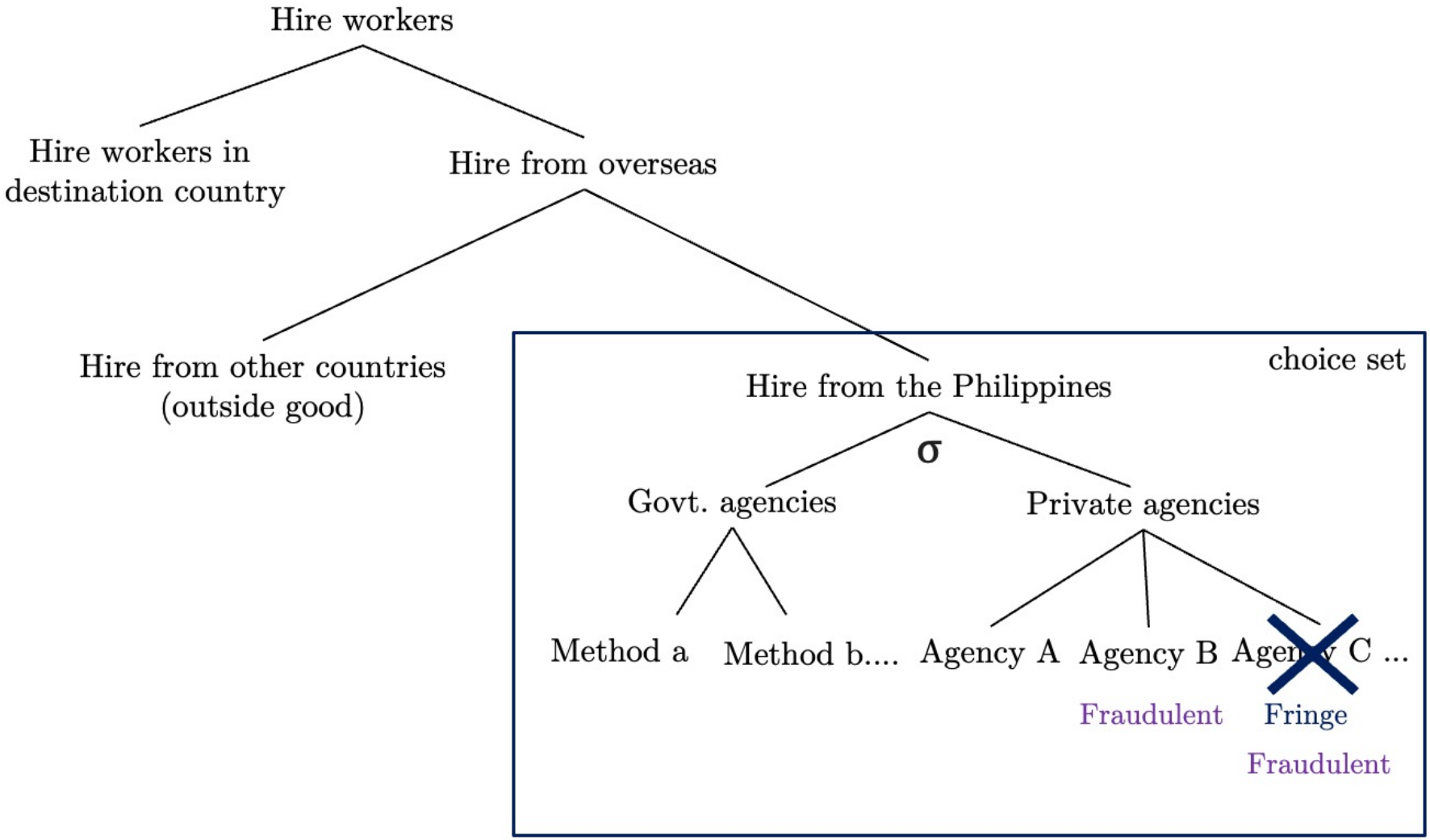

Estimation

- The utility employer i obtains from choosing agency j is: Details

$$u_{i,j\in g} = \delta_j + \nu_{ig}(\sigma) + (1-\sigma)\epsilon_{ij} \quad \text{where}$$
$$\delta_j = \beta_0 Wage_j + \beta_1 Experience_j + \beta_2 Award_j + \xi_j$$

  - Nest: govt. agencies ($g = 0$) and private agencies ($g = 1$)

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- Berry (1994): can estimate demand using aggregate data

$$\ln s_j = \beta_0 Wage_j + \beta_1 Experience_j + \beta_2 Award_j + \sigma \ln s_{j|g} + \xi_j$$

