

Serial Entrepreneurship in China

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Motivation

- Extensive literature on entrepreneurship
- Much less known about **serial entrepreneurship** (SE)
 - : entrepreneurs who start more than one firm
- SE is quantitatively important
 - : UK: 19-25% (Westhead et. al. 2005)
 - : Germany: 18% (Wagner, 2003)
 - : Finland: 30% (Hyytinen and Ilmakunnas 2007)
 - : US: 12.5% (Headd, 2003)
- Limited theoretical literature, however
 - : Literature largely focuses on entrepreneurship
 - : Few models of SE
 - Plehn-Dujowich (2010), Parker (2014).
 - : Potentially important distinction: Sequential vs Portfolio entrepr.

Key Questions: Still a Lot to Understand

- How common is SE?
- How do SE differ from non-SE
- Are they more likely to succeed?
- If so, what underlies their success?
 - : better access to capital?
 - : more talented?
 - : experience and learning?
 - : connections?
- Relationship between entrepreneurship and SE

Contribution: What Do We Do?

- Draw on unique data set to document SE in China
 - : Quantitatively how important? Changes over time?
 - : Relationship with Entrepreneurship?
 - : Differences vis-a-vis non-serial entrepreneurs wrt:
 - size
 - sector choice
 - productivity
 - : Spatial Differences?
- Develop simple model to analyze portfolio choice problem of SE. Test key predictions.
- Develop simple model to rationalize role of endowments, ability, and connections in explaining differences between SE and non-SE.
- Key motivating question: How differences in the local business environment affect selection into entrepreneurship and thus the prospects of serial entrepreneurship?

Key Findings

- Serial entrepreneurs have become more important over time. By 2015
 - : Quarter of all firms
 - : Half of all registered capital
 - : Product of larger initial size, higher start up rates, and lower exit
- Sector choice influenced by
 - : Downstream and upstream linkages
 - : Risk diversification
- Performance
 - : First firms of SE enjoy higher TFP than non-SE; also superior to their second firms
 - : Explanation
 - first firms help relax credit constraints of second firm
 - lowers productivity threshold for successful entry
- Sizeable regional differences
 - : Low entrepreneurship and serial entrepreneurship often go together
 - : Both linked to business environment facing firms as captured by
 - capital and output frictions
 - barriers to entry

Data Sources

1. **Business Registry of China**

- Maintained by State Administration of Industry and Commerce
- Universe of all firms ever established
- Information relating to
 - : year of establishment of each firm
 - : investors – individuals and enterprises
 - : initial registered capital
 - : main line of business
 - : firm exit
- Investors identified through unique ID
 - : also know year of investment
- For each legal representative, also have personal information on age, gender, CCP membership, education, and birth place

2. **Firm Inspection Data**

- Begins in 2008, with coverage expanding over time
- Self-reported information on sales, assets and profits of each firm
- Employment reported beginning in 2013

Business Registry of China: Key Definitions

- **Entrepreneur**

: Individual investor with controlling (majority) interest at the time of firm establishment or acquired later

- **Serial Entrepreneur**

: Individual who is or has been the “Entrepreneur” of more than one firm

Firms in China: Shareholder Information

Based on the largest shareholder							
year	Total	Unregistered	Individual			Enterprise	Unreported
			Single	Multiple	No citiz. ID		
1995	1,457,329	709,692	66,947	250,516	165,818	264,356	1,532,662
2000	2,749,463	792,553	231,699	1,065,079	271,104	389,028	1,108,930
2005	5,293,533	660,887	754,241	3,042,218	383,052	453,135	546,330
2010	8,414,674	550,504	1,702,511	5,137,976	444,406	579,277	368,765
2015	17,936,962	763,254	4,977,494	10,025,547	1,181,655	989,012	583,680

- Business Registry of China, 1995-2015
- Based on the largest shareholder
- This paper: **firms in which an individual is the largest shareholder** (single plus multiple)

