

Final report

Community origins of industrial entrepreneurship

Theory and historical
evidence from India

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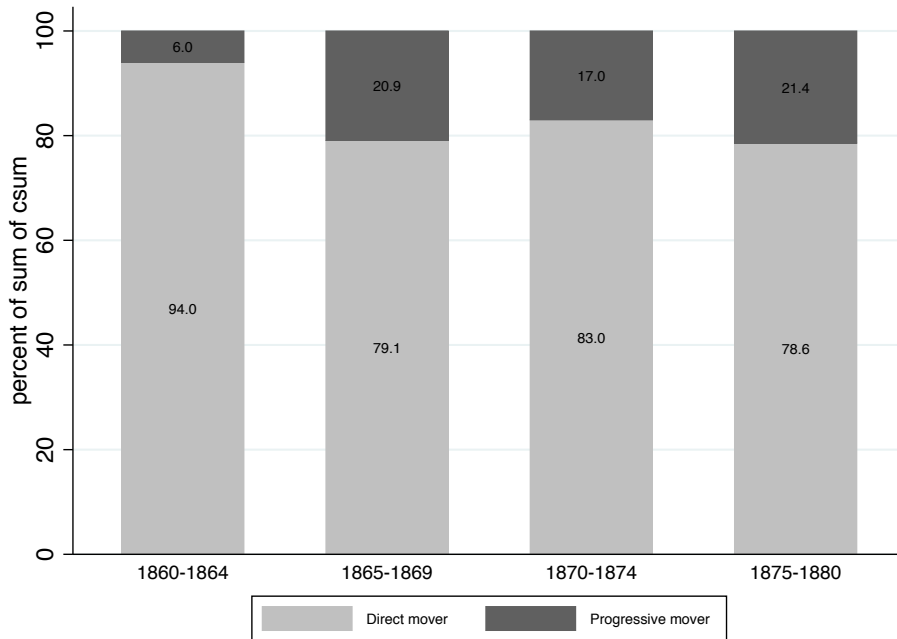
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Figure 5: Type of entrant distribution in downstream



Most entrants move directly in both cotton industrial sectors. In upstream, progressive movers are relevant in period 1 and 2 (1860-1869). The “Other” type of entrant category corresponds to individuals who were in downstream before moving into upstream. In downstream, most of the entry occurred in period 4 (1875-1880), where progressive movers represented the 21% of entrants only.

