Entry and Exit of formal firms in Vietnam 2000-2015*

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Abstract

Following Dunne, Roberts, and Samuelson (1988) and using Vietnamese firm survey, I report summary statistics of formal firms in Vietnam from 2000 to 2015.

1 Single plant share

I harmonize the ownership codes across waves. The GSO gave me a data set with "consistent" codes since these codes do not match the numbers in the questionnaires.

To harmonize these codes, I assume that it is unlikely that firms change their ownership codes between two consecutive years. I then infer major changes across surveys. I start from the last year, say 2015 and go back in time to 2000. There are only three major changes in 2011, 2003, and 2001.

These codes are at finer categories than state-owned, private, and foreign. For instance, there are central state-owned and local state-owned enterprises. I combine these categories to one big category under SOEs.

Figure 1 reports the shares of single-plant firms and their sales shares from 2000-2014. The shares of single plant firms are comparable to the US starting from 2002. The overall trend is increasing despite the strange numbers in 2000 and 2001.

Furthermore, more than 90% of foreign and private firms are single-plant. Among SOEs, 75% are single-plant on average.

In terms of revenue, the shares are lower for all ownership types, but the general pattern is consistent with counts. Single plants constitute about 85% of revenues among foreign and private firms.

In sum, the GSO main data files are single-plants. I interpret results of analysis of these data as covering all foreign and private firms and at the firm-level for SOEs.

*I would like to thank Sam Kortum and Costas Arkolakis for suggestions and comments.

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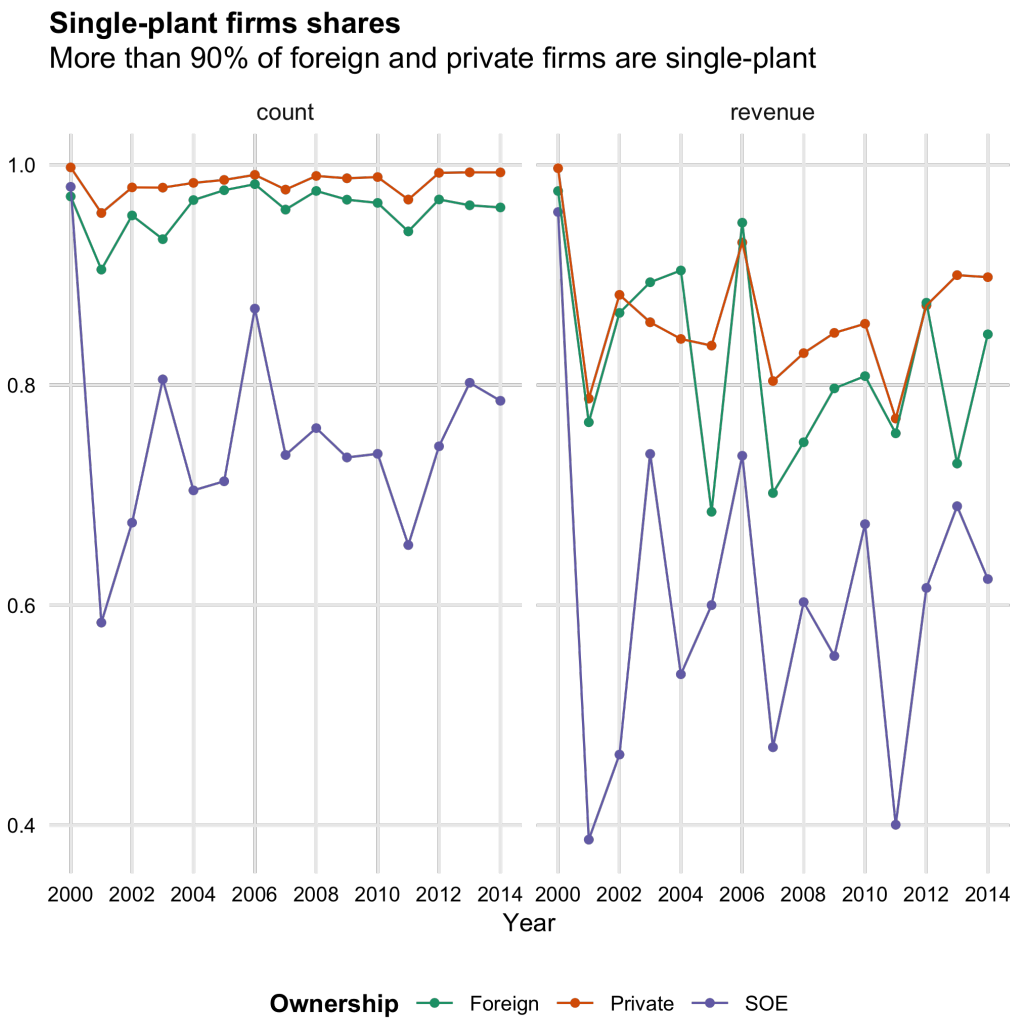


Figure 1: Single plant share

1.1 Market share by ownership

Before 2002, it looks like the shares of single-plant firms are relatively low. It is likely due to the high share of state-owned enterprises (SOEs).

