

Labour Market Reform, Firm-level Employment Adjustment and Trade Liberalisation

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Introduction

- One potential reason of the sluggish labour market adjustment in response to trade shocks is the labour market regulations that impede labour movement.
- Hukou system in China segregates the labour market into rural and urban sectors and imposes substantial rural-urban movement barriers, which results in considerable labour misallocation (Meng, 2012).
- A recent round of hukou reform that started in 2001 in selected cities aims to abolish the distinction between rural and urban hukou types and to encourage labour movement from rural to urban areas.
- (Low-skilled) labour supply in the urban market increases as a result of the hukou reform. This enables firms to adjust their labour use relatively more flexibly.
- Using firm-level data and city-level hukou reform data, this paper evaluates the effects of the hukou reform on firms' employment adjustment by comparing firms in reform and non-reform regions before and after the reform.

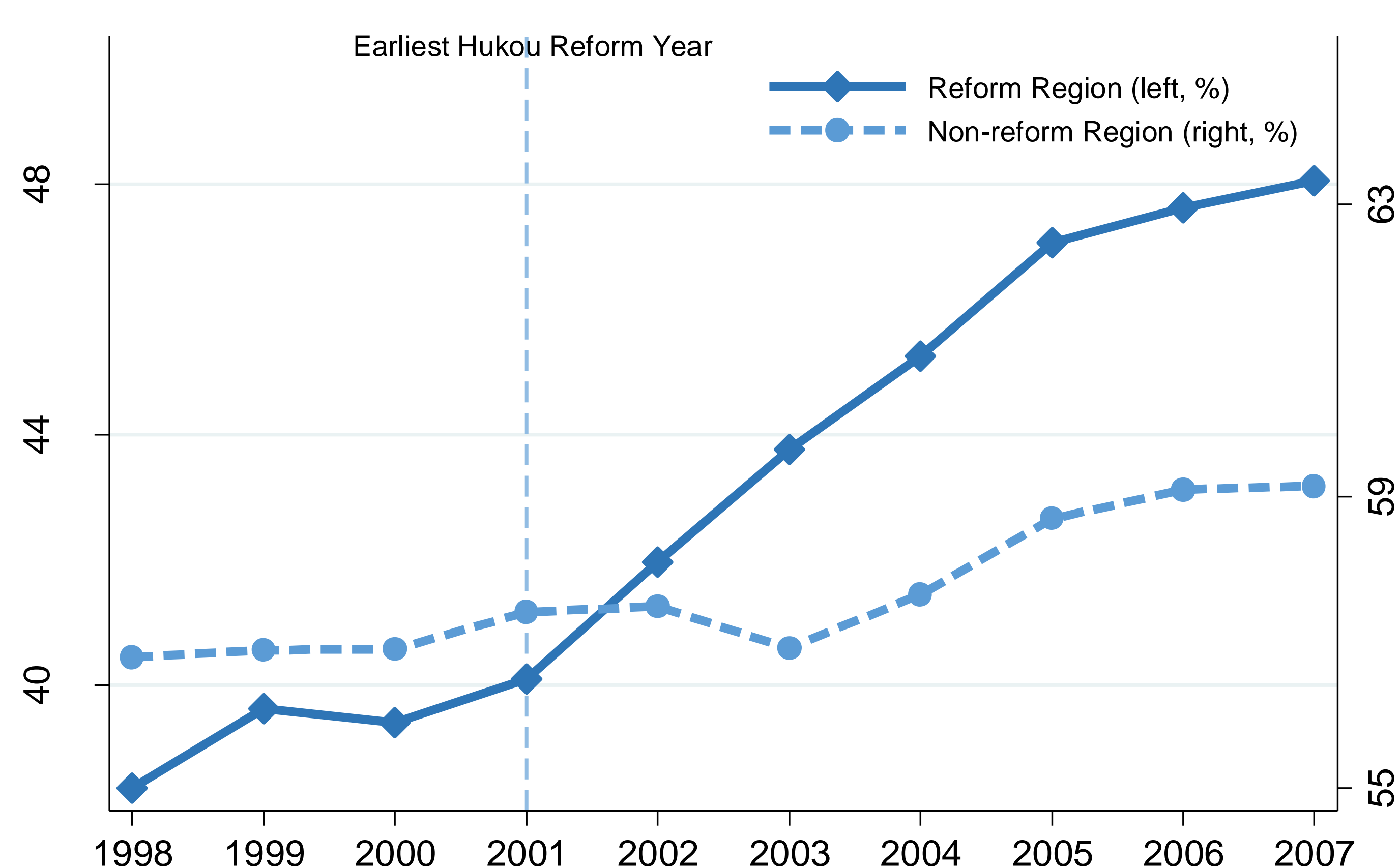


Figure 1. Percent of Non-agriculture Population in Reform and Non-reform Regions, 1998-2007