Figure 6: Type of entrant distribution in upstream by community

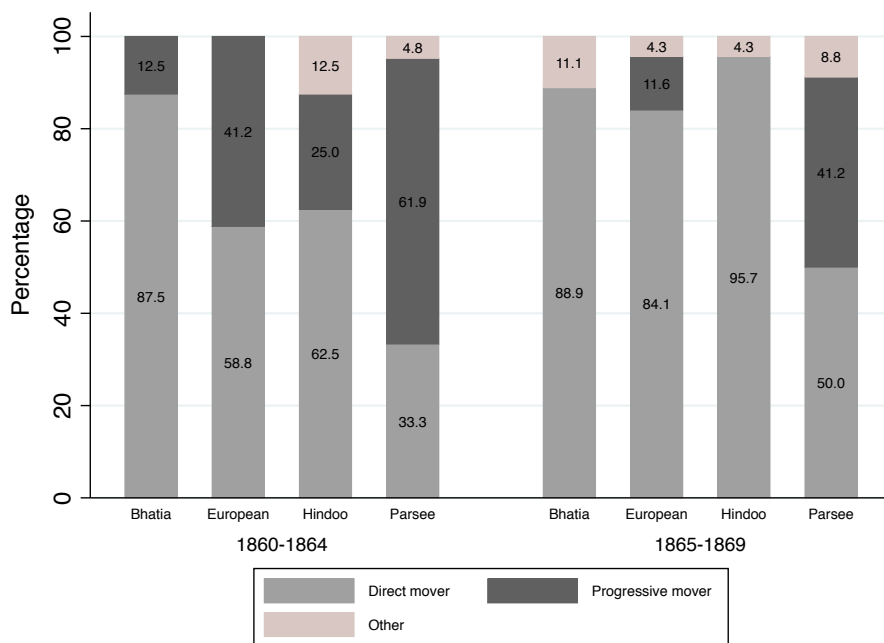
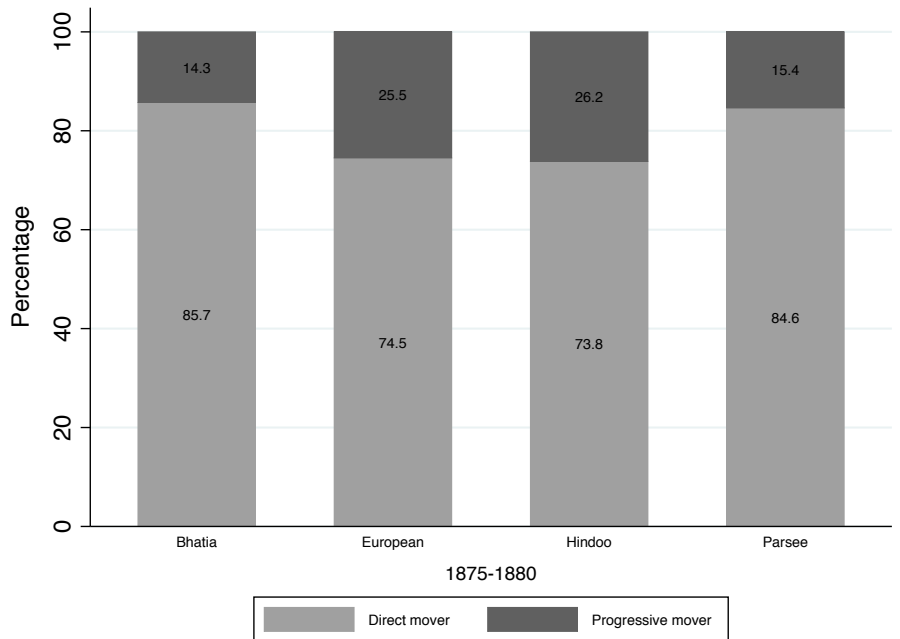


Figure 7: Type of entrant distribution in downstream by community



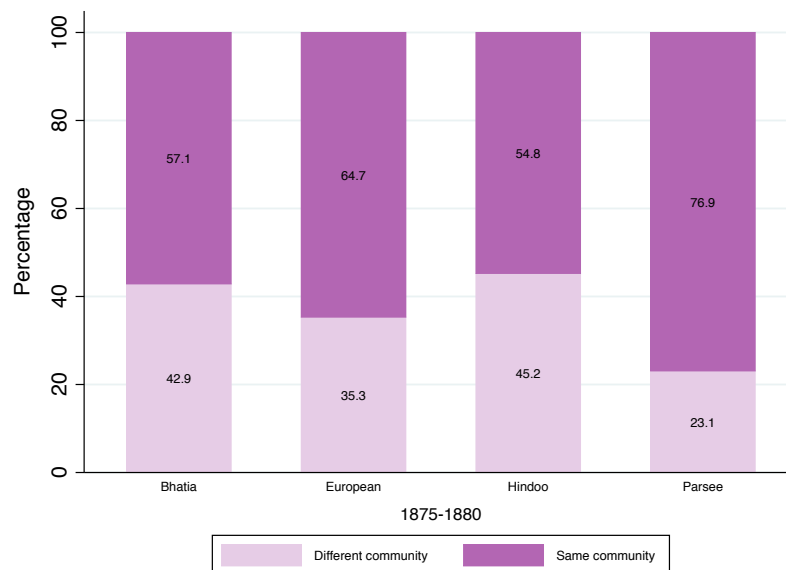
Parsis and Europeans were progressive movers in the upstream, but direct movers are typical of all communities. Similarly, in downstream period 4, across all communities, direct movers were the main type of entrepreneurs. This suggests that prior skill may not have been that important in decisions of entry.

We observe for period 2 in upstream, and period 4 in downstream that when new entrepreneurs enter into the industry, they mostly join firms from their same community.