  - Nest: govt. agencies ($g = 0$) and private agencies ($g = 1$)
  - Parameters are from underlying utility function
  - $\ln s_j$ is the market share, $\ln s_{j|g}$ is the within-nest share of agency j
  - Instrument for endogenous variables $Wage_j$ and $\ln s_{j|g}$ OLS Estimates

Results and Counterfactuals

▸ Results Table ▸ Counterfactuals Table

- Parameters: $Wage_j$ and $Experience_j$ are negatively associated with utility, while $Award_j$ is positively associated
  - Disutility of price (downward-sloping demand)
  - Employers prefer newer, fly-by-night agencies in these markets
  - Awards signal service quality
  - σ close to 1; govt. and private not close substitutes
- Fit: Markets for high-skilled workers in the UAE predicted the best
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- Counterfactual: Removing agencies with
  - $<$1% market share in each market
  - $<$100 total job orders

... decreases share of fraudulent agencies by 1-8 p.p.

Conclusion

- "Pricing out" fringe agencies is associated with:
  - wages and proportion of non-fraudulent agencies $\uparrow$
  - large $\downarrow$ in migration

  $\rightarrow$ Tradeoff between migration quantity and quality
- Making license requirements more stringent may $\downarrow$ prevalence of fraud
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- Making license requirements more stringent may $\downarrow$ prevalence of fraud
  - Structural model extensions and new data collection
- Identified characteristics of fraudulent agencies with new data
- As temporary labor migration policies become the norm, fringes of the migration industry become central to the global economy

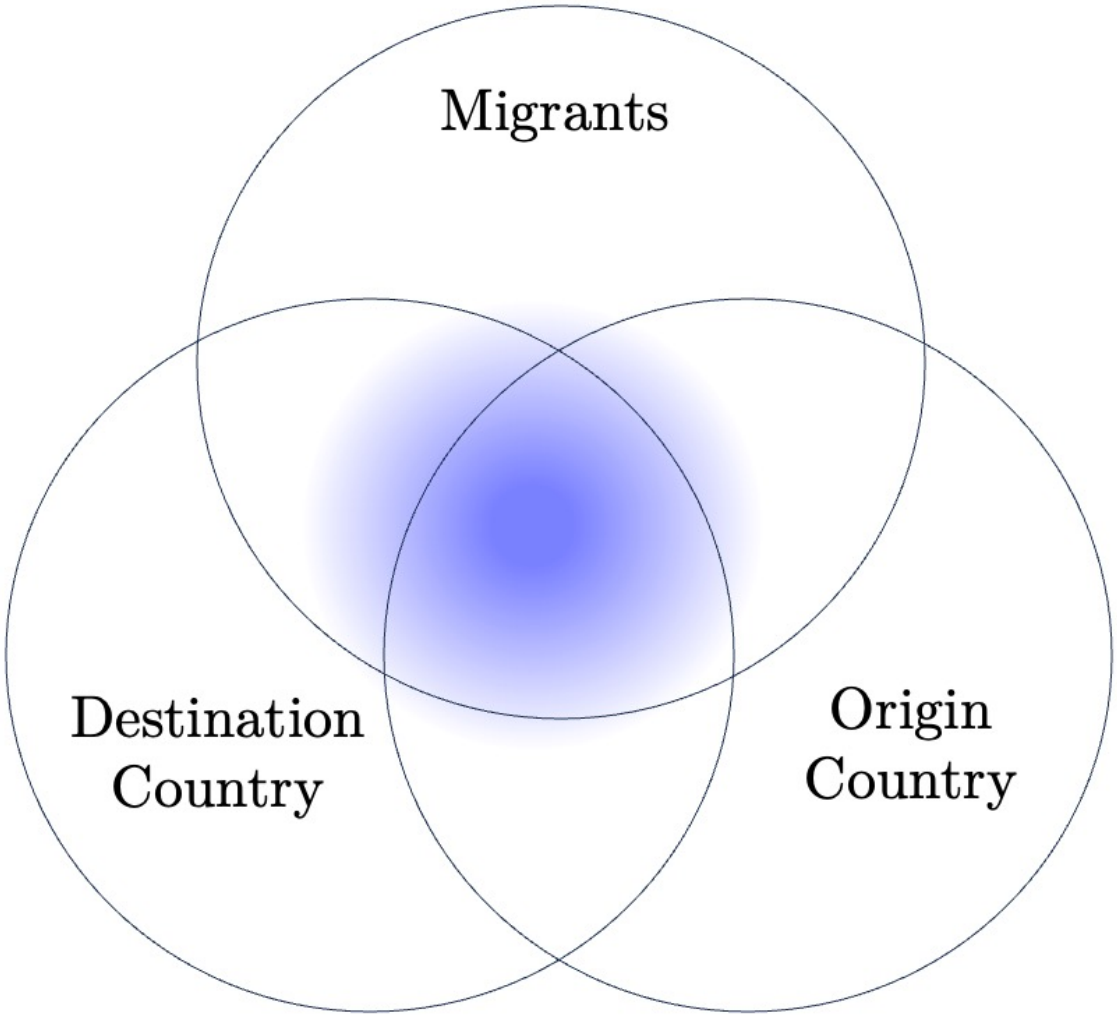
Thank You!

