Discussion of Entrepreneurship, Financial Frictions, and the Market for Firms by Rafael Guntin and Federico Kochen (NYU)

Min Fang University of Rochester August 17, 2020 @ Young Economist Symposium 2020 (UPenn)

1. Empirical Evidence on the Existence/Trend of Market for Firms

- \sim 20% of entrepreneurs acquired their business by purchasing an existing firm
- >60% of firm buyers have never been entrepreneurs before current purchasing
- ~10% declining of the Market for Firms from 1989 to 2016
- firms being traded are small, young, and higher APK

1. Empirical Evidence on the Existence/Trend of Market for Firms

- ~20% of entrepreneurs acquired their business by purchasing an existing firm
- >60% of firm buyers have never been entrepreneurs before current purchasing
- ~10% declining of the Market for Firms from 1989 to 2016
- firms being traded are small, young, and higher APK

2.A GE Model of Entrepreneurship, Financial Fraction, and Trade of Firms

- Gain from Trade through easing the financial constraints of productive firms
- Closing this market creates 6% entrepreneurs' output loss
- Easing credit condition explains the declining of the Market for Firms from 1989 to 2016

1. Empirical Evidence on the Existence/Trend of Market for Firms

- ~20% of entrepreneurs acquired their business by purchasing an existing firm
- >60% of firm buyers have never been entrepreneurs before current purchasing
- ~10% declining of the Market for Firms from 1989 to 2016
- firms being traded are small, young, and higher APK

2.A GE Model of Entrepreneurship, Financial Fraction, and Trade of Firms

- Gain from Trade through easing the financial constraints of productive firms
- Closing this market creates 6% entrepreneurs' output loss
- Easing credit condition explains the declining of the Market for Firms from 1989 to 2016

A very interesting paper & the Market for Firms is an interesting market to look at!

What are the key ingredients of the market for firms? (credit channel)

• Item for Trade: productivity \tilde{z} of a DRS production unit (the optimal scale $k^*(\tilde{z})$)

What are the key ingredients of the market for firms? (credit channel)

- Item for Trade: productivity \tilde{z} of a DRS production unit (the optimal scale $k^*(\tilde{z})$)
- Seller: entrepreneurs whose asset is low: $\tilde{k} = \lambda \tilde{a} < k^*(\tilde{z})$

What are the key ingredients of the market for firms? (credit channel)

- Item for Trade: productivity \tilde{z} of a DRS production unit (the optimal scale $k^*(\tilde{z})$)
- Seller: entrepreneurs whose asset is low: $\tilde{k} = \lambda \tilde{a} < k^*(\tilde{z})$
- Buyers: entrepreneurs whose $z < \tilde{z} \& a > \tilde{a} |$ workers whose $a > \tilde{a} \& \varepsilon$ is low

What are the key ingredients of the market for firms? (credit channel)

- Item for Trade: productivity \tilde{z} of a DRS production unit (the optimal scale $k^*(\tilde{z})$)
- Seller: entrepreneurs whose asset is low: $\tilde{k} = \lambda \tilde{a} < k^*(\tilde{z})$
- Buyers: entrepreneurs whose $z < \tilde{z} \& a > \tilde{a} \mid$ workers whose $a > \tilde{a} \& \varepsilon$ is low

What's happening on the market for firms?

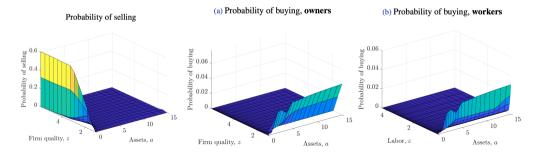
• The very "poor" & "productive" owners selling to the "rich" & "unproductive" buyers

What are the key ingredients of the market for firms? (credit channel)

- Item for Trade: productivity \tilde{z} of a DRS production unit (the optimal scale $k^*(\tilde{z})$)
- Seller: entrepreneurs whose asset is low: $\tilde{k} = \lambda \tilde{a} < k^*(\tilde{z})$
- Buyers: entrepreneurs whose $z < \tilde{z} \& a > \tilde{a} \mid$ workers whose $a > \tilde{a} \& \varepsilon$ is low

What's happening on the market for firms?