Figure 8: Community match between upstream entrant and firms



Figure 9: Community match between downstream entrant and firms



We classify as “*Same community*” when an individual entrant joined a firm whose majority of directors were from the same community. In Figure 8, we show how Bhatia and Parsee entrepreneurs mainly entered into firms from their same community. Among Parsi entrants, 76% of them entered into Parsi firms, while 71% of Europeans and 66% of Bhatia followed the same pattern.

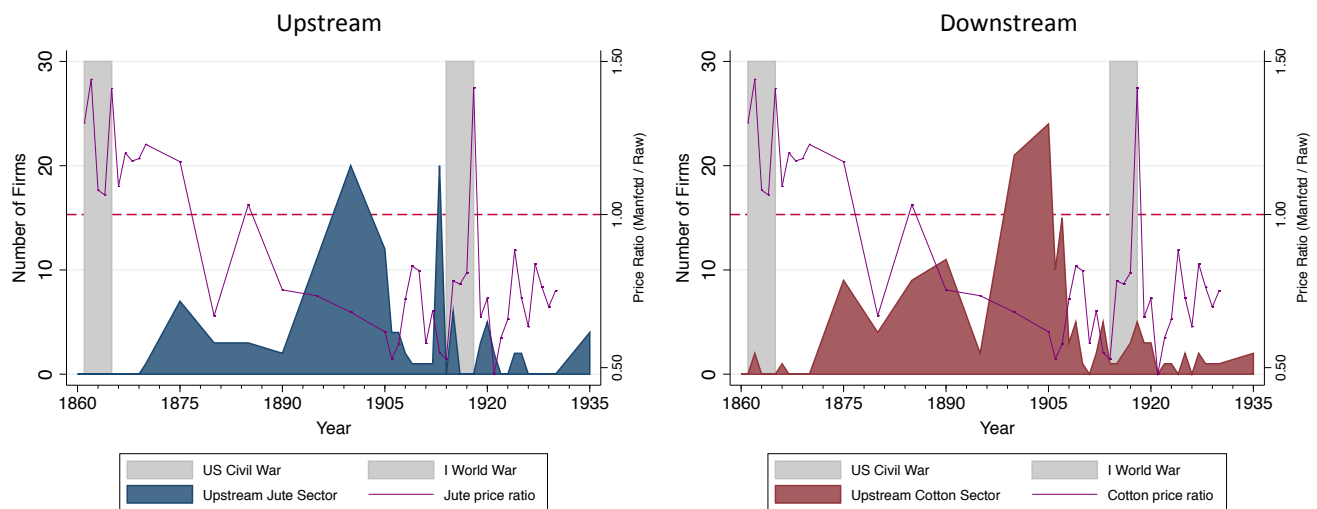
In downstream, presented in Figure 9, the community match is slightly larger for Parsi, but lower for Bhatias (57%), and Europeans (65%). Community effects seems to be stronger at

firms level. Possible reason of the dilution of the community match for Hindu groups, including the Bhatias could be the lack of technical knowledge about the industry. Most of the technicians in the industry in the early phase were either British or Parsi.

Phase 2: Firms entry

After 1880, we collected data every five years to have better understanding of how the cotton industry developed from the US Civil War, through First World War, until 1935, right after the great depression in 1929. Phase 2 is divided into two cycles: cycle 2 from 1881 to 1905 and cycle 3 from 1906 to 1935.

