Discussion of "Aggregate Implications of Barriers to Female Entrepreneurship"

Erik Hurst

Fall 2022

Overview

- **Question**: How do barriers to "occupational choice" for women (in this case barriers to “entrepreneurship” and labor force participation) affect aggregate productivity and welfare in India?

- **Answer**: Barriers to entrepreneurship for women reduce overall productivity and welfare. Provides economic rational for removing barriers.

- **Key additional insight**: Removing barriers for women entrepreneurs can dramatically increase the well-being of women who are not entrepreneurs.

- **Very interesting paper!**

Part 1:
Big Picture Overview

Causes of Gender Differences in the Labor Market

- **Discrimination in the labor market**: Conditional on human capital, women are paid less than their marginal product. [Can differ by occupation/sector]
- **Discrimination in human capital**: Women may face explicit barriers to accumulating skills lowering their marginal product in an occupation. [Can differ by occupation.]
- **Different social norms**: Nudge women away from getting human capital in certain occupations or working in certain occupations. [Can differ by occupation.]
- **Different preferences/productivity for working in the home sector**.
- **Different preferences for working in different occupations**. [Differ by occupation.]
- **Different innate endowments**: i.e., Some occupations require more "brawn" and biologically men may be endowed with more brawn. [Can differ by occupation.]

Causes of Gender Differences in the Labor Market

- **Discrimination in the labor market**: Conditional on human capital, women are paid less than their marginal product. [Can differ by occupation/sector]
- **Discrimination in human capital**: Women may face explicit barriers to accumulating skills lowering their marginal product in an occupation. [Can differ by occupation.]
- **Different social norms**: Nudge women away from getting human capital in certain occupations or working in certain occupations. [Can differ by occupation.]
- **Different preferences/productivity for working in the home sector**.
- **Different preferences for working in different occupations**. [Differ by occupation.]
- **Different innate endowments**: i.e., Some occupations require more "brawn" and biologically men may be endowed with more brawn. [Can differ by occupation.]

Causes of Gender Differences in the Labor Market

- **Discrimination in the labor market**: Conditional on human capital, women are paid less than their marginal product. [Can differ by occupation/sector]
- **Discrimination in human capital**: Women may face explicit barriers to accumulating skills lowering their marginal product in an occupation. [Can differ by occupation.]
- **Different social norms**: Nudge women away from getting human capital in certain occupations or working in certain occupations. [Can differ by occupation.]
- **Different preferences/productivity for working in the home sector**.
- **Different preferences for working in different occupations**. [Differ by occupation.]
- **Different innate endowments**: i.e., Some occupations require more "brawn" and biologically men may be endowed with more brawn. [Can differ by occupation.]

Causes of Gender Differences in the Labor Market

- **Discrimination in the labor market**: Conditional on human capital, women are paid less than their marginal product. [Can differ by occupation/sector]
- **Discrimination in human capital**: Women may face explicit barriers to accumulating skills lowering their marginal product in an occupation. [Can differ by occupation.]
- **Different social norms**: Nudge women away from getting human capital in certain occupations or working in certain occupations. [Can differ by occupation.]
- **Different preferences/productivity for working in the home sector**.
- **Different preferences for working in different occupations**. [Differ by occupation.]
- **Different innate endowments**: i.e., Some occupations require more "brawn" and biologically men may be endowed with more brawn. [Can differ by occupation.]

Causes of Gender Differences in the Labor Market

- **Discrimination in the labor market**: Conditional on human capital, women are paid less than their marginal product. [Can differ by occupation/sector]
- **Discrimination in human capital**: Women may face explicit barriers to accumulating skills lowering their marginal product in an occupation. [Can differ by occupation.]
- **Different social norms**: Nudge women away from getting human capital in certain occupations or working in certain occupations. [Can differ by occupation.]
- **Different preferences/productivity for working in the home sector**.
- **Different preferences for working in different occupations**. [Differ by occupation.]
- **Different innate endowments**: i.e., Some occupations require more "brawn" and biologically men may be endowed with more brawn. [Can differ by occupation.]