• The very "poor" & "productive" owners selling to the "rich" & "unproductive" buyers



- How does this Market help for Resource Allocation?
- What does this Market mean for Firm Dynamics?
- Minor Comments

Modern economics is all about resource allocation:

 $Y = A K^{\alpha} L^{\eta},$

Three markets are very well-studied:

- Market for K: Lumpy Inv. / Used-Capital Trade / Inv. Hubs / ...
- Market for L: Labor Search & Match / Implicit Contract / ...
- Market for A: R&D Inputs / Patent & Idea Trade / ...

Modern economics is all about resource allocation:

 $Y = A K^{\alpha} L^{\eta},$

Three markets are very well-studied:

- Market for K: Lumpy Inv. / Used-Capital Trade / Inv. Hubs / ...
- Market for L: Labor Search & Match / Implicit Contract / ...
- Market for A: R&D Inputs / Patent & Idea Trade / ...

What is similar? (Gain and FFs)

- Gain from Trade through allocating resources to more productive firms
- Financial Friction is usually one of the non-negligible frictions

What is different? (Other Forms of Fractions)

- mergers and acquisitions literature (Finance) shows that "firm-shopping" is super complex:
 - information frictions on *z*;
 - management issues;
 - reallocation of all factors *A*, *K*, *L*;
 - ...

What is different? (Other Forms of Fractions)

- mergers and acquisitions literature (Finance) shows that "firm-shopping" is super complex:
 - information frictions on *z*;
 - management issues;
 - reallocation of all factors *A*, *K*, *L*;
 - ...
- mergers and acquisitions literature (IO) shows similar complexity:
 - information frictions on *z*;
 - product differentiation;
 - strategic integration;
 - ...

• the model/mechanism is neat, easier to solve just like the Market for Ideas

- the model/mechanism is neat, easier to solve just like the Market for Ideas
- (The abstraction maybe too strong that is hard to discuss other patterns/forces)

- the model/mechanism is neat, easier to solve just like the Market for Ideas
- (The abstraction maybe too strong that is hard to discuss other patterns/forces)

Financial Fractions vs Other Fractions

• Empirically, indirect evidence of financial fraction: age, size, & APK (I also believe in FFs. But it would be better to observe more direct evidence: i.e., debt)

- the model/mechanism is neat, easier to solve just like the Market for Ideas
- (The abstraction maybe too strong that is hard to discuss other patterns/forces)

Financial Fractions vs Other Fractions

- Empirically, indirect evidence of financial fraction: age, size, & APK (I also believe in FFs. But it would be better to observe more direct evidence: i.e., debt)
- Theoretically, other fractions on the M&A markets also apply here: i.e., inspection costs on *z*, reallocation costs of factors, firm-specific capital adjust costs, ...

- the model/mechanism is neat, easier to solve just like the Market for Ideas
- (The abstraction maybe too strong that is hard to discuss other patterns/forces)

Financial Fractions vs Other Fractions

- Empirically, indirect evidence of financial fraction: age, size, & APK (I also believe in FFs. But it would be better to observe more direct evidence: i.e., debt)
- Theoretically, other fractions on the M&A markets also apply here: i.e., inspection costs on *z*, reallocation costs of factors, firm-specific capital adjust costs, ... (These other fractions hold back *Trade*. I am very interested to see the fights.)

- the model/mechanism is neat, easier to solve just like the Market for Ideas
- (The abstraction maybe too strong that is hard to discuss other patterns/forces)

Financial Fractions vs Other Fractions

- Empirically, indirect evidence of financial fraction: age, size, & APK (I also believe in FFs. But it would be better to observe more direct evidence: i.e., debt)
- Theoretically, other fractions on the M&A markets also apply here: i.e., inspection costs on *z*, reallocation costs of factors, firm-specific capital adjust costs, ... (These other fractions hold back *Trade*. I am very interested to see the fights.) (If FF is not large enough to overcome these fractions, what other motivations are so strong?)

An earlier stage market compare to M&As literature

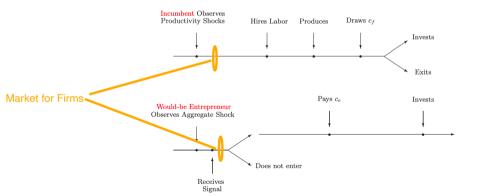
- This Market: 60% buyers are workers + Most units are traded at age 0
- M&As literature usually focus on the M&As of relative mature firms into Public Firms

Firm Dynamics: What stage does the Market for Firms fit in?

An earlier stage market compare to M&As literature

- This Market: 60% buyers are workers + Most units are traded at age 0
- M&As literature usually focus on the M&As of relative mature firms into Public Firms

When does this Market enter in Firm Dynamic literature such as Clementi-Palazzo (2016)?