Role of Serial Entrepreneurs

Year	# of firms	SE(%)	Total K (trill.)	SE(%)	Aver. registered K (mill.)	
					SE	Non-SE
1995	317,463	6.25	0.66	9.67	3.23	2.01
2000	1,296,778	10.99	2.46	19.68	3.40	1.71
2005	3,796,459	18.83	6.81	31.86	3.03	1.51
2010	6,840,487	23.27	14.66	41.00	3.78	1.65
2015	15,003,041	28.12	52.07	47.61	5.88	2.53

- Increasing role of serial entrepreneurs over time, 1995-2015
 - : **fraction of firms started by SE** increased from 6% to 28%
 - : **share of registered capital for SE** increased from 10% to 48%
- **Average registered capital around 2 times higher for SE**
- 85% of SE establish their second firm **concurrently** with the first firm

Entry and Exit Dynamics

Year	SE			Non-SE		
	Survival	Entry rate(%)	Exit rate(%)	Survival	Entry rate(%)	Exit rate(%)
1995	11,927	52.07	3.45	305,536	49.00	0.62
2000	83,364	54.52	5.99	1,213,414	32.14	4.81
2005	450,866	37.12	6.94	3,345,593	23.80	6.56
2010	1,067,319	27.61	6.70	5,773,168	20.48	6.67
2015	2,850,524	32.09	3.64	12,152,517	23.29	3.50

- Entry rates for SE firms are significantly higher than for Non-SE firms
- Entry rates for SE and Non-SE firms decline from 50% to about 23%
- Exit rates for SE firms are slightly higher than for Non-SE firms
- Exit rates for SE and Non-SE firms rise up through 2007 and fall afterwards

Firm Inspection Data: Financial Performance

Type	Year	Asset	Sales	Profit	Tax	Profit/Asset	Sales/Asset
Non-SE	2008	2.86	2.58	0.09	0.06	0.03	0.90
1st-SE	2008	5.33	4.22	0.15	0.10	0.03	0.79
2nd-SE	2008	5.66	3.69	0.13	0.09	0.02	0.65
Non-SE	2009	2.93	2.37	0.09	0.06	0.03	0.81
1st-SE	2009	5.50	4.00	0.16	0.10	0.03	0.73
2nd-SE	2009	5.85	3.43	0.13	0.09	0.02	0.59
Non-SE	2010	3.14	2.58	0.10	0.06	0.03	0.82
1st-SE	2010	5.92	4.37	0.17	0.11	0.03	0.74
2nd-SE	2010	6.32	3.67	0.14	0.09	0.02	0.58
Non-SE	2011	3.32	2.66	0.09	0.06	0.03	0.80
1st-SE	2011	6.34	4.60	0.17	0.11	0.03	0.72
2nd-SE	2011	6.71	3.80	0.14	0.09	0.02	0.57
Non-SE	2012	3.39	2.49	0.09	0.06	0.03	0.73
1st-SE	2012	6.64	4.45	0.16	0.11	0.02	0.67
2nd-SE	2012	6.86	3.61	0.13	0.09	0.02	0.53

- Use the Firm Inspection Data, 2008-2012
- The 1st SE firm has a higher capital stock than the Non-SE firm
- The 2nd SE firm has a higher capital stock than the 1st SE firm

Simple Model Setup

- Two periods
- There is a fixed set of potential entrepreneurs (unit measure)
- Entrepreneurs can start one firm each period
 - For simplicity: a firm lasts for only one period
- TFP z_{it} of a potential new firm of entrepreneur i in period t is stochastic
- Correlation between draws is $\text{corr}(z_{i1}, z_{i2}) = \rho$, where $\rho \in (0, 1)$
- Potential entrepreneurs are risk-neutral and consume after 2nd period. They are ex-ante identical: start initial period with zero equity ($e = 0$)

Production and Markets

- Firm's production function is

$$y = z^{1-\eta} \left(k^{1-\alpha} n^\alpha \right)^\eta,$$

where $\eta \in (0, 1)$ reflects decreasing returns to scale

- Markets:
 - : Banks offer one-period loans (at interest rate R_l) and take deposits (at rate R_d)
 - : Positive interest rate spread: $R_l > R_d$
 - : Firms pay workers a wage rate w
- Firms pay an output tax τ_y