2 Entry and exit

I report entry and exit rates, following the definitions in Dunne, Roberts, and Samuelson (1988). These definitions are as follow:

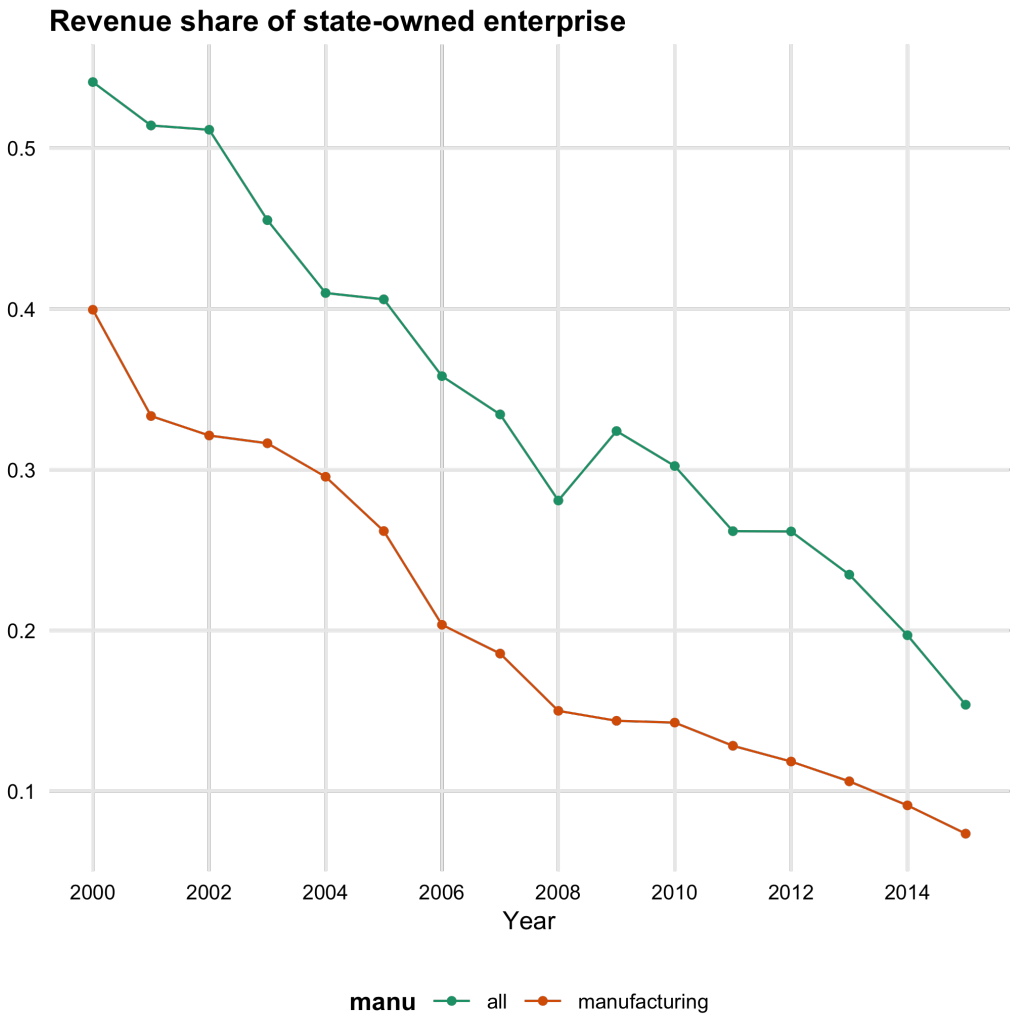


Figure 2: Market share

$NE_i(t) =$ number of firms that enter industry i between census years $t-1$ and t;
$NT_i(t) =$ total number of firms in industry i in census year t. This includes firms that enter industry i between census years $t-1$ and t;
$NX_i(t-1) =$ number of firms that exit industry i between census years $t-1$ and t;
$QE_i(t) =$ total output of firms that enter industry i between census years $t-1$ and t.
$QT_i(t) =$ total output of all firms in industry i in census year t;
$QX_i(t-1) =$ total year $t-1$ output of firms that exit industry i between census years $t-1$ and t.