The aggregate application of *Market for Firms* in GK

	Baseline economy	Partial $(\alpha_o, \alpha_w)/2$	Complete $(\alpha_o, \alpha_w) = 0$
Fract. firms purchased	0.19	0.11	0.00
Fract. firms purchased by workers	0.64	0.65	-
Fract. entrepreneurs	0.09	0.08	0.08
Δ Output		-0.1%	-0.2%
Δ Output, public		2.0%	4.9%
Δ Output, entrepreneurial		-2.5%	-5.9%
Δ TFP, entrepreneurial		-0.6%	-1.5%

Does it mean this market is negligible at aggregate level?

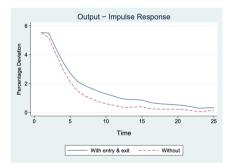
The aggregate application of *Market for Firms* in GK

	Baseline economy	$ ext{Partial} \ (lpha_o, lpha_w)/2$	$\begin{array}{l} \text{Complete} \\ (\alpha_o, \alpha_w) = 0 \end{array}$
Fract. firms purchased	0.19	0.11	0.00
Fract. firms purchased by workers	0.64	0.65	-
Fract. entrepreneurs	0.09	0.08	0.08
Δ Output		-0.1%	-0.2%
Δ Output, public		2.0%	4.9%
Δ Output, entrepreneurial		-2.5%	-5.9%
Δ TFP, entrepreneurial		-0.6%	-1.5%

Does it mean this market is negligible at aggregate level? Maybe Not.

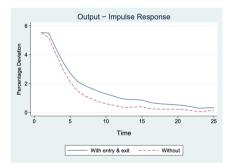
Entry&Exit plays an essential role in Clementi-Palazzo (2016).

Entry&Exit plays an essential role in Clementi-Palazzo (2016). Entries are small, but firm growth is important!



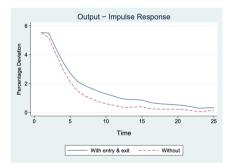
Market for Firms could play an essential role for more efficient Entry&Exit allocation.

Entry&Exit plays an essential role in Clementi-Palazzo (2016). Entries are small, but firm growth is important!



Market for Firms could play an essential role for more efficient Entry&Exit allocation. (It's interesting to see how this *Market* help to select/"rescue" productive startups.)

Entry&Exit plays an essential role in Clementi-Palazzo (2016). Entries are small, but firm growth is important!



Market for Firms could play an essential role for more efficient Entry&Exit allocation. (It's interesting to see how this *Market* help to select/"rescue" productive startups.) (And generate decent magnitude in the cumulative dynamics through firm growth.)

• non-borrowing constraint (*a* ≥ 0) seems too strong, if we have earning-based constraint as suggested by Lian-Ma (2020) but as household-level, the *Risk Channel* may just vanish;

- **non-borrowing constraint (***a* ≥ 0**) seems too strong**, if we have earning-based constraint as suggested by Lian-Ma (2020) but as household-level, the *Risk Channel* may just vanish;
- non-conditional law of motion is really hard to capture firm dynamics ($\gamma = 0.925$)

$$z' = \begin{cases} z & \text{with pr. } \gamma \\ z' \sim \mathcal{P}(z_{min}, \eta_z) & \text{with pr. } (1 - \gamma) \end{cases}$$

- **non-borrowing constraint (***a* ≥ 0**) seems too strong**, if we have earning-based constraint as suggested by Lian-Ma (2020) but as household-level, the *Risk Channel* may just vanish;
- non-conditional law of motion is really hard to capture firm dynamics ($\gamma = 0.925$)

$$z' = \begin{cases} z & \text{with pr. } \gamma \\ z' \sim \mathcal{P}(z_{min}, \eta_z) & \text{with pr. } (1 - \gamma) \end{cases}$$

• **solider facts are helpful**: better access to firm balance sheets and more owner info. (i.e., Orbis Ownership Database) could help us to understand the *Market for Firms* better

Guntin-Kochen is a very interesting paper & Market for Firms is an interesting market!

- For Resource Allocation, it helps for better reallocate resources.
- For Firm Dynamics, it may help for more efficient Entry&Exit allocation.

An open avenue for further research

- More empirical findings on how this market works.
- Alternative modeling to account for other fractions and firm dynamics. (of course based on new discovers)
- Aggregate implications of this market for macro fluctuations.