

Integration and De-integration in Forty-one Mexican Forest Communities

The following graphs were generated from a random stratified sample of forty-one communities with timber resources surveyed in Michoacán and Durango. With end-product sold as an indicator, each graph displays community vertical integration levels by increasing forest size grouped in five ranges. “Vibr” on the vertical axis refers to the most processed product sold, where 1 = forest but no timber sales; 2=stumpage, 3=roundwood, 4=sawnwood. Numbers above each timeline refer to the community observation number. Across forest size ranges, there is considerable change in end product sold over time. While forest size is a positive explanatory variable in vertical integration levels in other regions (see <http://are.berkeley.edu/~antinori/EDCCfinal.pdf> for Oaxaca), the relationship is weak in this dataset, suggesting possibly a larger role for institutional characteristics that vary by region (see [The Mexican Common Property Forestry Sector, June 7, 2010](#)).

Notes by size group:

Very small forests: During the time period 1960-2010, all started at no-sale of forest products. The period 1985 to 1995 showed the most activity in further processing wood themselves before selling. All but two de-integrated since about 2000, with one re-integrating.

Small forests: A few started the period with forestry production and most stepped up their operations at various points in this time period. Two made sawnwood investments, with one later de-integrating to roundwood production. Three show a “blip” in their production strategies, where they took on more forestry production and processing themselves for a short period of time and then went back to not selling any timber.

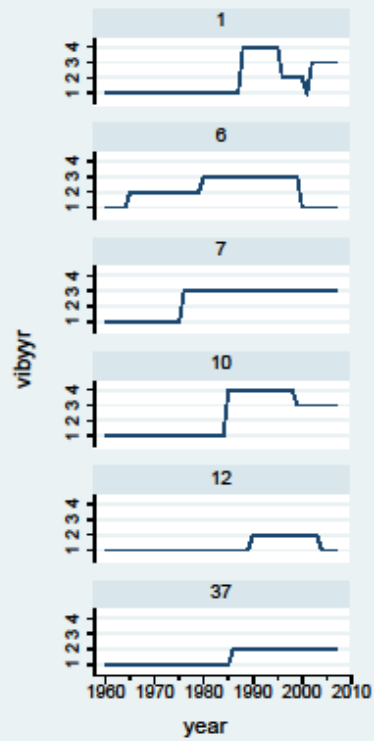
Medium forests: All but one started the period as “no-sales” and then vertically integrated, with four of seven starting around 1980. Two managed a sawmill at some point in time, but then de-integrated. The most processed product sold now in this group is one community selling roundwood. .

Large forests: After reaching further processing capabilities, six out of this group of nine have scaled back their processing. Blip patterns also appear in this group, but since about 1995, the level of processing has been relatively stable for most. Only one is currently selling sawnwood.

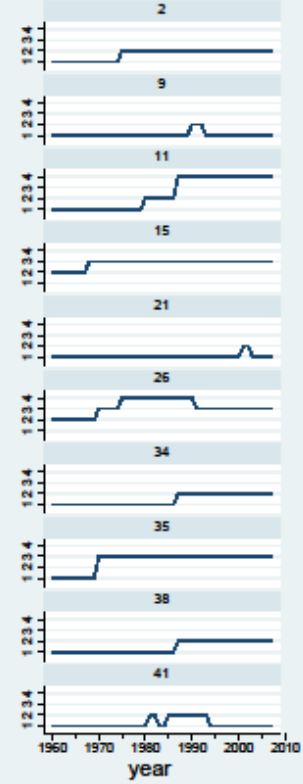
Very large forests: 1975 marked a big impetus for processing in this size category. Three went directly from no-sale or stumpage to selling sawnwood. All except #24 and #33 remained at some higher processing level, and those two communities did not go back all the way to “no-sale.” Only three in this group are currently selling sawnwood.

--Camille Antinori

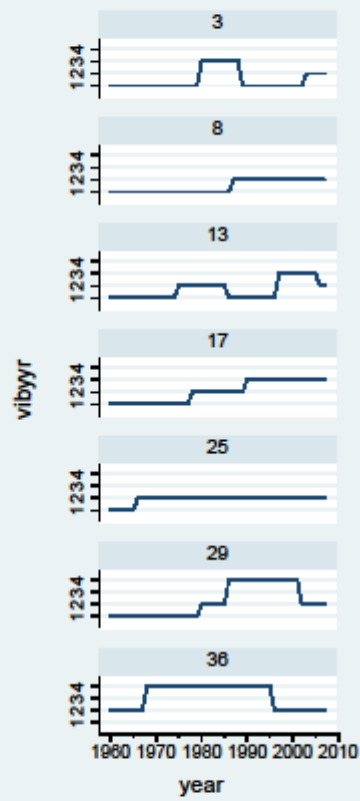
VI level by community, very small forests



VI level by community, small forests



VI level by community, medium forests



VI level by community, large forests