Simple Model

- Three possibilities for effective interest rate R ;
 1. Entrepreneur is borrowing: $R = R_l$
 2. Entrepreneur has positive deposits: $R = R_d$
 3. Entrepreneur has neither loans nor deposits: $R \in (R_d, R_l)$
- Optimal capital investment is weakly increasing in z and e ,

$$k^*(z, e) = \begin{cases} z \times (R_d)^{-\frac{1-\alpha\eta}{1-\eta}} \times X & \text{for } R = R_d \\ e & \text{for } R \in (R_d, R_l) \\ z \times (R_l)^{-\frac{1-\alpha\eta}{1-\eta}} \times X & \text{for } R = R_l, \end{cases}$$

where X is a constant

Entry

- Running a firm requires a fixed operating cost $v > 0$
- After observing the TFP z for a potential firm, the entrepreneur decides whether or not to operate the firm
- Optimal decision: operate the firm iff $z \geq z^*(e)$
- Optimal entry decision for potential entrepreneur with equity e is a threshold $z^*(e)$ weakly falling in e

$$z^*(e) = \begin{cases} (R_d)^{\frac{(1-\alpha)\eta}{1-\eta}} Z_1 & \text{for } e \geq \bar{e} \\ (e)^{-\frac{(1-\alpha)\eta}{1-\eta}} Z_2 & \text{for } e \in (\underline{e}, \bar{e}) \\ (R_l)^{\frac{(1-\alpha)\eta}{1-\eta}} Z_1 & \text{for } e \leq \underline{e}, \end{cases}$$

where Z_1 and Z_2 are constants

- Note: all first-time entrepreneurs have $R = R_l$, cutoff $z^*(0)$, and capital $k(z, 0)$

Firm Inspection Data: Firm TFP

- Divide firms into (p, j, m) cells
 - : prefecture p , industry j , type $m \in \{SE, NSE_1, NSE_2\}$
- Postulate a common τ_y in a (j, p, m) cell
 - : w is also the same in a (j, p, m) cell
- The ratio of average TFP for types m and M in a (j, p) pair:

$$\frac{Z_{jpm}}{Z_{jpM}} = \frac{\sum_{i \in L(jpm)} \frac{y_{ijpm}}{Y_{jpm}} (y_{ijpm})^{\frac{1-\eta\alpha_j}{1-\eta}} (k_{ijpm})^{-\frac{(1-\alpha_j)\eta}{1-\eta}}}{\sum_{i \in L(jpM)} \frac{y_{ijpM}}{Y_{jpM}} (y_{ijpM})^{\frac{1-\eta\alpha_j}{1-\eta}} (k_{ijpM})^{-\frac{(1-\alpha_j)\eta}{1-\eta}}}$$

- The TFP ratios for the whole economy are:

$$\frac{Z_m}{Z_M} = \sum_j \sum_p \frac{Y_{jp}}{Y} \frac{Z_{jpm}}{Z_{jpM}}$$

: Y_{pj} is value added in a (p, j) cell; Y is total value added

Firm Inspection Data: Capital Wedges

- Calculate the average capital wedge as the (capital-weighted) average marginal return to capital (MPK).
- The MPK, \tilde{R}_i , for firm i is given by

$$\tilde{R}_i = (1 - \tau_y) (1 - \alpha) \eta \frac{y_i}{K_i}$$

- The $(1 + \tau_k)$ ratios for types m and M in a (j, p) pair:

$$\frac{1 + \tau_{jpm}^k}{1 + \tau_{jpM}^k} = \frac{\frac{1}{K_{jpm}} \sum_{i \in L(jpm)} y_{ijpm}}{\frac{1}{K_{jpM}} \sum_{i \in L(jpM)} y_{ijpM}} = \frac{\frac{Y_{jpm}}{K_{jpm}}}{\frac{Y_{jpM}}{K_{jpM}}}$$

- The $(1 + \tau_k)$ ratios for the whole economy are:

$$\frac{1 + \tau_m^k}{1 + \tau_M^k} = \sum_j \sum_p \frac{K_{jp}}{K} \frac{1 + \tau_{jpm}^k}{1 + \tau_{jpM}^k}$$

