As China’s economy slows, there is increasing pressure to revamp the nation’s industrial structure into a leaner, meaner manufacturing machine. Obsessed by visions of huge corporate champions bestriding national and global markets, many Chinese planners place the blame for their current woes on low levels of industry concentration—the small market share collectively held by the largest firms. Such thinkers argue that China’s potential is being weighed down by small, poorly performing firms that need to cede the stage to larger and more efficient rivals.

Official efforts to encourage industry consolidation have stepped up in 2013, with the central government announcing new targets in January. These goals focus on concentration ratios, typically measured as the combined market share of the 10 largest firms in a sector. For instance, the concentration ratio for the auto industry is supposed to go up to 90% by 2015 (from our estimate of 57% in 2011) and steel’s is to rise to 60% (from our estimate of 49% in 2011). Since that announcement, central and regional authorities have issued a spate of plans regarding several sectors, with more expected in the coming months. The latest move was a directive from the Ministry of Industry and Information Technology ordering the closure of outdated facilities in 19 different industries by end-year.

Although government rhetoric has signaled support for market forces, their approach to industrial consolidation still relies on administrative measures to force mergers and ban small and outdated producers. Yet the government’s push to consolidate industries is hampered by both a misunderstanding of the problem and a lack of empirical data. The use of concentration ratios into policy targets leads officials to pursue higher concentration as a goal in and of itself, regardless of its economic origins or effects. It is true that many industrial sectors in China are weighed down by a “long tail” of small firms with tiny market share and poor performance, but who, like zombies, just won’t die. But low concentration ratios can also be an indicator that competition is working, and that it is difficult for one firm to accumulate too much market power. So an administrative approach that uses arbitrary criteria to force firms to merge or exit may not actually do much to improve industrial efficiency. In fact, it risks concentrating more market power in large state-owned enterprises, which are rarely allowed to fail. Unless China starts to use more market mechanisms, its push for industrial consolidation will generate few real economic gains.

Concentrate on the data

While hand-wringing about China’s supposedly duplicative and inefficient industrial structure is common, actual data is not. We address this gap by collecting figures from two sources, Chinese industry-specific statistical yearbooks and the Euromonitor database. The Euromonitor database is particularly useful because it allows us to compare results for many consumer goods sectors across different countries. Here our calculations
show that China’s average 10-firm concentration ratio in 16 consumer goods sectors is indeed lower than for major developed economies, though it has been rising in recent years.

But an average concentration level is a bit of a misnomer, as the variation across different industries is huge. On our calculations from Chinese industry data, the 10-firm concentration ratio ranges from a high of 78% (for mining of nonferrous metals, which is dominated by a few state firms) to around 4% for the small-business havens of apparel and retailing (see appendix for the full list). There is also less of a shared trend over time, as concentration ratios in many industrial sectors have fallen instead of rising.

To us, this wide variation indicates there is no one “right” concentration level. More important than a sector’s concentration ratio is how the industry structure is achieved: by competition or fiat. China has relatively high concentration ratios in many sectors with vigorous market competition: passenger cars, mobile phones, beer, construction equipment. But China also has several sectors whose high concentration is the result of the privileged position of a few large state-owned firms controlled by the central government: think electric power, oil and gas, financial services.

The latter pattern appears to be the most common one. Our data clearly indicate that higher concentration levels are closely associated with the predominance of state-owned firms. As the chart below shows, the higher the proportion of SOEs in overall output, the higher the sector’s concentration level; no other factor we tested had much of a correlation. This suggests that privilege more often than competition determines whether a company can seize a dominant market position in China.

Paradoxically, however, while SOE dominance can lead to high industrial concentration, it can also lead to its opposite: the persistence of low concentration and a “long tail” of lots of small firms with tiny market share. This pattern is associated with locally rather than centrally controlled SOEs, and is the result of continued local government support.
for big local employers. Not surprisingly, sectors with longer tails tend to have worse asset-liability ratios and more debt. The cement and steel sectors, with concentration ratios of 31% and 49% respectively, are typical examples of how local SOEs have blossomed thanks to easy access to finance and protection against competitors from outside their regions. In 2011 China still had almost 16,000 cement makers and over 21,000 steel companies, the vast majority of whom produce little while racking up high debts and spilling forth substantial pollution.

The pattern of low industry concentration has its origins in the Mao era, when planners encouraged regional self-sufficiency. This approach reached its climax during the 1960s, with the building of the “Third Front” of military-industrial facilities in inland provinces, where they were supposed to be safe from the reach of US and Soviet forces. The launch of economic reforms in subsequent decades pushed in the opposite direction, aiming to create an integrated national market based on economies of scale and regional comparative advantage. Yet the old industrial pattern still has an influence. China’s state-controlled financial system and the close ties between local firms and their regional governments has encouraged the creation of “local champions” who face soft budget constraints, which results in substantial national fragmentation of industries.

It is this pernicious pattern that the central government is attempting to combat through its policies encouraging industrial consolidation. Yet planners should be cautious: a low concentration ratio is by itself not necessarily an indicator that local protectionism is leading to excess capacity. The low concentration levels found in retailing, apparel and hotels are, for instance, a sign of healthy market competition where economies of scale may be trumped by varied regional tastes and local customer loyalty. Even in an industry like chemicals, some fragmentation is reasonable because the sector is composed of thousands of products unlikely to be produced efficiently by just a small number of companies.
Beijing has many administrative measures in its toolbox for encouraging industry consolidation. To raise concentration in "head" of an industry, officials use policies to limit market entry and ensure a select group of companies has substantial market share. These are supplemented by directed mergers between leading companies, typically SOEs, and their competitors—with compensation to help deal with employees and debts. To attack the long tail, officials use minimum environmental and production capacity standards to force smaller producers to close. The latest announcement of forced capacity closures is part of this pattern: the facilities targeted are those that planners have identified as “backward.”