Figure 3: All firm entry

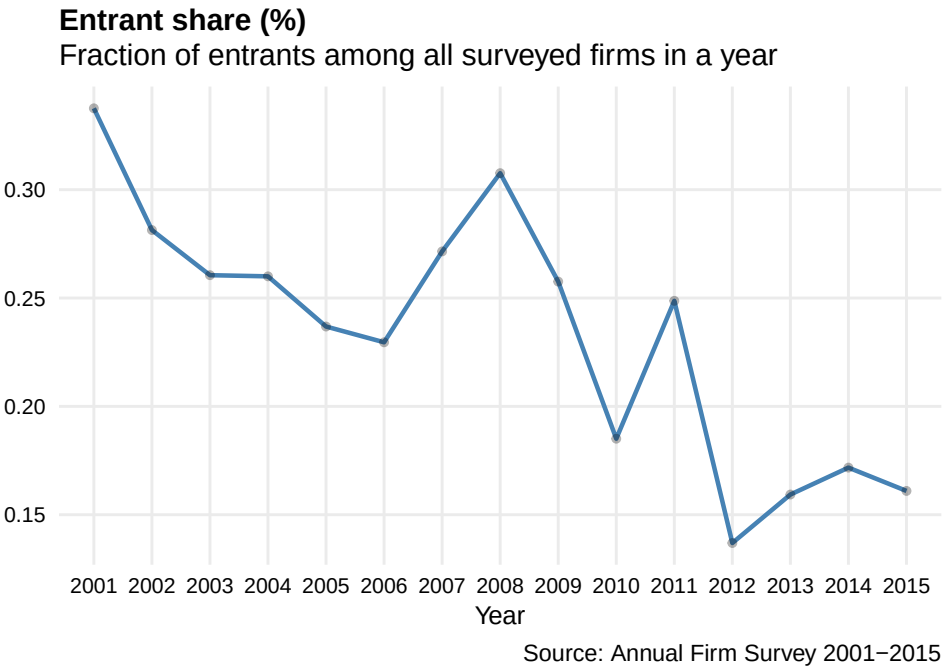


Figure 4: Manu Entry

Table 1: Entry and exit all and manufacturing Vietnamese plants 2000-2015

	All			Manufacturing		
	00-05	05-10	10-15	00-05	05-10	10-15
Entry						
Entry Rate (ER)	2.023	1.996	1.011	2.315	1.526	0.801
Entrant Market Share (ESH)	0.517	0.497	0.350	0.485	0.395	0.311
Entrant Relative Size (ERS)	0.225	0.265	0.305	0.604	0.537	0.532
Exit						
Exit Rate (XR)	0.578	0.465	0.426	0.497	0.356	0.348
Exiter Market Share (XSH)	0.367	0.285	0.250	0.315	0.153	0.200
Exiter Relative Size (XRS)	0.422	0.459	0.449	0.873	0.434	0.608

Note:
Manufacturing are averages over 374 4-digit VSIC1993 manufacturing industries

$$
\begin{aligned}
ER_i(t) &= NE_i(t)/NT_i(t-1) \\
XR_i(t-1) &= NX_i(t-1)/NT_i(t-1). \\
ESH_i(t) &= QE_i(t)/QT_i(t) \\
XSH_i(t-1) &= QX_i(t-1)/QT_i(t-1). \\
ERS_i(t) &= \frac{QE_i(t)/NE_i(t)}{\left(QT_i(t)-QE_i(t)\right)/\left(NT_i(t)-NE_i(t)\right)} \\
XRS_i(t-1) &= \frac{QX_i(t)/NX_i(t-1)}{\left(QT_i(t-1)-QX_i(t-1)\right)/\left(NT_i(t-1)-NX_i(t-1)\right)}.
\end{aligned}
$$

Table 1 reports these statistics for three pairs of years, 2000-2005, 2005-2010, and 2010-2015. The first three columns are statistics for all firms, while the last three columns are averages over 374 4-digit VSIC 1993 manufacturing industries.

Table 2 reports numbers from Dunne, Roberts, and Samuelson (1988) to compare with the Vietnamese numbers.

2.1 Discussion

While most Vietnamese statistics are comparable to the US, the entry rate of Vietnam is about 4 times as high as that of the US during the period of rapid economic growth 2000-2010. Using the same data source, McCaig and Pavcnik (2021) independently reports a comparable annualized rate at 27%.

This rate is high even compared to developing countries as documented in McCaig and Pavcnik (2021) and much higher than developed countries. McCaig and Pavcnik (2021)

Table 2: Entry and exit of US manufacturing firms

	1963-1967	1967-1972	1972-1977
Entry			
ER	0.307	0.427	0.408
ESH	0.136	0.185	0.169
ERS	0.369	0.359	0.324
Exit			
XR	0.308	0.390	0.372
XSH	0.144	0.191	0.173
XRS	0.367	0.367	0.344

Note:

Figures are from Dunne et. al (1988)

observe that this number is comparable to other countries that transition out of centrally planned economies. That is, as the economy privatizes SOEs, private and foreign firms seize this opportunity to open new firms.