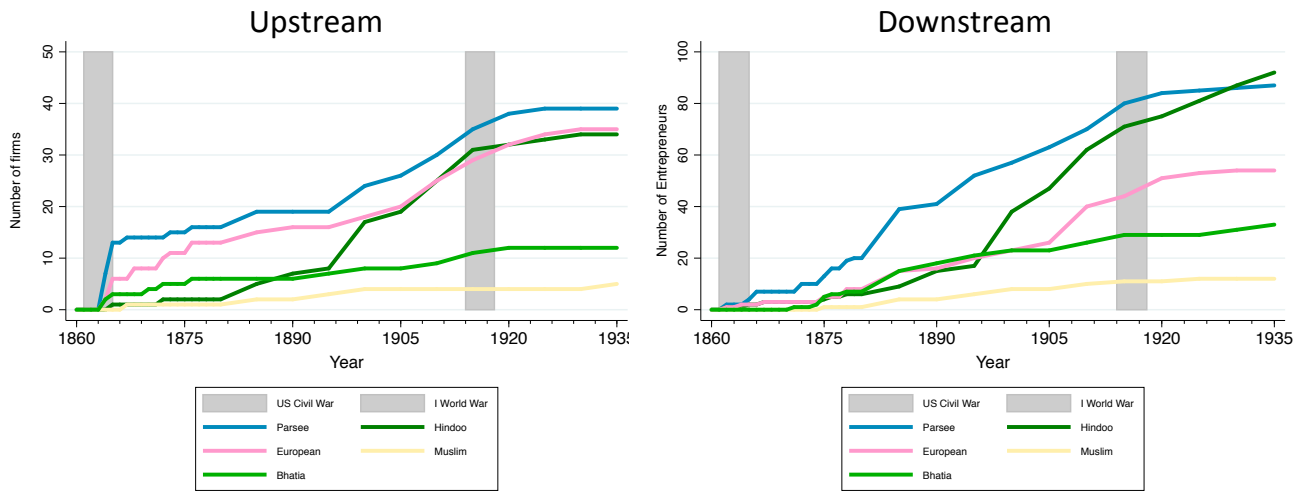
During cycle 2, 1881-1905, there are two entry waves of firms in downstream, around 1885 and 1900. Firms in upstream entered close to 1900 only. Entry slowed down thereafter. Figure 10: Firms entry in cotton industry



In terms of communities, we observe how Parsis set up firms first in upstream and later in downstream. Figure 11 shows how Parsis are clearly the main community in both sectors up to 1930, followed initially by European in upstream, and then by other Hindu communities since 1900 in both sectors.¹ Europeans stayed mainly . Hindu groups became important in downstream over time.

¹ The Hindu group is composed by several communities we have not classified yet, although together, they gained a large participation in cotton industry after 1900.

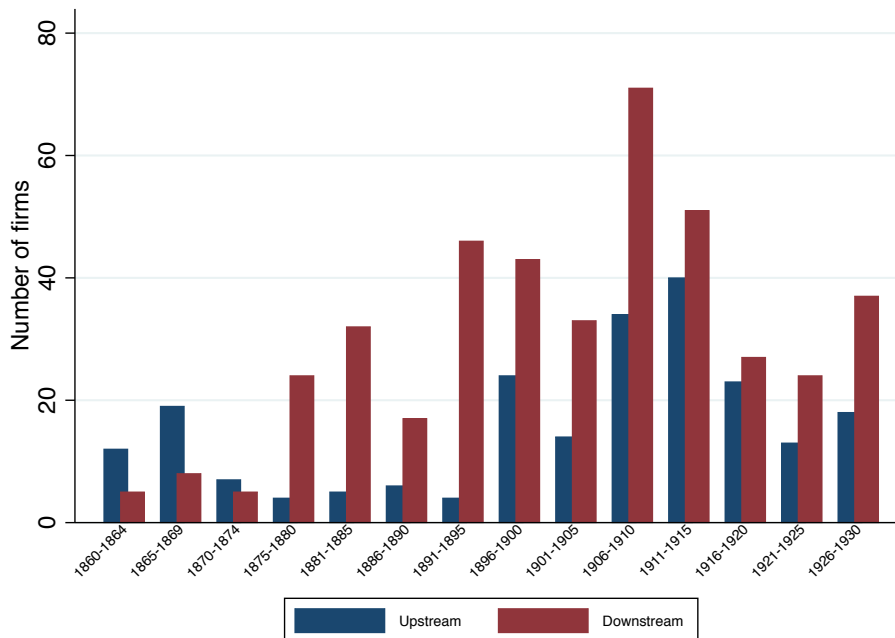
Figure 11: Cumulative entry of firms in cotton by community



Phase 2: Entrepreneur entry

The entry pattern of entrepreneurs shown in Figure 12 is similar to firms. Entrepreneurs mainly entered during 1906-1915, in both upstream and downstream. However, entry levels are mostly larger in downstream than upstream.