Such administrative tinkering tackles the symptoms of low industry concentration and excess capacity, but not their fundamental causes. A better strategy would make use of more market mechanisms. The most obvious would be to charge poorly performing but well-connected state firms a market rate of interest on their debt. While only about 11% of bank lending is now heavily discounted, compared to 25-30% just a few years ago, the provision of cheap loans keeps many marginal firms alive. Another technique would be better enforcement of intellectual property rights. The rampant theft of patents, copyrights and trademarks makes it hard for leading firms to consolidate any advantages from new products and services, which reduces the incentive for innovation. The poster children for the detrimental effects of weak IP protections are the pharmaceutical and software industries, neither of which has a dominant Chinese firm.

The third leg of a more market-oriented approach is to make mergers and acquisitions easier. M&A activity has risen substantially over the last decade, particularly following the outbreak of the global financial crisis. In 2012 there were over 2,800 M&A deals in China worth almost $140 billion, with much activity led by private firms, not just SOEs. Yet while deals are on the rise, there are doubts as to how often genuine integration occurs. The target in a government-directed merger is often spared break up and permitted to keep its old employees and product lineup. Acquisitive SOEs like Sinopec, with 108 different subsidiaries, can act more like a ministry overseeing a large number of independent firms rather than the efficient manager of a unified portfolio of assets. As one official told me, Chinese M&A deals are often like “connecting sampans into an aircraft carrier,” imposing from afar but fragile on closer inspection.

**Still waiting for a new approach**

Nonetheless, for the foreseeable future China is likely to continue promoting industry consolidation through primarily administrative methods. There are signs of gradual progress in credit allocation, IP protection and M&A, but their cumulative effect on industry structure is still difficult to discern. There is also widespread recognition that state dominance of the financial sector and close ties between firms and local governments hinder greater efficiency and are a key reason for overcapacity. But officials and industry observers with whom I spoke were universally skeptical that there would be a rapid tilt in the direction of more use of market mechanisms. Top leaders are now putting increased emphasis on upgrading China’s industrial structure and phasing out excess capacity. Without a change in strategy, the effects of their consolidation campaigns are unlikely to be deep or long-lasting.
### Appendix: Concentration ratios by industry

Share of sales by 10 largest firms, ranked by 2011 share

<table>
<thead>
<tr>
<th>Industry</th>
<th>2005</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonferrous metals, mining and processing</td>
<td>27.8</td>
<td>77.8</td>
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<tr>
<td>Dairy products</td>
<td>31.1</td>
<td>62.1</td>
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<tr>
<td>Mobile phones</td>
<td>46.5</td>
<td>61.4</td>
</tr>
<tr>
<td>Electric power</td>
<td>60.8</td>
<td>60.6</td>
</tr>
<tr>
<td>Petroleum, coking, nuclear fuel processing</td>
<td>76.2</td>
<td>59.2</td>
</tr>
<tr>
<td>Passenger vehicles</td>
<td>68.6</td>
<td>57.4</td>
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<tr>
<td>Motorcycles</td>
<td>62.9</td>
<td>53.3</td>
</tr>
<tr>
<td>Alcoholic drinks</td>
<td>35.7</td>
<td>50.4</td>
</tr>
<tr>
<td>Steel</td>
<td>33.3</td>
<td>49.2</td>
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<tr>
<td>Computers and peripherals</td>
<td>38.5</td>
<td>43.7</td>
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<tr>
<td>Home care</td>
<td>32.1</td>
<td>41.3</td>
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<tr>
<td>Soft drinks</td>
<td>37.9</td>
<td>40.9</td>
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<tr>
<td>Coal mining and processing</td>
<td>29.8</td>
<td>40.3</td>
</tr>
<tr>
<td>Consumer appliances</td>
<td>29.6</td>
<td>38.3</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>28.4</td>
<td>37.5</td>
</tr>
<tr>
<td>Beauty &amp; personal care</td>
<td>34.9</td>
<td>36.3</td>
</tr>
<tr>
<td>Cement</td>
<td>15.9</td>
<td>31.1</td>
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<tr>
<td>Chemical fibers</td>
<td>32.0</td>
<td>28.2</td>
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<tr>
<td><strong>Median industry</strong></td>
<td><strong>26.7</strong></td>
<td><strong>27.8</strong></td>
</tr>
<tr>
<td>Tissue &amp; hygiene</td>
<td>16.7</td>
<td>27.4</td>
</tr>
<tr>
<td>Ferrous metals, smelting and pressing</td>
<td>29.5</td>
<td>25.5</td>
</tr>
<tr>
<td>Rubber</td>
<td>25.5</td>
<td>22.0</td>
</tr>
<tr>
<td>Nonferrous metals, smelting and pressing</td>
<td>17.5</td>
<td>18.2</td>
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<tr>
<td>Consumer health</td>
<td>16.4</td>
<td>18.1</td>
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<tr>
<td>Beverages</td>
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<td>17.8</td>
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<td>Packaged food</td>
<td>10.7</td>
<td>16.5</td>
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<tr>
<td>Medicines</td>
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<td>15.9</td>
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<tr>
<td>Communications and electronics</td>
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<td>14.2</td>
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<td>Electrical machinery and equipment</td>
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<td>Textiles</td>
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<tr>
<td>General purpose machinery</td>
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<td>9.0</td>
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<tr>
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<tr>
<td>Processing of food</td>
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<td>8.2</td>
</tr>
<tr>
<td>Retailing</td>
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<td>4.2</td>
</tr>
<tr>
<td>Apparel</td>
<td>2.1</td>
<td>3.9</td>
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*Industry yearbooks, GK Dragonomics research*