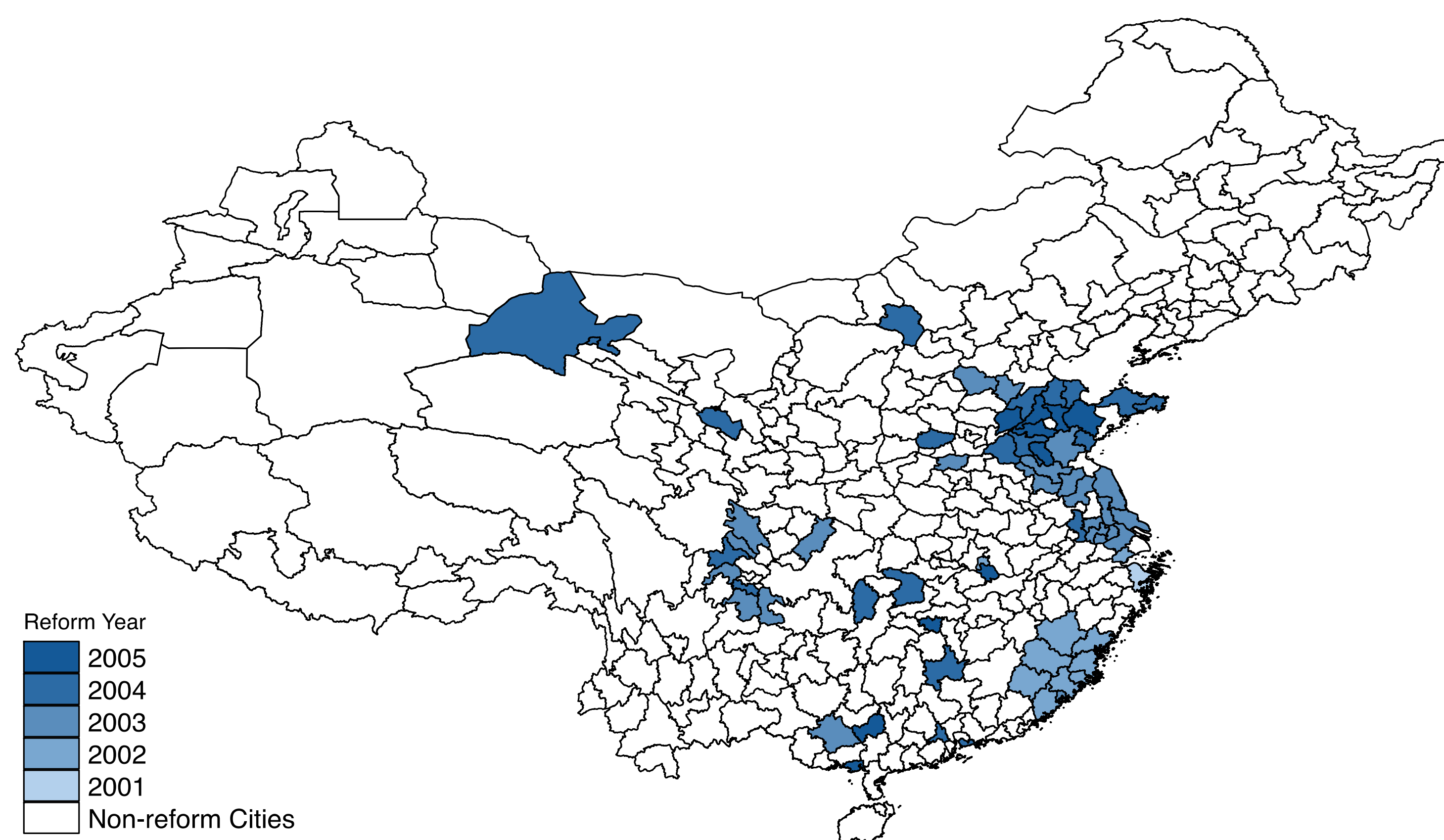


Figure 2. Map of Chinese Hukou Reform Cities by Reform Year, 2001-2005

Data and Empirical Specification

- Industrial firm-level annual survey spanning 1998-2007 that covers all State-owned Enterprises (SOEs) and non-SOEs with annual sales over RMB 5 million (USD 780 thousand).
- 66 hukou reform cities between 2001 and 2005.
- Employment adjustment rate: $EAR_{it} = \frac{E_{it} - E_{it-1}}{(E_{it} + E_{it-1})/2}$, where E_{it} is the employment of firm i in year t .
- Baseline regression model:

$$EAR_{it} = \beta_1 + \beta_2 policy_{ct} + \sum_{t=1999}^{2007} \beta_t year_t + \mathbf{X}_{ict} \boldsymbol{\gamma} + \mathbf{Z}_{ct} \boldsymbol{\delta} + \theta_i + \varepsilon_{ict}$$

where $policy_{ct}$ equals to 1 for firms in the reform city after the reform and 0 otherwise. \mathbf{X}_{ict} is a vector of firm-level characteristics, \mathbf{Z}_{ct} is a vector of city-level control variables, and θ_i is firm fixed effects.

- Including trade openness:

$$EAR_{it} = \beta_1 + \beta_2 policy_{ct} + \beta_3 open_{jt-1} + \beta_4 open_{jt-1} \times policy_{ct} + \sum_{t=1999}^{2007} \beta_t year_t + \mathbf{X}_{ict} \boldsymbol{\gamma} + \mathbf{Z}_{ct} \boldsymbol{\delta} + \theta_i + \varepsilon_{ict}$$

where $open_{jt-1}$ is measures of trade openness at industry level lagged by one year.

Empirical Results

Table 1 Effects of the Hukou Reform on Employment Adjustment: Baseline Results

	(1)	(2)	(3)
Policy	0.040*** (2.764)	0.046*** (3.361)	0.045*** (3.071)
Firm age		-0.813*** (35.905)	-0.813*** (35.380)
Productivity		-0.186*** (29.963)	-0.187*** (29.551)
City GDP			0.018 (0.612)
City population			-0.021 (0.746)
Constant	0.252*** (43.154)	2.565*** (38.027)	2.678*** (10.501)
Ownership dummy	No	Yes	Yes