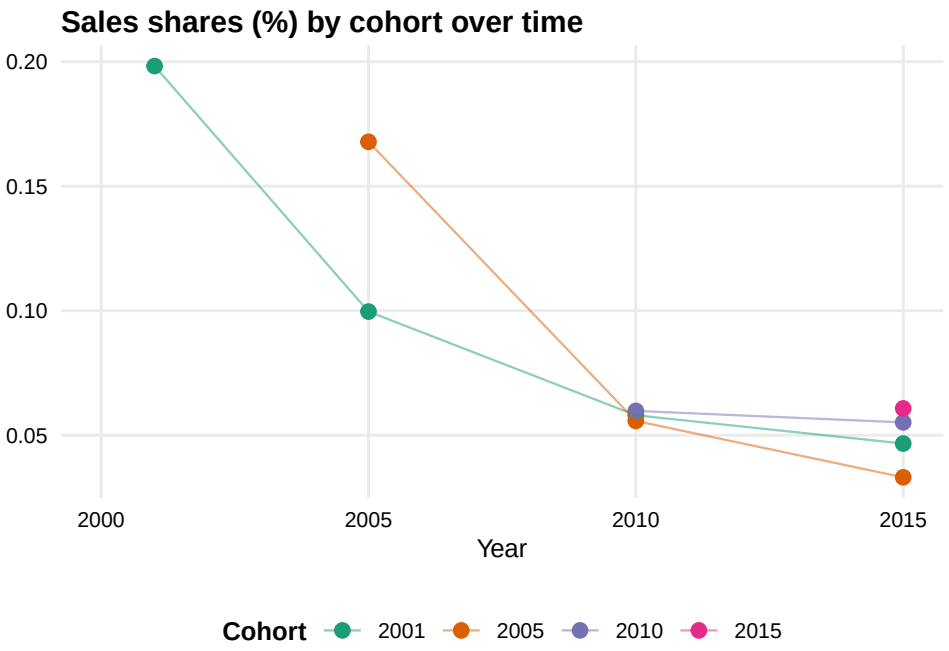
3 Surviving firms

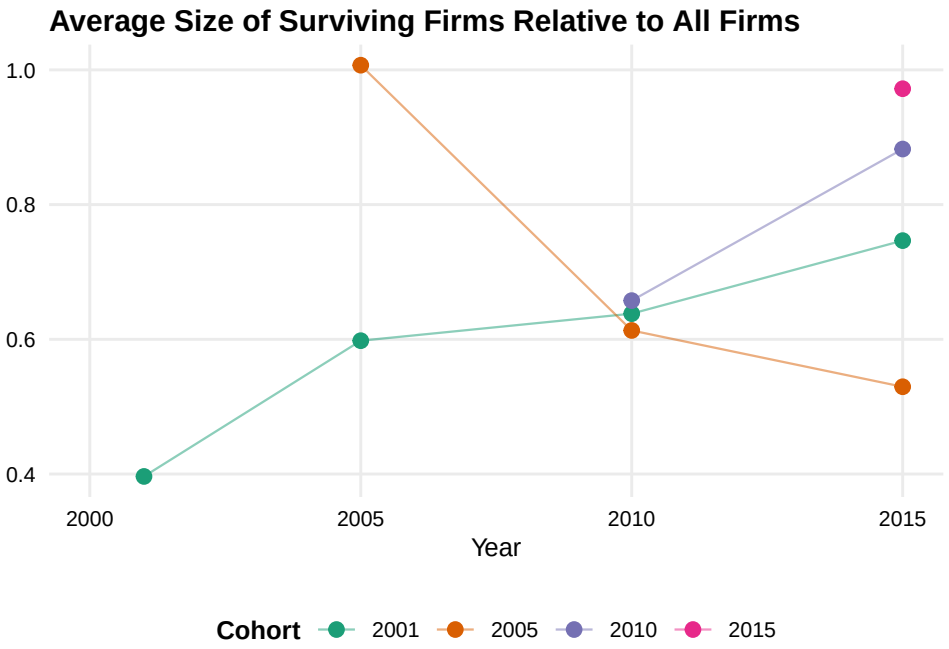
I document market shares, average firm size, and exit rates of four cohorts 2001, 2005, 2010, 2015. Based on the following figures, I observe the following:

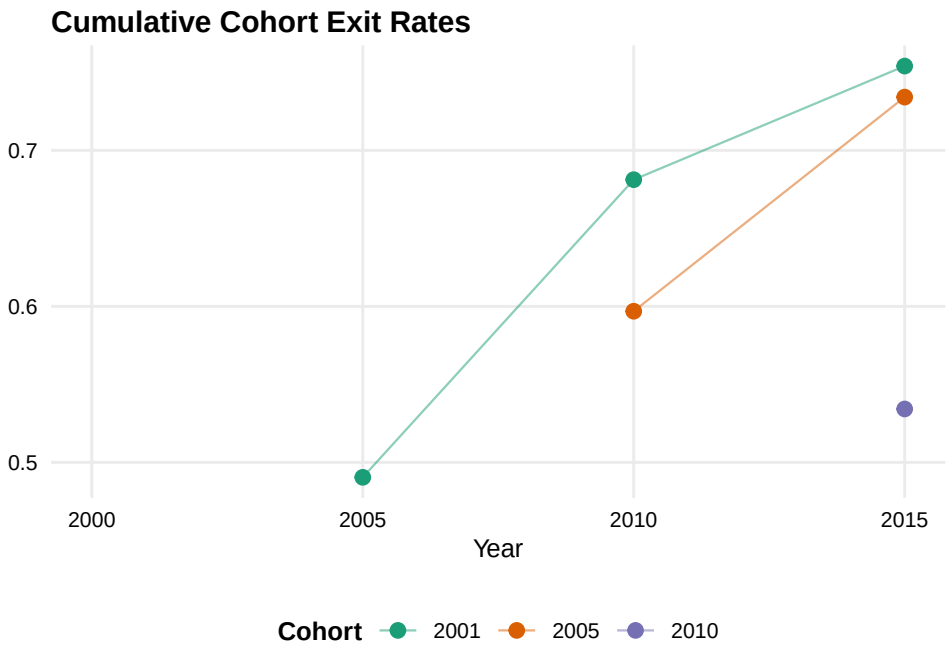
First, sales shares of each cohort fall over time. Besides, the average revenue shares of entering cohorts is about 0.108 which is smaller than that of the US . This can be due to high exit rate or falling of average size of incumbents or both. In the US, the former is true while the latter is not. Incumbents become larger over time in the US.