: K_{jp} is capital in a $(j, p,)$ cell; K is total capital

TFP and Wedges, by Firm Type

- Computed relative to the Non-SE firms

Year	TFP		Capital Wedge		Output Wedge	
	1st-SE	2nd-SE	1st-SE	2nd-SE	1st-SE	2nd-SE
2008	1.189	1.128	0.930	0.894	0.995	1.001
2009	1.187	1.126	0.938	0.899	0.993	1.000
2010	1.166	1.122	0.929	0.885	0.994	1.001
2011	1.163	1.101	0.930	0.888	0.995	1.001
2012	1.170	1.122	0.930	0.894	0.993	1.000

- : Use the Firm Inspection Data, 2008-2012
- : The 1st SE firm has a higher TFP than the Non-SE firm
- : The 2nd SE firm has a lower TFP than the 1st SE firm

Implication 1: TFP and Size of 1st SE Firm

- Entrepreneurs who operate a firm in 1st period accumulate equity through retained profits. Profits are increasing (linearly) in TFP z_1 .
- Since $z^*(e)$ is falling in e , rich entrepreneurs are more likely to start firms in second period. This effect is stronger the larger is z_1 .
- Among those who started a firm in the first period, those who start also a firm in 2nd period are *positively selected* in terms of TFP, while those who do not start in 2nd period are *negatively selected*.
- **Implication 1: First firm of serial entrepreneurs has larger TFP than non-serial firms and more capital than non-serial firms.**

Implication 2: 1st versus 2nd SE Firm

- Note that the investment k^* is increasing in e while the cutoff z^* is falling in e . This is a force for larger size and lower TFP of the second SE firm.
- **Implication 2: second firm of serial entrepreneurs has more capital and lower TFP than the SE's first firm**

Implication 3: TFP and Capital of 2nd SE Firm vs. non-SE Firm

- Selection for TFP of the second firm of SE is influenced by two opposing forces:
 1. Since high equity lowers z^* , the second SE firm will be negatively selected (in terms of TFP) relative to the first SE firm
 2. A large ρ contributes to a smaller difference in TFP between first and second SE firm. This increases TFP of second SE firm
- If ρ is sufficiently high, then the second effect dominates
- **Implication 3: If ρ is sufficiently high then second firm of serial entrepreneurs has more capital and higher TFP than non-serial firms.**

Implication 4: Increasing Role of SE over Time

- Over time, the share of SE firms will increase. This is driven by two forces:
 1. More entrepreneurs will have had time to start a second firm (given that no potential entrepreneurs had an existing firm when entering period 1)
 2. Existing entrepreneurs accumulate more equity over time. This increases the probability they will start firms
- **Implication 4: The share of firms operated by serial entrepreneurs increases over time**

Industrial Distribution of Entrants, 2010, Non-SE and SE

Industry	2010					
	Unconditional share			Conditional share		
	Non-SE	1st-SE	2nd-SE	Non-SE	1st-SE	2nd-SE
Agriculture	3.35	2.62	2.54	1.42	1.11	1.08
Mining	0.33	0.43	0.54	0.48	0.63	0.78
Manufacturing	18.49	15.86	18.41	0.73	0.63	0.73
Power	0.18	0.18	0.33	0.39	0.40	0.73
Construction	5.86	5.48	4.86	1.12	1.05	0.93
Wholesale&Retail	39.16	38.23	34.45	1.15	1.12	1.01
Transportation	2.70	2.62	2.32	1.02	0.99	0.87
Accommodation	1.11	1.23	1.67	0.77	0.85	1.16
IT	3.35	3.38	2.89	0.94	0.95	0.81
Finance	0.30	0.54	0.95	1.00	1.79	3.13
Real Estate	3.00	4.21	5.80	0.97	1.37	1.88
Enterprise&Business Service	11.01	13.42	13.60	1.13	1.38	1.40
R&D&Tech Service	6.38	7.32	7.51	1.07	1.23	1.26
Resident service	2.82	2.42	1.97	0.97	0.83	0.68
Entertainment	1.38	1.45	1.48	0.94	0.98	1.00

