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Data and Descriptive Statistics

Data on bank presence was acquired from Central Bank of Brazil, in the Banking Statistics System (ESTBAN). This dataset exposes each bank branch in every municipality, from its address to opening and closing dates. The selected year was 2000, eliminating all banks closed until December 1999 and opened January 2001 onward. Moreover, only banks that offered some line of credit were included. In order to estimate the parameters of the Bresnahan and Reiss's model, aggregate total income per town was chosen as market size, as mentioned earlier and implemented in Coelho (2007).

Also, ESTBAN also provides the amount of credit by municipality monthly. In order to diminish noise in the data, the mean amount of credit by municipality was taken.

Table 1 below illustrates some characteristics of the markets analyzed. Observe that approximately 35% of the sample is composed of towns that do not have banks, in which average income was R\$ 750 thousand on the whole. As expected, there is a positive association between the number of banks in a town and its total income. Note, however, that total incomes per bank are very close on municipalities with up to four banks and increasing at relatively high rates afterwards. Finally, observe that this income per bank ratios present some non-linearity.

Table 1 Descriptive Statistics – Bresnahan and Reiss

Number of Banks	# of Municipalities	Avg. Total Income	Avg. Total Income per Bank	Avg. Total Income per Bank Ratios
0	1551	R\$ 754,91	-	-
1	1339	R\$ 1.438,58	R\$ 1.438,58	-
2	546	R\$ 2.727,06	R\$ 1.363,53	0,95
3	291	R\$ 4.241,87	R\$ 1.413,96	1,04
4	226	R\$ 5.828,32	R\$ 1.457,08	1,03
5	171	R\$ 9.303,65	R\$ 1.860,73	1,28
6	79	R\$ 12.936,42	R\$ 2.156,07	1,16
7	66	R\$ 18.125,47	R\$ 2.589,35	1,20
>7	180	R\$ 52.994,77	R\$ 5.235,49	2,02
Total	4449			

Source: Central Bank of Brazil and Brazilian Institute of Statistics and Geography. Number of Banks is the quantity of banks (in terms of branches) in each town. Total income is measured in R\$ thousands in the current value of 2000.

As for the growth regression, observe in table 2 how number of banks, credit and income per capita vary. Credit stock is increasing in the number of banks and suggests a non-linear relationship. On the other hand, the relationship between total credit and income per capita tends to be positive, except for the clear drop in income per capita between municipalities with five and six banks.

Table 2 Descriptive Statistics – Growth Regression

Number of Banks	# of Municipalities	Avg. Income per Capita	Avg. Total Credit
0	2024	R\$ 111,77	R\$ 3,59
1	1347	R\$ 160,33	R\$ 1.342,08
2	549	R\$ 198,08	R\$ 6.600,97
3	293	R\$ 239,19	R\$ 12.512,76
4	227	R\$ 258,90	R\$ 17.483,56
5	171	R\$ 338,57	R\$ 28.576,98
6	78	R\$ 263,33	R\$ 37.230,65
7	65	R\$ 694,41	R\$ 43.995,84
>7	180	R\$ 671,40	R\$ 165.345,93
Total	4934		

Source: Central Bank of Brazil and Brazilian Institute of Statistics and Geography. Number of Banks is the quantity of banks (in terms of branches) in each town. Mean Total Credit and Income per Capita are measured in R\$ of 2000 and the first is measured in thousands.