Causes of Gender Differences in the Labor Market

- **Discrimination in the labor market**: Conditional on human capital, women are paid less than their marginal product. [Can differ by occupation/sector]
- **Discrimination in human capital**: Women may face explicit barriers to accumulating skills lowering their marginal product in an occupation. [Can differ by occupation.]
- **Different social norms**: Nudge women away from getting human capital in certain occupations or working in certain occupations. [Can differ by occupation.]
- **Different preferences/productivity for working in the home sector**.
- **Different preferences for working in different occupations**. [Differ by occupation.]
- **Different innate endowments**: i.e., Some occupations require more "brawn" and biologically men may be endowed with more brawn. [Can differ by occupation.]

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 1

- Suppose women *prefer* not to work in occupation j. [i.e., work of Claudia Goldin on preferences for hours flexibility, etc.]
- All else equal, there will be less women working in occupation j.
- If we have policies that force women into occupation j, that would be welfare reducing (all else equal).
- If we subsidize women moving into occupation j, the welfare effects may be mixed.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 1

- Suppose women *prefer* not to work in occupation *j*. [i.e., work of Claudia Goldin on preferences for hours flexibility, etc.]
- All else equal, there will be less women working in occupation *j*.
- If we have policies that force women into occupation *j*, that would be welfare reducing (all else equal).
- If we subsidize women moving into occupation *j*, the welfare effects may be mixed.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 1

- Suppose women *prefer* not to work in occupation *j*. [i.e., work of Claudia Goldin on preferences for hours flexibility, etc.]
- *All else equal, there will be less women working in occupation j.*
- If we have policies that force women into occupation *j*, that would be welfare reducing (all else equal).
- If we subsidize women moving into occupation *j*, the welfare effects may be mixed.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 1

- Suppose women *prefer* not to work in occupation *j*. [i.e., work of Claudia Goldin on preferences for hours flexibility, etc.]

- *All else equal, there will be less women working in occupation j.*

- If we have policies that force women into occupation *j*, that would be welfare reducing (all else equal).

- If we subsidize women moving into occupation *j*, the welfare effects may be mixed.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 2

- Suppose women *face discrimination* in occupation *j* labor market. [i.e., Beckerian discrimination where firms may get less profits but more utility from discrimination]
- All else equal, there will be less women working in occupation *j*.
- If we have policies that force women into occupation *j*, there could be large welfare gains if talented women are excluded from the occupation.
- If we subsidize women moving into occupation *j*, welfare gains could also be large.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 2

- Suppose women *face discrimination* in occupation *j* labor market. [i.e., Beckerian discrimination where firms may get less profits but more utility from discrimination]
- *All else equal, there will be less women working in occupation j.*
- If we have policies that force women into occupation *j*, there could be large welfare gains if talented women are excluded from the occupation.
- If we subsidize women moving into occupation *j*, welfare gains could also be large.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 2

- Suppose women *face discrimination* in occupation *j* labor market. [i.e., Beckerian discrimination where firms may get less profits but more utility from discrimination]

- *All else equal, there will be less women working in occupation j.*

- If we have policies that force women into occupation *j*, there could be large welfare gains if talented women are excluded from the occupation.

- If we subsidize women moving into occupation *j*, welfare gains could also be large.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 3

- Suppose women *face barriers* to accumulating human capital associated with the skills required in occupation *j*. [Women will then have *lower productivity* in occupation *j*]
- All else equal, there will be less women working in occupation *j*.
- If we have policies that force/subsidize women into occupation *j*, there could be a reduction in welfare/utility. Women may not have the human capital required in these occupations.
- Policy response should be to reduce the barriers to human capital accumulation in *j*.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 3

- Suppose women *face barriers* to accumulating human capital associated with the skills required in occupation *j*. [Women will then have *lower productivity* in occupation *j*]
- *All else equal, there will be less women working in occupation j.*
- If we have policies that force/subsidize women into occupation *j*, there could be a reduction in welfare/utility. Women may not have the human capital required in these occupations.
- Policy response should be to reduce the barriers to human capital accumulation in *j*.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is important for conducting various policy counterfactuals and computing welfare analysis.