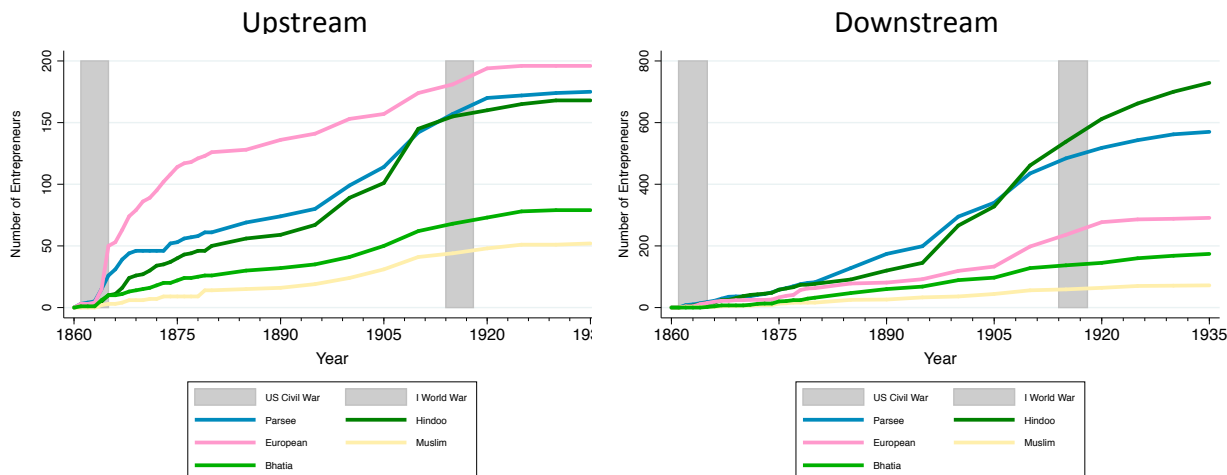
Figure 12: Entrepreneurs entry in cotton industry



At community level, we observe in Figure 12 how Europeans have the largest community presence in upstream sector along the whole period. On the other hand, downstream is first led

by Parsis, and from 1905 onward by the Hindu communities.

Figure 13: Cumulative entry of entrepreneurs in cotton by community



Capital requirement to enter into cotton industry

We look at capital required to enter both at the level of firm and individual. From the firm panel, we present descriptive statistics by communities, in relation to the number of entrepreneurs, the capital per entrepreneur and the total capital per firm.

Table 1: Capital requirements at firm level in cotton upstream

| Firm Community | Cycle | Num. of entrpr. (<i>mean</i>) | Capital per entrpr. (<i>median</i>) | Capital per firm (<i>median</i>) |
|----------------|-----------|---------------------------------|---------------------------------------|------------------------------------|
| Bhatia | 1860-1880 | 4.8 | 100,000 | 500,000 |
| | 1881-1905 | 3.8 | 88,000 | 352,000 |
| | 1906-1935 | 3.5 | 57,000 | 150,000 |
| European | 1860-1880 | 3.9 | 125,000 | 350,000 |
| | 1881-1905 | 3.8 | 93,750 | 375,000 |
| | 1906-1935 | 1.9 | 170,000 | 625,000 |
| Hindoo | 1860-1880 | 4.4 | 83,333 | 340,000 |
| | 1881-1905 | 4.6 | 22,500 | 100,000 |
| | 1906-1935 | 3.6 | 37,500 | 200,000 |
| Muslim | 1860-1880 | 3.9 | 116,667 | 400,000 |
| | 1881-1905 | 4.3 | 100,000 | 500,000 |
| | 1906-1935 | 3.0 | 65,625 | 105,000 |
| Parsee | 1860-1880 | 5.1 | 150,000 | 725,000 |
| | 1881-1905 | 5.0 | 33,333 | 200,000 |
| | 1906-1935 | 4.2 | 23,214 | 100,000 |