Second, the average size of surviving do not always increase. Both 2001 and 2005 cohorts experience a decline in their average size from 2005.

Finally, the exit rates are about the same as the US.

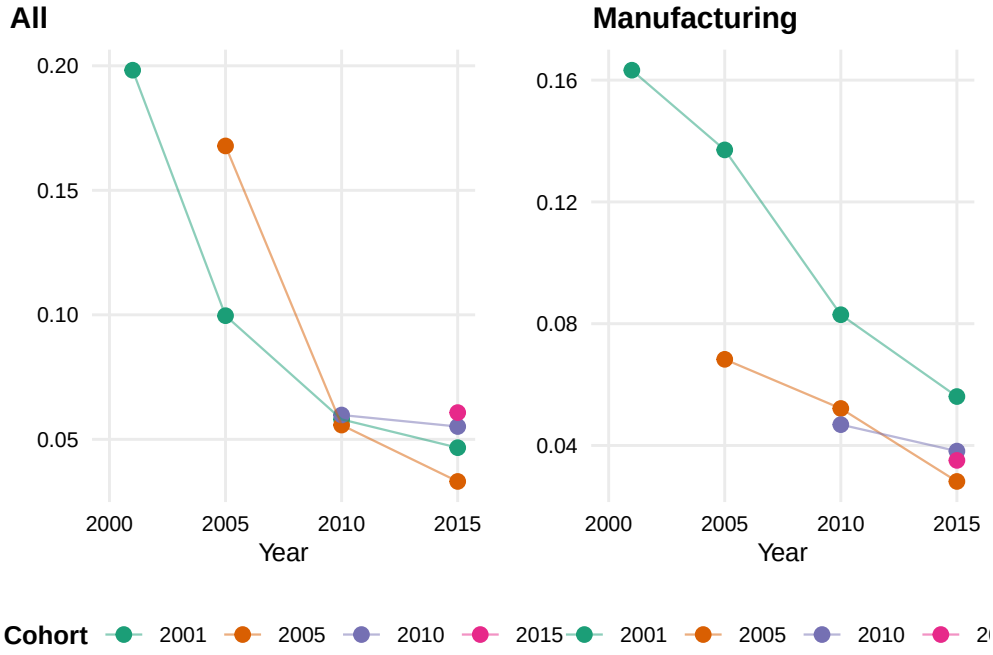

Sales shares (%) by cohort over time
0.20
0.15
0.10
0.05
2000
2005
2010
2015
Year
Cohort
2001
2005
2010
2015

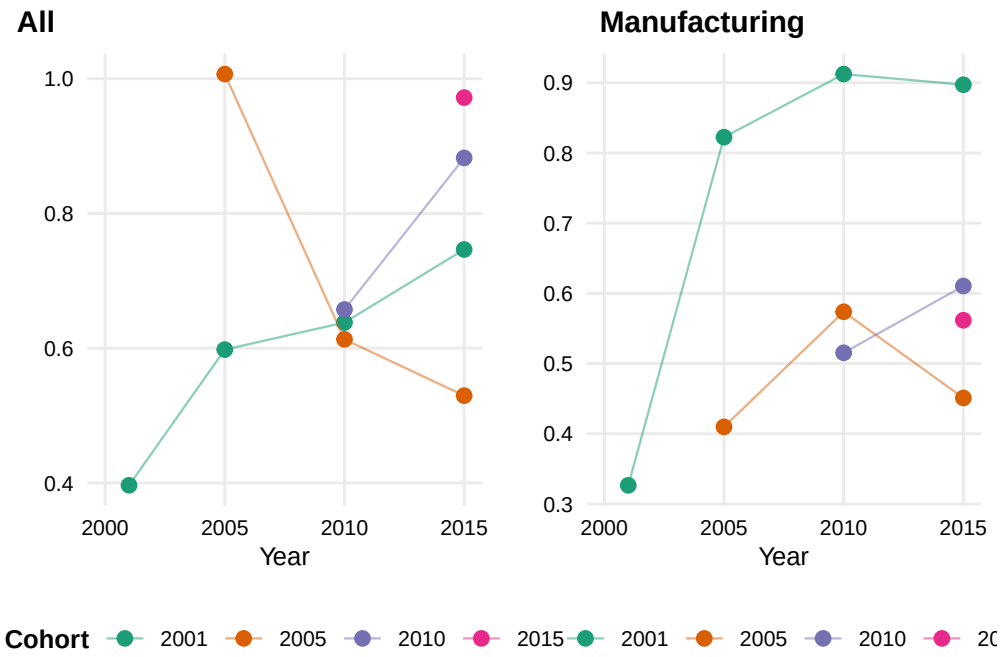

Average Size of Surviving Firms Relative to All Firms
1.0
0.8
0.6
0.4
2000
2005
2010
2015
Year
Cohort
2001
2005
2010
2015