Please send questions and feedback to: hnakazawa24@amherst.edu

Appendix

Big Picture

- Temporary Labor Migration Policies as "triple-win" (Bauböck and Ruhs, 2022)



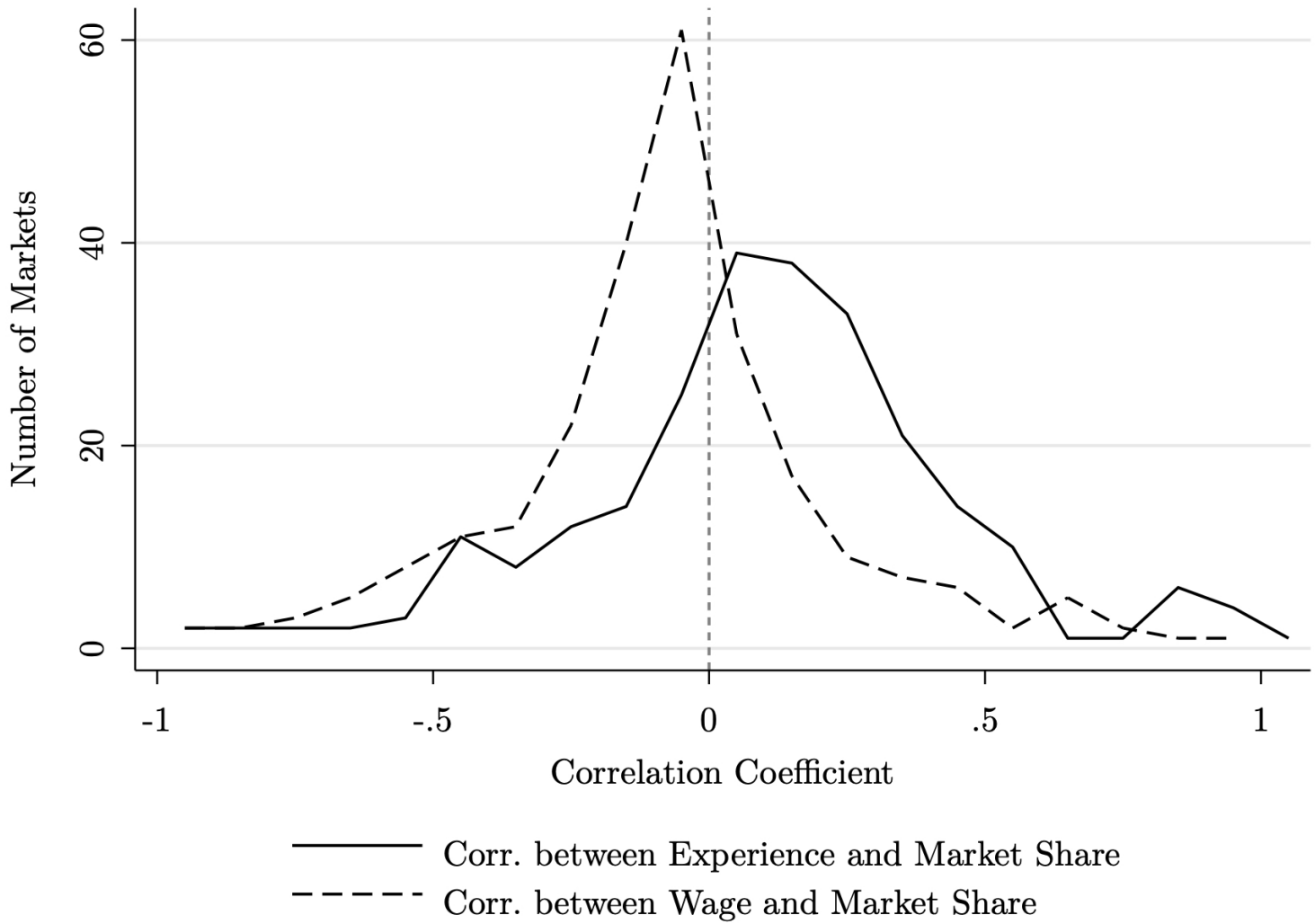
§2 - Descriptive Stats

Back

	Migrants			Recruitment Agencies					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	Total	Gov. Hire	% Gov.	Licensed	Entry	Exit	1+	100+	% Entrants 100+
2002	277,297	15,878	5.7%	2,808			980	599	21.3%
2003	235,906	13,145	5.6%	2,843	83	48	987	552	2.4%
2004	281,948	14,179	5.0%	2,883	57	17	988	632	19.3%
2005	286,920	8,018	2.8%	2,981	116	18	1011	605	6.0%
2006	306,566	18,700	6.1%	3,093	136	24	1008	521	16.9%
2007	308,120	28,337	9.2%	3,162	79	10	966	538	6.3%
2008	339,745	22,738	6.7%	3,220	75	17	949	541	17.3%
2009	332,126	17,535	5.3%	3,289	77	8	954	540	5.2%