- Unconditional share: distribution of entrants over industries
- Conditional share: distribution of entrants **relative to the current distribution** of firms over industries

Sectoral and Geographical Migration

2-digit Sector	Different Sector	Same Sector	Different Sector (%)	Same Sector (%)	Total(%) Total(%)
Different Province	471,871	148,996	13.24	4.18	17.41
Same Province	2,027,427	916,890	56.87	25.72	82.59
Total(%)			70.10	29.90	100.00
<hr/>					
3-digit Sector					
Different Province	549,999	70,868	15.43	1.99	17.41
Same Province	2,373,679	570,638	66.58	16.01	82.59
Total(%)			82.01	17.99	100.00
<hr/>					
3-digit Sector					
Different Prefecture	836,280	114,187	23.46	3.20	26.66
Same Prefecture	2,087,398	527,319	58.55	14.79	73.34
Total(%)			82.01	17.99	100.00

- **Sectoral** and **geographical** location of the **second firm of SE**
 - : more likely to be in the same province (and prefecture)
 - : more likely to be in a different 2-digit (and 3-digit) sector

Sectoral and Geographical Migration, Local and Non-Local SE

First firm in birth place	Total	3-digit	Different Sector (%)	Same Sector (%)	Total(%)
No	1,667,324	Different Prefecture (%)	34.48	4.97	39.44
		Same Prefecture (%)	45.39	15.17	60.56
		Total (%)	79.87	20.13	
Yes	1,893,096	Different Prefecture (%)	13.81	1.66	15.47
		Same Prefecture (%)	70.29	14.25	84.53
		Total (%)	84.10	15.90	

- Separate SE into
 - : **local** – first firm started in home prefecture (of birth)
 - : **non-local** – first firm not started in home prefecture (of birth)
- Local SE more likely to start 2nd firm in their home prefecture (of birth)
- Local and non-local SE equally likely to start 2nd firm in a different 3-digit industry

Determinants of SE Second Firm: Diversification of Risk

- Consider a simple portfolio model
- Assume that entrepreneurs have linear quadratic preferences:

$$a[E(r_p)] - b[\text{Var}(r_p)],$$

where r_p is the portfolio return

- Assume there exist entrepreneurs that operate only one firm
 - : the value of operating in sector i is $V_i = aE(r_i) - b\text{Var}(r_i)$,
 - : r_i is the rate of return in sector i
- Assume free entry across sectors and some single entrepreneurs in all sectors i and j , then
 - : $V_i = V_j$.

Determinants of SE Second Firm: Diversification of Risk

- Consider entrepreneur with 1st firm in sector i , looking to establish (concurrently) a 2nd firm in sector $j \in J = \{1, 2, \dots\}$:

$$\max_{j \in J} a[E(r_i) + E(r_j)] - b[\text{Var}(r_i) + \text{Var}(r_j) + 2\text{Cov}(r_i, r_j)]$$

- Since $V_i = V_j$ for all i, j , the objective function becomes

$$\min_{j \in J} [\text{Cov}(r_i, r_j)]$$

: **entrepreneur chooses sector j with the lowest $\text{Cov}(r_i, r_j)$**

- Measurement

: construct a measure of return on capital in sector i in period t as:

$$r_{i,t} = \frac{\text{profits}_{i,t}}{\text{assets}_{i,t}}$$

- use the Inspection Data over the 2010-2012 period across industries to compute a **covariance index**

Determinants of SE Second Firm: Downstream and Upstream Integration

Take a SE with **1st firm in industry i** and **2nd firm in industry j** (Fan & Lang, 2000)

- **Upstream index:** dollar value of industry j 's output required to produce 1 dollar's worth of industry i 's output
- **Downstream index:** dollar value of industry i 's output required to produce 1 dollar's worth of industry j 's output
- **Output complementarity index:** correlation coefficient between b_{ik} and b_{jk}
 - : b_{ik} (b_{jk}) is the percentage of industry i (j) output supplied to each intermediate industry k
 - : captures the degree to which industries i and j share outputs
- **Input complementarity index:** correlation coefficient between v_{ik} and v_{jk}
 - : v_{ik} (v_{jk}) is the percentage of inputs from each intermediate industry k used in industry i (j) output
 - : captures the degree to which industries i and j share inputs
- Use the 2007 Chinese Input-Output table to compute these indices