Table 2: Capital requirements at firm level in cotton downstream

| Firm Community | Cycle | Num. of entrpr. (<i>mean</i>) | Capital per entrpr. (<i>median</i>) | Capital per firm (<i>median</i>) |
|-------------------|-----------|------------------------------------|--|---------------------------------------|
| Bhatia | 1860-1880 | 6.0 | 145,833 | 875,000 |
| | 1881-1905 | 4.2 | 150,000 | 750,000 |
| | 1906-1935 | 4.3 | 193,750 | 1,162,500 |
| European | 1860-1880 | 5.5 | 104,167 | 600,000 |
| | 1881-1905 | 3.0 | 137,000 | 800,000 |
| | 1906-1935 | 3.8 | 266,048 | 1,000,000 |
| Hindoo | 1860-1880 | 5.9 | 130,000 | 750,000 |
| | 1881-1905 | 5.3 | 138,953 | 800,000 |
| | 1906-1935 | 5.2 | 133,333 | 700,000 |
| Muslim | 1860-1880 | 4.4 | 166,667 | 750,000 |
| | 1881-1905 | 5.0 | 142,857 | 900,000 |
| | 1906-1935 | 2.9 | 221,429 | 1,350,000 |
| Parsee | 1860-1880 | 5.3 | 187,500 | 1,000,000 |
| | 1881-1905 | 4.5 | 150,000 | 1,000,000 |
| | 1906-1935 | 5.6 | 200,000 | 1,300,000 |

The number of entrepreneurs per firm decreased in cycle 3, in all firms and across all communities. The capital per entrepreneur and total capital per firm was also lower in cycle 3 compared to the two previous cycles. The average number of entrepreneurs per firm also decreased in all firms but Parsis. The total capital required increases in cycle 3 for all community firms.

Jute Industry

This industry was different from cotton in terms of ownership by community. The industry was set up by European entrepreneurs and remained almost entirely so until the First World War. During Phase 1, all firms were European, and only few Non-European entrepreneurs came to join them.

Figure 14: Firms entry in cotton industry

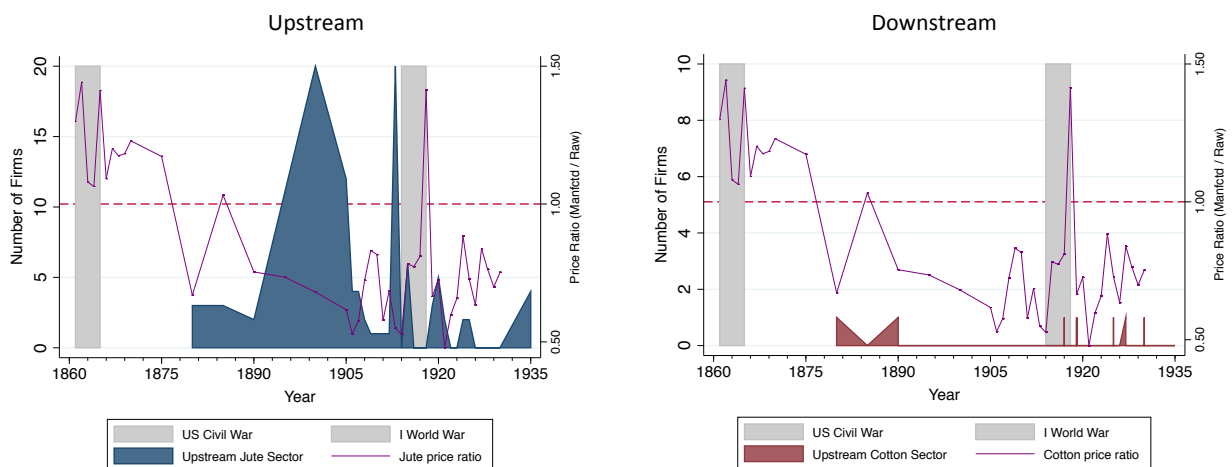
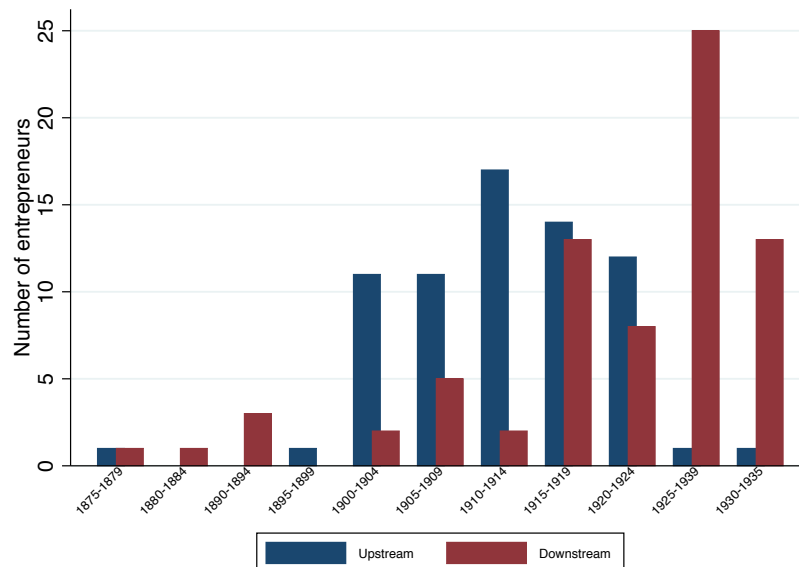