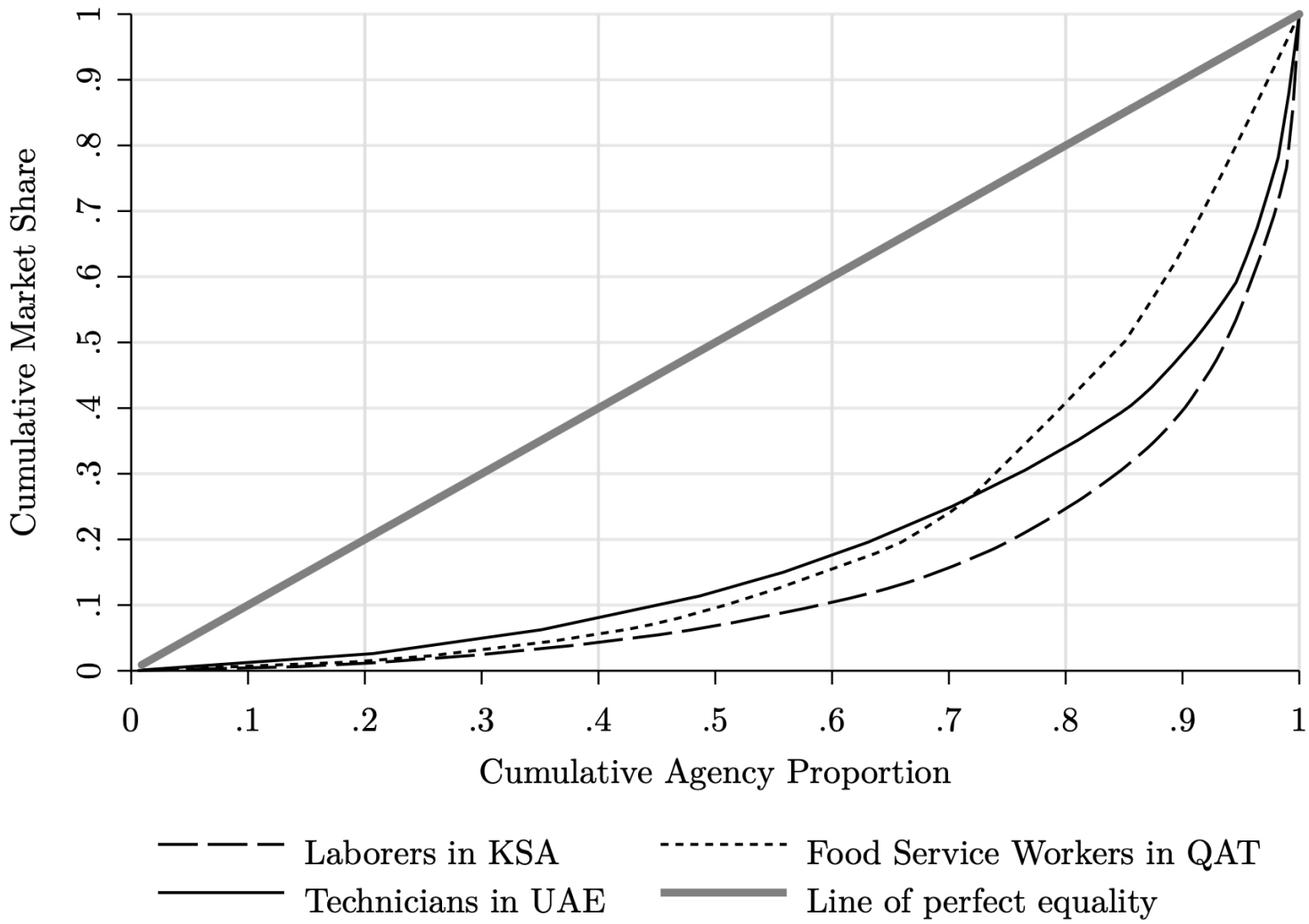
§2 - Market Share and Experience, Wage

Back



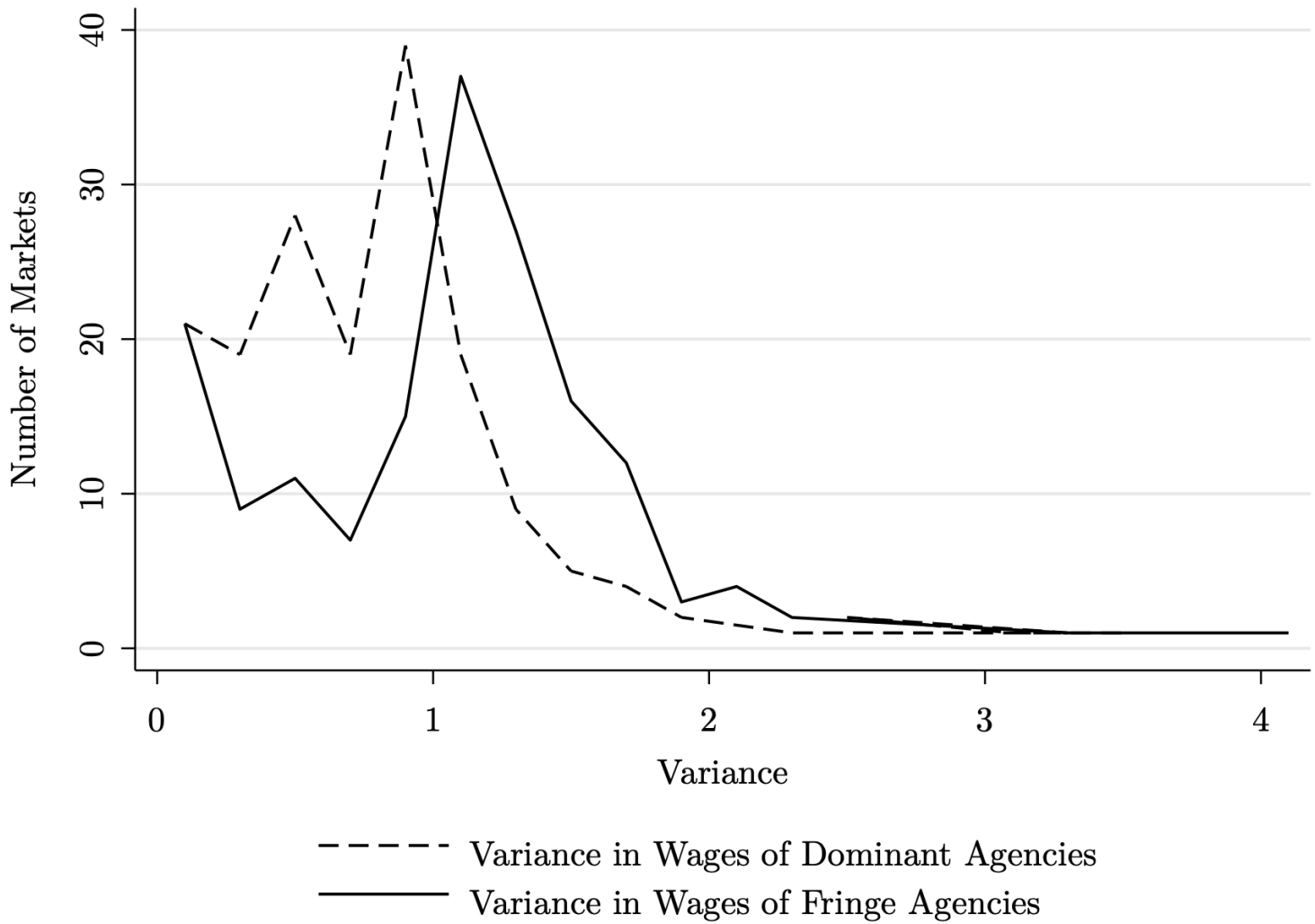
§2 - Market Share Distribution

Back



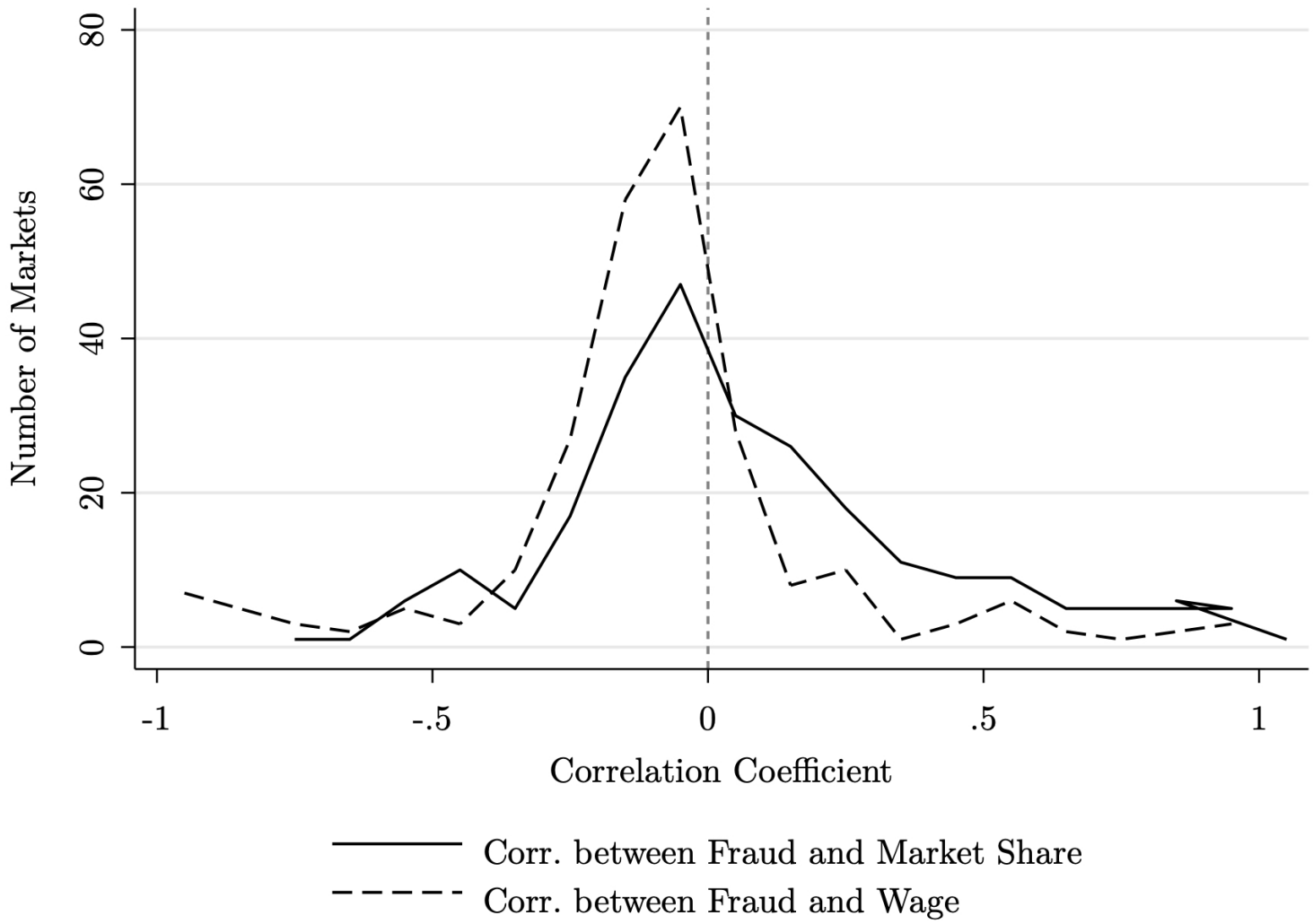
§2 - Variance in Wage

Back



§2 - Fraud and Market Share, Wage

Back



§4 - Double Difference

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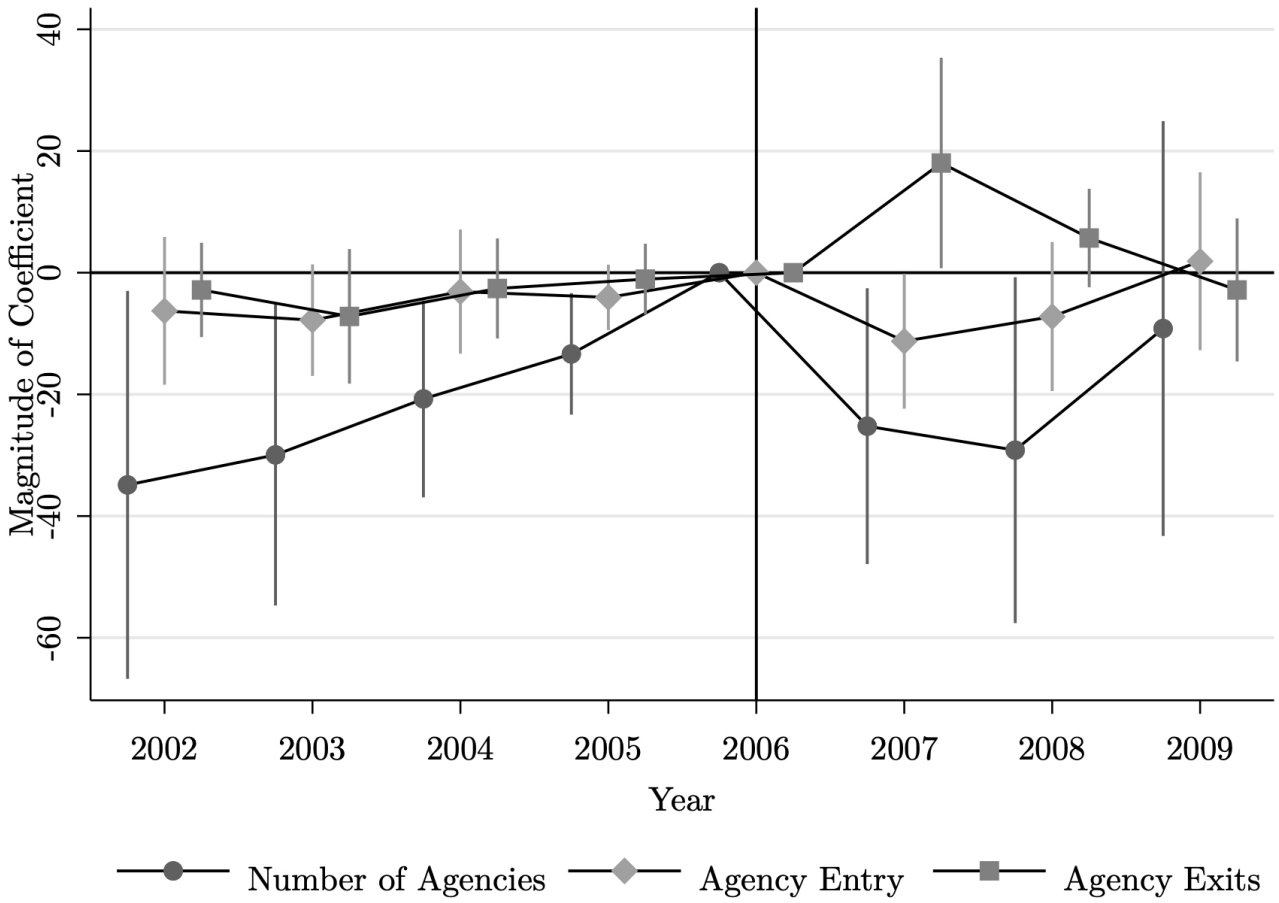