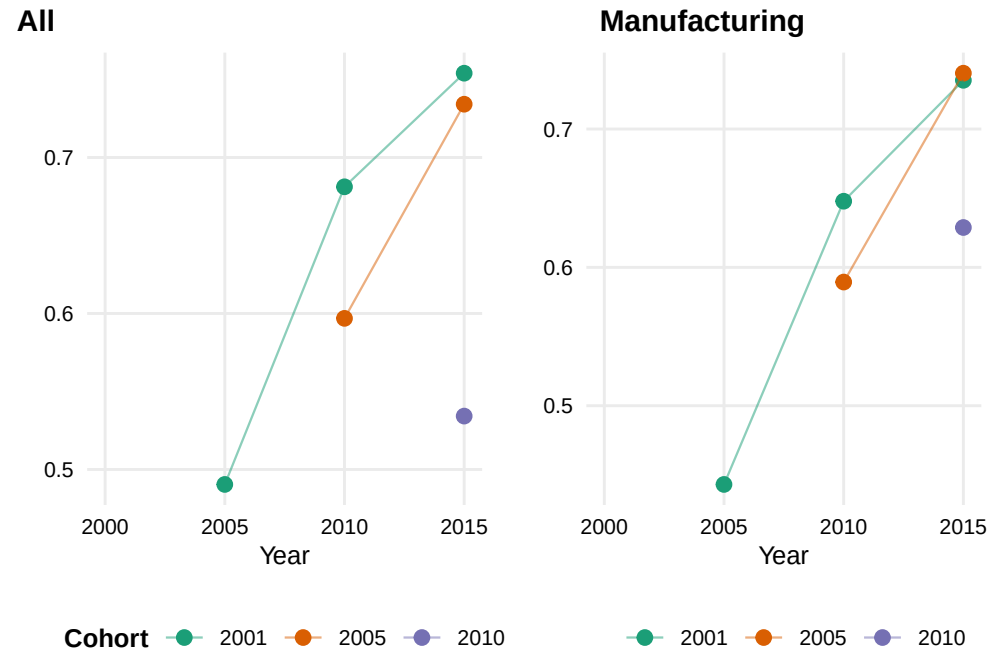


3.1 Manufacturing

I include manufacturing figures next to the previous figures




All
Manufacturing
1.0
0.8
0.6
0.4
0.9
0.7
0.5
0.3
2000
2005
2010
2015
Year
Cohort
2001
2005
2010
2015


All
Manufacturing
0.7
0.6
0.5
2000
2005
2010
2015
Year
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2001
2005
2010