Example 3

- Suppose women *face barriers* to accumulating human capital associated with the skills required in occupation *j*. [Women will then have *lower productivity* in occupation *j*]

- *All else equal, there will be less women working in occupation j.*

- If we have policies that force/subsidize women into occupation *j*, there could be a reduction in welfare/utility. Women may not have the human capital required in these occupations.

- Policy response should be to reduce the barriers to human capital accumulation in *j*.

Preferences vs. Productivity vs. Discrimination

- Distinguishing between *preferences*, *productivity*, and *discrimination* is hard.
- All three forces can lead to women being underrepresented in occupation *j*.
- However, the covariance between *occupational wage gaps* and o*ccupational quantity gaps* may be useful in distinguishing between preferences and productivity/ discrimination (given some assumptions).
- Hsieh, Hurst, Klenow, and Jones (HHKJ) show that with some assumptions, discrimination in labor market for occupation *j* can lead women to be underrepresented in occupation *j* but have the *same wage gap* in *j* (relative to other occupations).
- HHKJ show that with some assumptions, preference gaps in occupation *j* can lead women to be underrepresented in occupation *j* but have a *smaller wage gap* in *j*.

Part 2:
Gender Differences in this Paper

Individual Decisions

- *Individuals choose*:
  - Whether or not to work.
  - If work, then choose whether to be an "worker" or "entrepreneur".
  - If an "entrepreneur", then choose whether to own business in the informal or formal sector.
  - If an "entrepreneur" in a sector, also choose industry for business.

- Sectors (informal vs. formal) differ in their cost of starting a business, their tax liability, and their scalability.

- Industries ("occupations"?) in the quantitative model are manufacturing, agriculture, and services.

Individual Heterogeneity

- *What defines an individual?*
  - Their gender (g)
  - Their entrepreneurial productivity (x) – drawn from a known distribution
  - Their disutility of working (η) – drawn from a known distribution
  - Their (relative) industry specific entrepreneurial productivity (ε) – drawn from a Frechet distribution.

- The first three are known when the individual makes their choice to stay at home, whether to work as a wage worker, or whether to become an entrepreneur in the informal or formal sectors.

- After the above decisions, entrepreneurs draw their industry specific entrepreneurial productivity and start business in a given industry.

What Differs Between Men and Women?

- *Potential Preference Differences*
  - Differential preferences for the *home sector*.
- *Potential Discrimination/Social Norm Differences for Entrepreneurs*
  - Differential costs of hiring workers in the informal and formal sectors.
  - Differential fixed costs of starting a business in both informal and formal sectors.
- *Potential Productivity Differences*
  - Women and men workers (not entrepreneurs) can differ exogenously in their *average productivity* in each sector/industry.
  - Differential *shape* of the Frechet distributions from which industry productivities (for entrepreneurs) are drawn. [Impose same means; *empirically estimate shapes to be the same*]

What Differs Between Men and Women?

- *Potential Preference Differences*
  - Differential preferences for the *home sector*.
- *Potential Discrimination/Social Norm Differences for Entrepreneurs*
  - Differential costs of hiring workers in the informal and formal sectors.
  - Differential fixed costs of starting a business in both informal and formal sectors.
- *Potential Productivity Differences*
  - Women and men workers (not entrepreneurs) can differ exogenously in their *average productivity* in each sector/industry.
  - Differential *shape* of the Frechet distributions from which industry productivities (for entrepreneurs) are drawn. [Impose same means; *empirically estimate shapes to be the same*]

What is the Same Between Men and Women?

- Men and women have the same average latent productivity in entrepreneurship (both in mean and variance) across all sectors
  - Rules out potential human capital differences between men and women that can translate into entrepreneurship productivity.
  - If there are differences in human capital, counterfactuals would have to account for the costs of increasing human capital.

- Men and women have the same preferences for entrepreneurship.
  - Rules out that women may prefer flexibility or having higher risk aversion (with self employment offering less flexibility and more risk).

- Men and women have the same preferences for the formal vs. informal sector and the same preferences for being an entrepreneur/worker in various industries.