$$Y_{c,t} = \gamma_0 + \sum_{t=2002}^{2009} \gamma_{1,t} Binding_c + \lambda_c + \mu_t + \eta_{c,t}$$



§4 - Results Table

▸ Main Event Study ▸ Proportion ▸ Migration

	(1) Number of Agencies	(2) Agency Entry	(3) Agency Exits	(4) Number of Fringe	(5) Number of Fraudulent	(6) Log Migrants	(7) Log Wages
$Domestic_o \times Post_t$	-36.261***	-9.977***	-1.405	-31.389**	-4.944***	-2.555***	0.690
$\times Binding_c$	(12.429)	(3.797)	(3.769)	(10.216)	(1.856)	(0.823)	(0.470)
$Binding_c \times Post_t$	34.139***	9.430***	7.742**	31.154***	5.769***	1.616***	0.088
	(7.925)	(1.283)	(1.594)	(8.081)	(0.754)	(0.225)	(0.142)
$Domestic_o$	34.51	4.291	2.328	38.467*	7.996***	4.187***	-0.764***
$\times Binding_c$	(24.671)	(2.740)	(4.384)	(21.422)	(2.575)	(0.752)	(0.276)
$Domestic_o \times Post_t$	9.943	3.608	-1.462	8.838	0.267	1.187*	-0.321
	(9.816)	(2.601)	(2.169)	(8.457)	(0.598)	(0.615)	(0.466)
Observations	1,200	1,200	1,200	1,200	1,200	1,190	1,120
R^2	0.709	0.619	0.563	0.674	0.62	0.66	0.655

§4 - Robustness Checks

Back

- Drop large destination countries in both groups
  - Treatment - KSA, QAT, UAE
  - Control - JPN, TWN
- Expand to entire sample (include markets with $<$100 migrants)
- Restrict to balanced sample
  - At least 1 domestic worker every year
  - At least 1 agency operating every year