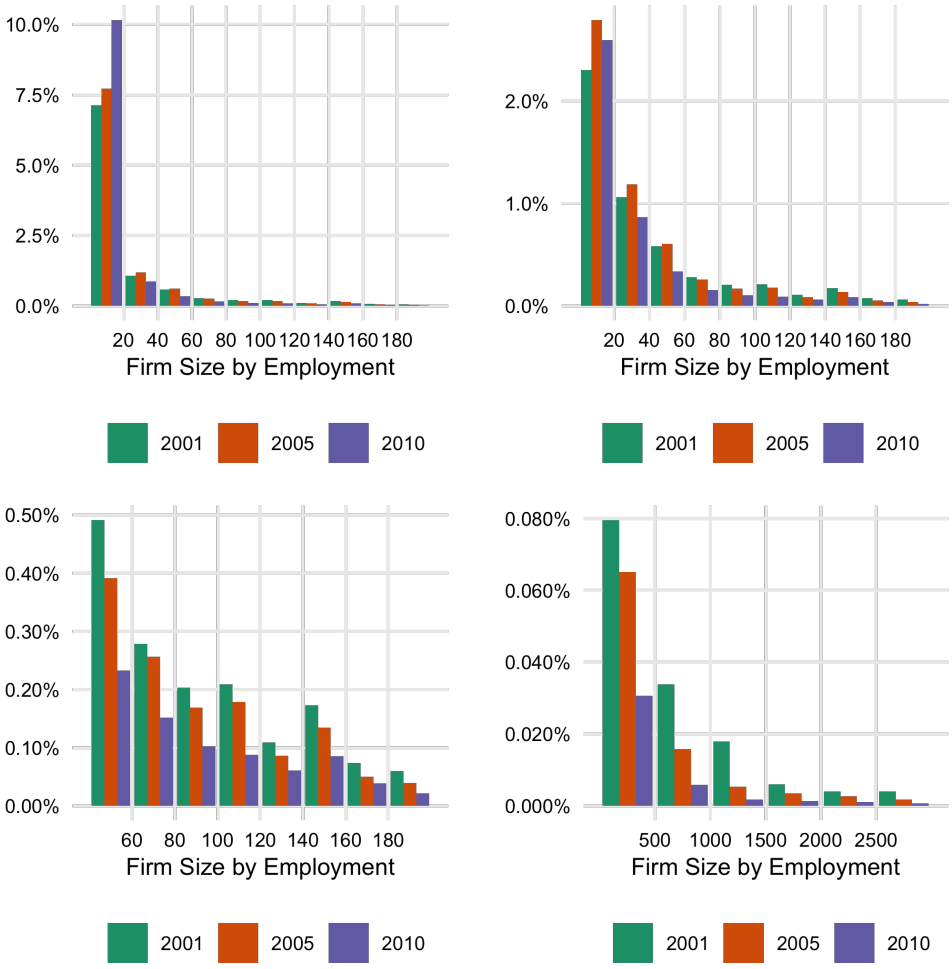

Figure 5: Firm Size Distribution by Employment of All Firms

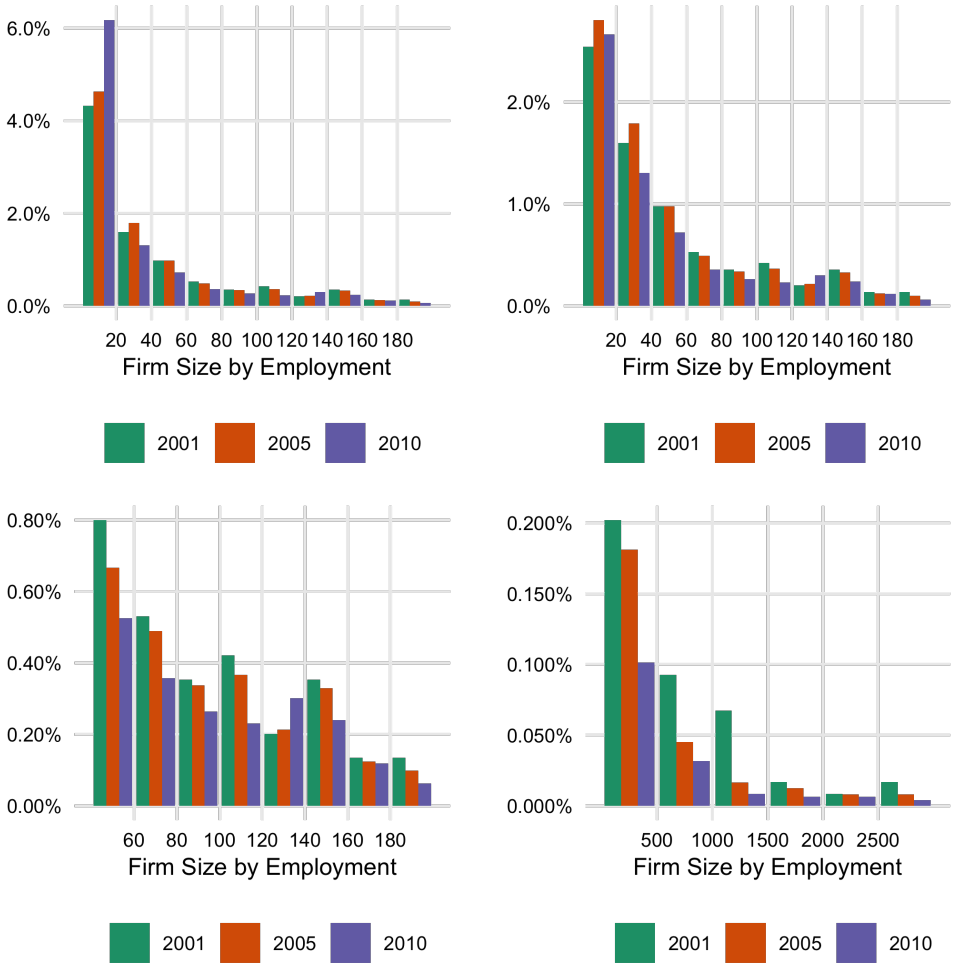

Figure 6: Firm Size Distribution by Employment of Manufacturing Firms

4 Size distribution

4.1 Number of workers

4.2 Revenue

Figure 7 shows the firm size distribution by revenue of all firms in 2001 and 2010, and Figure 8 the distribution of manufacturing only. The vertical axis is the ratio between the revenues of the firms at a specific percentiles and the mean sales among firms in the year of interest.

These figures look very similar to the US.

Furthermore, the revenue size of firms increase from 2001 to 2010.