Figure 15: Non-European entrepreneur entry in cotton industry



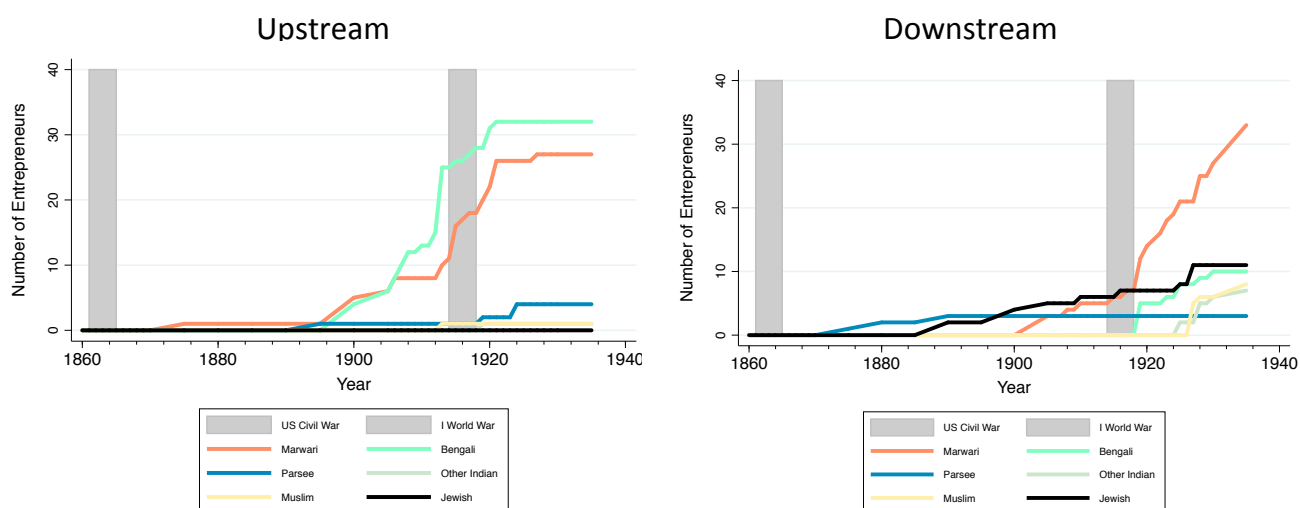
The industry was set up by European entrepreneurs and remained almost entirely so until the First World War. Only after 1900, in Phase 2, is where we start observing a larger participation of Non-European entrepreneurs in upstream sector. The participation in upstream of Non-

European entrepreneurs became even larger, just before the I World War. After the War, the entry in upstream start decreasing while increasing in downstream where we observe the first flow of entre between 1915 and 1920, and the highest entry during 1925-1929.