§5 Nested Logit Demand Model

Back

- δ_j is the component common across all employers from agency j

$$\delta_j = \beta_0 Wage_j + \beta_1 Experience_j + \beta_2 Award_j + \xi_j$$

  - $Wage_j$, $Experience_j$, $Award_j$ are observable characteristics
  - ξ_j accounts for unobservables (to the econometrician)

- $\nu_{ig}(\sigma) + (1-\sigma)\epsilon_{ij}$ is the idiosyncratic deviation from δ_j
  - ν_{ig} is specific to each employer-nest
  - ϵ_{ij} is specific to each employer-agency, e.g., social network effects
  - $\sigma \in [0, 1)$ weights the two errors and measures intra-nest correlation
  - Assume ν_{ig} to be i.i.d generalized extreme value, and ϵ_{ij} to be i.i.d Type-I extreme value

§5 - OLS Estimates

Back

	Physical Work in KSA		Non-Home Based in QAT		High-Skilled in UAE	
	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV
$Wage_j$	-0.00005**	-0.00015***	-0.00014*	-0.00040**	-0.00024***	-0.00082***
	[0.00002]	[0.00004]	[0.00007]	[0.00020]	[0.00005]	[0.00022]
$Experience_j$	-0.01443***	-0.00054	-0.09175***	-0.06520***	-0.04660*	-0.00576
	[0.00171]	[0.00155]	[0.01392]	[0.01286]	[0.02485]	[0.01794]
$Award_j$	0.07031***	0.07359***	0.17630***	0.29683***	0.14451***	0.28317***
	[0.00609]	[0.00999]	[0.02869]	[0.09252]	[0.03924]	[0.07914]
σ	0.98303***	0.99637***	0.94918***	0.94446***	0.95018***	0.85988***
	[0.00134]	[0.00417]	[0.01191]	[0.02445]	[0.02347]	[0.04314]
Observations	10,861	10,861	1,650	1,650	1,278	1,278
Uncentered R^2	0.992	0.99167	0.98622	0.98505	0.98961	0.98138

§5 - Results Table

Back

	(1) Physical Work in KSA	(2) Non-Home Based Services in QAT	(3) High-Skilled Work in UAE
$Wage_j$	-0.00009***	-0.00035	-0.00076***
	(0.00003)	(0.00021)	(0.00021)
$Experience_j$	-0.00270**	-0.06748***	-0.00522
	(0.00133)	(0.01224)	(0.01942)
$Award_j$	0.06554***	0.27592***	0.27506***
	(0.00720)	(0.09215)	(0.06510)
σ	0.99834***	0.94899***	0.87553***
	(0.00283)	(0.02530)	(0.03889)
Observations	10,861	1,650	1,278
Uncentered R^2	0.99186	0.98542	0.98292

§5 - Counterfactual Results

Back

Markets	Year	Number of Agencies	Fringe Agencies	Migrants Migrants	Fraud. Agencies (Obs.)	Fraud. Agencies (CF.)	Fraud Share (Obs.)	Fraud Share (Pre.)	Fraud Share (CF.)
Physical Work KSA	2003	317	26	22120	24	9	5.6%	0.0%	0.1%
	2004	296	31	22599	26	12	11.4%	0.0%	0.1%
	2005	283	66	25016	57	37	24.9%	0.1%	0.1%
	2006	315	78	40352	94	42	26.8%	18.4%	5.9%
	2007	317	92	51489	73	43	16.1%	0.5%	0.0%
Services QAT	2003	69	0	1309	0	0	0.0%	0.0%	0.00%
	2004	80	4	2938	3	3	2.3%	1.1%	8.0%
	2005	110	16	3512	12	8	39.4%	2.1%	0.9%
	2006	158	18	5774	17	10	7.0%	4.8%	4.1%
	2007	172	32	6108	27	19	17.4%	1.0%	1.8%
High-Skilled UAE	2003	88	6	654	5	4	1.4%	1.4%	0.4%
	2004	112	8	1080	7	3	6.0%	0.9%	0.5%
	2005	148	21	1618	16	14	8.3%	5.3%	3.8%
	2006	163	17	1991	17	9	11.7%	9.6%	1.5%
	2007	209	26	3275	24	13	5.9%	13.0%	2.1%

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Bauböck, R. and M. Ruhs (2022). The elusive triple win: addressing temporary labour migration dilemmas through fair representation. Migration Studies.

Berry, S. T. (1994). Estimating Discrete-Choice Models of Product Differentiation. The RAND Journal of Economics 25(2), 242–262.