Determinants of SE Second Firm: Probability of 2nd Firm in Industry j

Computing an **excess probability** measure

- Consider SE with 1st firm in industry i and 2nd firm in industry j
- Calculate the percentage of SE that move from i to j each year
: number of SE from i to j divided by total SE in industry i
- Normalize by the share of industry j in total incumbents last year

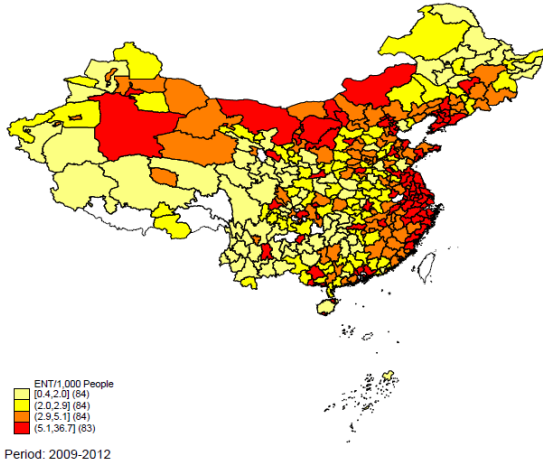
Sectoral Choice and Business Linkages

Dependent variable:	(1)	(2)	(3) excess probability	(4)	(5)
Downstream Integrated	1.038***				0.787***
Upstream Integrated		0.748***			0.511***
Input/Output complementarity			1.520***		1.257***
Covariance				-0.048	-0.074*
Constant	1.140***	1.132***	1.168***	1.112***	1.191***
Observations	316,008	316,008	316,008	316,008	316,008
1st Sector FE	Yes	Yes	Yes	Yes	Yes
Transfer Date FE	Yes	Yes	Yes	Yes	Yes

Note: *** – statistically significant at 1%; ** – at 5%; * – at 10%.

- Probability of starting the second firm in industry j is higher if j is
 - : downstream integrated with i
 - : upstream integrated with i
 - : output complementary with i (similar results with input complementarity)
 - : returns covary negatively with i

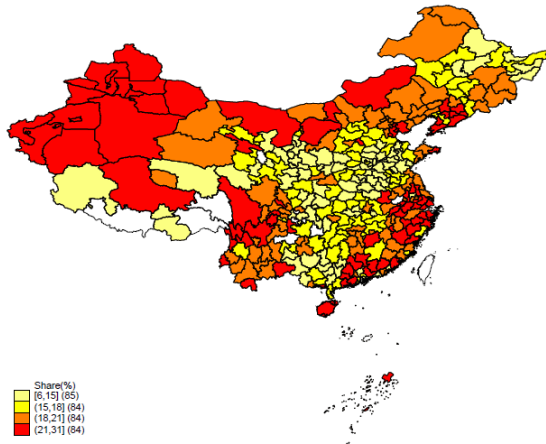
Entrepreneurial Entry, by Prefecture 2009-2012



- **Entrepreneurial entry:** new firms established per 1,000 working-age individuals

[1996-99, 2005-08]