Some Data From India (2005)

Firm Type	Share of Firms	Firm Size	Fraction Female Emp
Informal, Male Owned	**91.9%**	3.0	21%
Informal, Female Owned	**7.2%**	2.8	58%
Formal, Male Owned	**0.8%**	67.7	25%
Formal, Female Owned	**0.04%**	76.6	48%

Some Data From India (2005)

Firm Type	Share of Firms	Firm Size	Fraction Female Emp
Informal, Male Owned	91.9%	**3.0**	**21%**
Informal, Female Owned	7.2%	**2.8**	**58%**
Formal, Male Owned	0.8%	**67.7**	**25%**
Formal, Female Owned	0.04%	**76.6**	**48%**

Some Data From India (2005)

Firm Type	Share of Firms	Firm Size	Fraction Female Emp
Informal, Male Owned	91.9%	3.0	21%
Informal, Female Owned	7.2%	2.8	58%
Formal, Male Owned	0.8%	67.7	25%
Formal, Female Owned	0.04%	76.6	48%

- **As point of reference, 36% of non-incorporated businesses are owned by women and 28% of incorporated businesses are owned by women in US in 2018.**

Identification of Gender Specific Frictions: Part 1

- *Different number of women business owners (relative to men) in informal and formal sectors* [Helps pin down differential entry costs for women vs. men]

Note 1: The gender difference in the number of "entrepreneurs" in the formal and informal sectors are loaded onto the gender difference in start up costs (all else equal).

Note 2: Does not allow for gender differences in preferences or human capital associated with entrepreneurship.

Note 3: The gender gap in start up costs is a key friction in the model (in 2005, women faced entry costs into the formal sector that were 55% higher then men).

Identification of Gender Specific Frictions: Part 2

- Ratio of avg firm size of female owned vs male owned firms [Helps pin down gender specific hiring barriers]

- Share of female workers in female owned firms (as compared to male owned firms) [Helps pin down gender specific hiring costs for women (vs male) employees]

Note 1: All firm sizes differences by gender loaded onto differential hiring costs.

Note 2: Does not allow for gender differences in preferences for business size.

Note 3: Estimated differential hiring costs for women are large (particularly in the formal sector)

Identification of Gender Specific Frictions: Part 3

- *Differential labor force participation rates between men and women* [Helps pin down preferences for home sector between men and women]

Note 1: This is similar to what we did in HHJK

Note 2: Allows model to match exactly labor force participation rates between men and women. (Women's utility from the home sector in 2005 is 2.5 times higher than men).

Part 3:
A Few Quick Comments to Guide Discussion

Comment 1

- *Would be nice to allow for other potential mechanisms to explain gender differences in business formation:*
  - Preference differences?
  - Human capital differences?
- Is there additional data that can be brought in to help discipline other forces?
  - Wage/earnings data can help (with some structure) – See HHJK
  - Does data on hours worked exist?
  - What about data on schooling/major choice?
- Distinguishing between *barriers*, *preferences*, or *productivity* is essential for interpreting the counterfactuals. It is nice to show wedges are correlated with indices of women empowerment, but that that doesn't distinguish source of wedge.

Comment 2

- I found the data work on women entrepreneurs being more likely to hire women workers super interesting!

- *I would have liked more descriptive work on this in the paper*.
  - There is one regression showing that these patterns hold controlling for industry fixed effects.
  - I would have liked to see some of the underlying micro data by industry.
  - We know women are more likely to work in some industries/occupations than others (across the world).
  - Flushing out these facts can be a lasting contribution of the paper.

Comment 3

- *How should we think about barriers to formality more broadly?*

- Most men start businesses in the informal sector.

- How much would welfare increase if the barriers to formality were removed for men (and women)?

- Through the lens of the model, I would conjecture those gains would be larger than gains from only removing gender-specific barriers.

Part 4:
Concluding Thoughts

Concluding Thoughts

- Super interesting paper on a very important topic!
- There are many potential causes of gender differences in business start up rates within a country.
- Focusing on additional costs needed to be paid by women business owners is a good place to start
- But, there may be gains to also thinking about human capital differences or differences in preferences.