Comparing entry at firms and entrepreneurs level in Figures 14 and 15, we can infer that most of Non-European entry in jute happened within European firms. When Indians began to enter the industry, we observe entry differences in community presence between upstream and downstream sector using data at individual level.

In Figure 16, we observe two main Indian communities in this industry: The Marwaris and the Bengal. Both were present in the upstream before the I World War with a larger number of Bengali across the whole period. In downstream, Marwaris were the most important Non-European community, and they entered after the I World War. Other communities, such as Jewish, Bengali and Muslims entered in downstream sector, but they are small in number.

Figure 16: Cumulative entry of entrepreneurs in cotton by community



Capital requirement to enter into jute industry

Given the low number of Non-European firms, we check capital requirements at individual level, regardless the main community within the firm. Additionally, we present descriptive statistics by communities, in relation to the number of entrepreneurs, the capital per entrepreneur and the total capital per firm.

Table 3: Capital requirements at firm level in jute upstream

| Individual Community | Cycle | Num. of entrpr. (<i>mean</i>) | Num. of firms (<i>mean</i>) | Capital per entrpr. (<i>median</i>) |
|----------------------|-----------|------------------------------------|----------------------------------|--|
| Bengali | 1860-1880 | - | - | - |
| | 1881-1905 | 4.7 | 1.0 | 25,000 |
| | 1906-1935 | 2.2 | 1.0 | 20,000 |
| Hindoo | 1860-1880 | - | - | - |
| | 1881-1905 | - | - | - |
| | 1906-1935 | 1.0 | 1.1 | - |
| Jewish | 1860-1880 | - | - | - |
| | 1881-1905 | 4.0 | 2.0 | 62,500 |
| | 1906-1935 | - | - | - |
| Marwari | 1860-1880 | 3.0 | 1.0 | 133,333 |
| | 1881-1905 | 2.2 | 1.0 | 131,250 |
| | 1906-1935 | 1.5 | 1.0 | 200,000 |
| Muslim | 1860-1880 | - | - | - |
| | 1881-1905 | - | - | - |
| | 1906-1935 | 3.0 | 1.0 | 20,000 |
| Parsee | 1860-1880 | - | - | - |
| | 1881-1905 | 1.0 | 1.0 | - |
| | 1906-1935 | 1.5 | 1.0 | 31,250 |

Table 4: Capital requirements at firm level in jute downstream

| Individual Community | Cycle | Num. of entrpr. (<i>mean</i>) | Num. of firms (<i>mean</i>) | Capital per entrpr. (<i>median</i>) |
|----------------------|-----------|------------------------------------|----------------------------------|--|
| Bengali | 1860-1880 | 4.0 | 1.0 | - |
| | 1881-1905 | - | - | - |
| | 1906-1935 | 4.0 | 1.0 | 342,720 |
| Hindoo | 1860-1880 | - | - | - |
| | 1881-1905 | - | - | - |
| | 1906-1935 | 4.8 | 1.0 | 600,000 |
| Jewish | 1860-1880 | - | - | - |
| | 1881-1905 | 3.9 | 1.0 | 300,000 |
| | 1906-1935 | 3.5 | 1.0 | 633,333 |
| Marwari | 1860-1880 | - | - | - |
| | 1881-1905 | - | - | - |
| | 1906-1935 | 4.1 | 1.0 | 833,333 |
| Muslim | 1860-1880 | - | - | - |
| | 1881-1905 | - | - | - |
| | 1906-1935 | 5.5 | 1.0 | 1,333,333 |
| Parsee | 1860-1880 | - | - | - |
| | 1881-1905 | - | - | - |
| | 1906-1935 | 1.0 | 1.0 | - |

The number of entrepreneurs per firm shows the size of the firm in terms of directors. Regarding to capital requirements, it is clear that the amount needed in downstream is at least for times larger than downstream.

Conclusion

The data collection is more or less complete now. We also have collected data on entry into industry up to 1951 using industrial censuses. We are in the process of analysing the pattern of early entry in cotton and jute using the data for an academic paper. Following this we will look at other features of entry into industry right up to Indian independence. Chettiars will feature in this as a community.

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