Fraction of Serial Entrepreneurs, by Prefecture 2009-2012

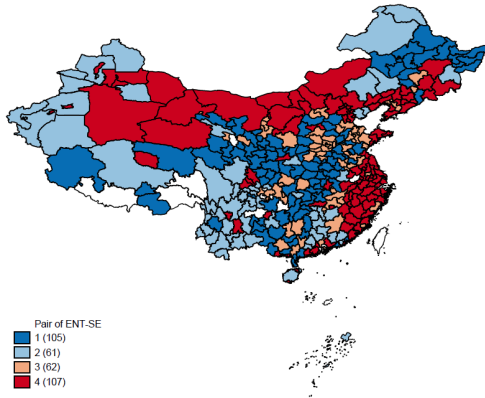


Period: 2009-2012

- **Fraction of SE:** SE as a share of all entrepreneurs

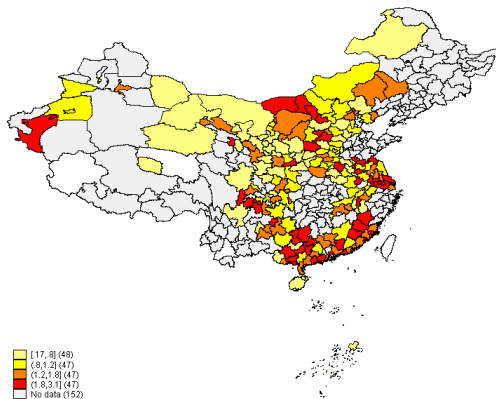
[1996-99, 2005-08]

Entrepreneurship and Serial Entrepreneurs 2009-2012



Period: 2009-2012
Group 1: Low Ent, Low SE
Group 2: Low Ent, High SE
Group 3: High Ent, Low SE
Group 4: High Ent, High SE

TFP of 2nd SE vs. Non-SE, by Prefecture



- **TFP of 2nd SE vs. Non-SE:** TFP ratio btw 2nd-SE and Non-SE firms in 2011

Entrepreneurship and Wedges: Number of New Firms per Capita

	1995	2004	2008
Output Wedge	1.45***	6.89***	2.36***
Capital Wedge	-3.51***	-12.37***	-3.43***
Entry Barrier	-0.23***	-0.75***	-0.29***
Constant	1.70***	5.48***	3.18***
Observations	319	319	319

Note: *** – statistically significant at 1%; ** – at 5%; * – at 10%.

- Entry barrier from Brandt, Kambourov, and Storesletten (2018)
- Higher capital and entry barriers lead to less entrepreneurial entry

Serial Entrepreneurs and Wedges: Probability of Firm Starts

	1995	2004	2008
Output Wedge	0.12***	0.19***	0.06
Capital Wedge	-0.41***	-0.41***	-0.15**
Entry Barrier	-0.012***	-0.013***	-0.008***
Constant	0.18***	0.18***	0.18***
Observations	565,093	2,520,340	3,967,990

Note: *** – statistically significant at 1%; ** – at 5%; * – at 10%.

- Entry barrier from Brandt, Kambourov, and Storesletten (2018)
- Higher capital and entry barriers lead to less serial entrepreneurship

Serial Entrepreneurship and Political Connections

- The effect of wedges on the fraction of SE that are CCP members
- A larger share of CCP members in prefectures with higher capital taxes and higher entry barriers

	1995	2004	2008
Output Wedge	0.000	-0.021	-0.050**
Capital Wedge	-0.099	0.152**	0.090*
Entry Barrier	0.004***	0.004***	0.004***
Constant	0.024***	-0.007	0.011*
Observations	145	167	163

Note: *** – statistically significant at 1%; ** – at 5%; * – at 10%. Entry barrier from Brandt, Kambourov, and Storesletten (2018).

Conclusion and Next Steps

- Develop a dynamic model of entrepreneurship that allows for entry and exit and for firms to be ran sequentially or concurrently
- Incorporate role of initial endowments
- Incorporate geographical and sectoral choices for 2nd SE firms
- Allow for regional heterogeneity in frictions and barriers, which is likely important for “selection” into entrepreneurship and serial entrepreneurship
- Flesh out role of connections and local networks

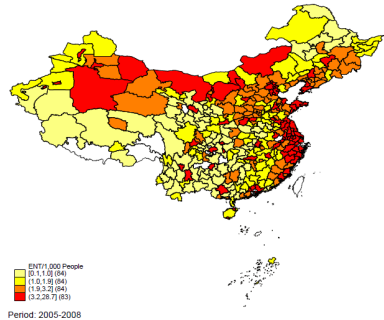
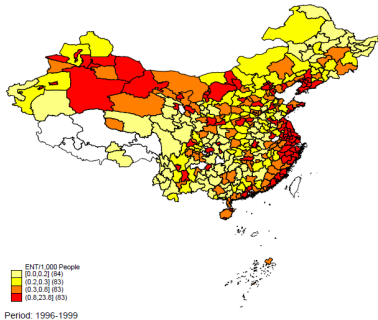
Additional Slides