Industry dummy	No	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Observations	902787	828139	824138
R ²	0.163	0.310	0.310

Notes: Standard errors are clustered at the city level for all specifications.
* p<0.1, ** p<0.05, *** p<0.01. Absolute t values in parentheses.

Table 2 Trade Openness and Employment Adjustment in the Presence of the Hukou Reform

	(1)	(2)	(3)
Policy	0.059*** (3.971)	0.050*** (3.735)	0.063*** (3.855)
Tariff _{t-1}	0.000 (0.170)		0.000 (0.246)
Tariff _{t-1} × Policy	-0.001** (2.018)		-0.001* (1.878)
Import _{t-1}		0.001*** (2.151)	0.001*** (2.143)
Export _{t-1}		0.031*** (2.783)	0.030*** (2.792)
Import _{t-1} × Policy		0.005*** (2.783)	0.004*** (2.478)
Export _{t-1} × Policy		-0.016 (1.466)	-0.014 (1.390)
Constant	2.584*** (11.250)	3.380*** (11.788)	3.385*** (11.918)
Firm control variables	Yes	Yes	Yes
City control variables	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Observations	796960	741971	741971
R ²	0.313	0.312	0.312

Notes: Firm-level control variables include firm age, productivity, ownership dummies and industry dummies. City-level control variables include regional GDP, population, and minimum wages. Standard errors are clustered at the city level for all specifications.
* p<0.1, ** p<0.05, *** p<0.01. Absolute t values in parentheses.

Conclusions

- Larger degree of the labour market flexibility introduced by the hukou reform enabled firms to expand their employment.
- Firms responded more strongly to trade openness in employment in the presence of the hukou reform.
- These findings offer important policy implications to the ongoing labour market reform and to other developing countries with regional labour movement barriers.

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