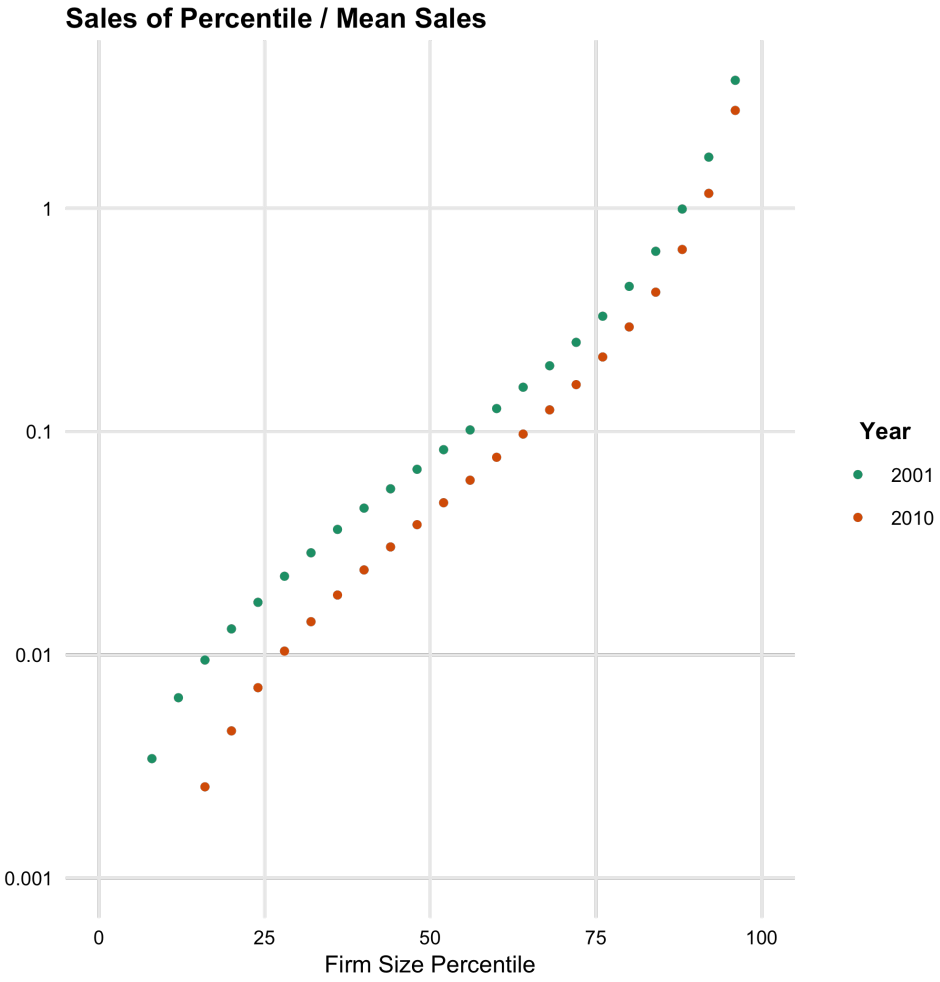

Figure 7: Firm Size Distribution of All Firms

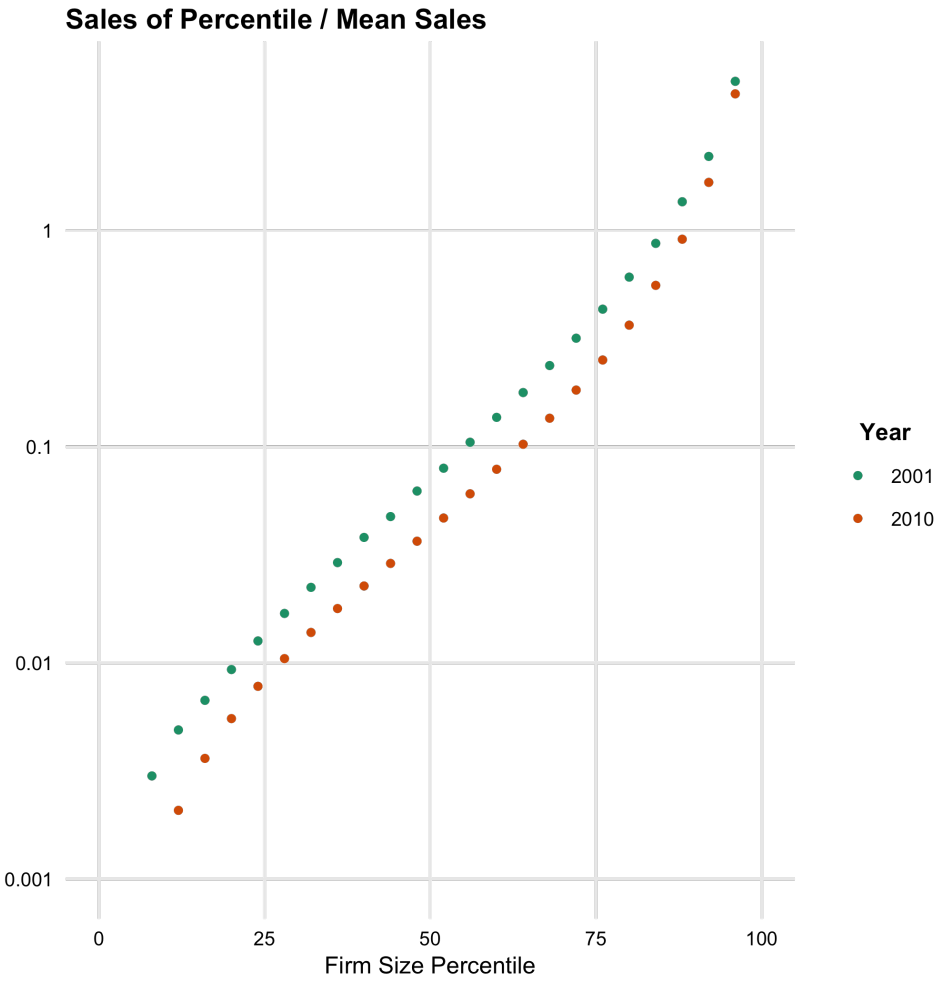

Figure 8: Firm Size Distribution of Manufacturing Firms

5 Next steps

First, I should check single-plant by ownership.

Second, firm size distribution by age group

Third, distribution of entry relative to incumbent across districts.

6 Appendix

Here are the entry and exit rates from McCaig and Pavcnik (2021)

References

Dunne, Timothy, Mark J Roberts, and Larry Samuelson. 1988. “Patterns of Firm Entry and Exit in U.S. Manufacturing Industries.” *The RAND Journal of Economics* 19 (4): 495. https://doi.org/10.2307/2555454.

McCaig, Brian, and Nina Pavcnik. 2021. “Entry and Exit of Informal Firms and Development.” *IMF Economic Review* 69 (3): 540–75. https://doi.org/10.1057/s41308-021-00142-8.