Industrial Distribution of Entrants, 2005, Non-SE and SE

Industry	2005					
	Unconditional share			Conditional share		
	Non-SE	1st-SE	2nd-SE	Non-SE	1st-SE	2nd-SE
Agriculture	2.32	2.09	2.05	1.31	1.18	1.16
Mining	0.77	0.94	0.99	1.08	1.31	1.38
Manufacturing	23.04	20.88	22.83	0.77	0.70	0.76
Power	0.41	0.36	0.54	0.84	0.74	1.10
Construction	5.48	5.46	4.87	1.17	1.16	1.04
Wholesale&Retail	34.40	34.05	31.33	1.00	0.98	0.91
Transportation	3.07	3.18	2.93	1.43	1.49	1.37
Accommodation	1.43	1.49	2.17	0.89	0.92	1.34
IT	3.79	3.62	3.17	1.17	1.12	0.98
Finance	0.19	0.27	0.41	0.94	1.32	2.02
Real Estate	2.26	3.08	4.17	0.82	1.13	1.52
Enterprise&Business Service	10.70	12.14	12.24	1.38	1.57	1.58
R&D&Tech Service	6.18	6.90	6.90	1.20	1.34	1.34
Resident service	3.41	2.99	2.73	1.17	1.03	0.94
Entertainment	1.64	1.62	1.66	1.36	1.34	1.37

- Unconditional share: distribution of entrants over industries
- Conditional share: distribution of entrants **relative to the current distribution** of firms over industries

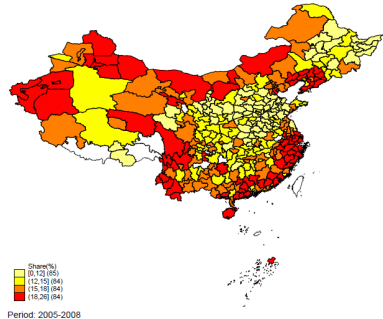
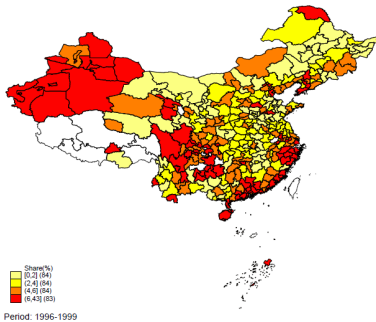
Entrepreneurial Entry, by Prefecture, 1996-1999, 2005-2008



- **Entrepreneurial entry:** new firms established per 1,000 working-age individuals

[Back]

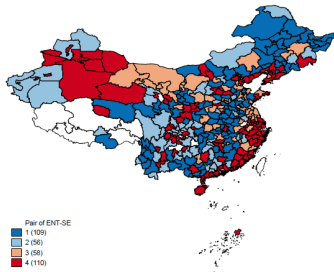
Fraction of Serial Entrepreneurs, by Prefecture 1996-1999, 2005-2008



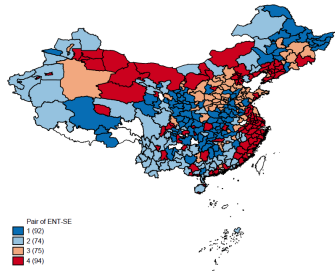
- **Fraction of SE:** SE as a share of all entrepreneurs

[\[Back\]](#)

Entrepreneurship and Serial Entrepreneurs 1996-1999 and 2009-2012



Period: 1996-1999
Group 1: Low Ent, Low SE
Group 2: Low Ent, High SE
Group 3: High Ent, Low SE
Group 4: High Ent, High SE



Period: 2005-2008
Group 1: Low Ent, Low SE
Group 2: Low Ent, High SE
Group 3: High Ent, Low SE
Group 4: High Ent, High SE

[\[Back\]](#)