

tried to overturn the oligopoly "by encouraging Chinese customers to negotiate purchases in unison, by hunting for alternate supplies and even by buying a stake in Rio, all to little effect."<sup>28</sup> In this case, buoyant demand and limited supply restricted Chinese government power to restructure the market, though China later brought bribery charges against officials of Rio Tinto.<sup>29</sup> In other cases, which depend upon direct investment or access to the internal Chinese market, the situation is reversed, and the government has wielded its economic power. And in September 2010, after a maritime dispute, China curtailed its export of rare earth minerals to Japan.

Even where natural resources are scarce within a nation's borders, their absence is not an index of low economic power. Much depends on a country's vulnerability, and that depends on whether substitutes are available and whether there are diverse sources of supply. For example, in the 1970s some analysts expressed alarm about the increasing dependence of the United States on imported raw materials and therefore its vulnerability. Of thirteen basic industrial raw materials, the United States was dependent on imports for nearly 90 percent of aluminum, chromium, manganese, and nickel. The ability of oil producers to form a cartel (OPEC) was taken as a harbinger for other commodities. Power was seen as shifting to the producers of natural resources. But over the next decade, raw materials prices went down, not up. What happened to the prediction? In judging vulnerability, the analysts failed to consider the alternative sources of raw materials and the diversity of sources of supply that prevented producers from jacking up prices artificially. Moreover, technology improves over time. Projections of U.S. vulnerability to shortages of raw materials were inaccurate. Analysts should not only consider technology and



## NATURAL RESOURCES

Sometimes people equate a rich endowment in natural resources with economic power, but the relationship is complicated. Japan, for example, became the second richest country in the world in the twentieth century without significant natural resources, and some well-endowed countries have not been able to turn their natural resources into national wealth or power. For example, some oil-producing countries remain weak, and because of oil's sometimes perverse social and economic effects, observers refer to an "oil curse." To the extent that oil wealth leads to corrupt institutions and an unbalanced economy that discourages broader entrepreneurship and investment in human capital, it may inhibit the development of national power.<sup>27</sup>

States struggle to shape the structure of markets to their advantage by manipulating market access with tariffs, quotas, and licenses; diversifying supply chains; pursuing equity shares in companies; and using aid to gain special concessions. Success varies with the asymmetries in particular markets. For example, for decades the annual price-setting negotiations between big suppliers of iron ore and leading steelmakers were dull as prices rose only gradually. But after China emerged as a buyer of more than half of all iron ore exports, prices quadrupled between 2002 and 2008. The Chinese government was nervous about its dependence because just three firms (BHP, Rio Tinto, and Vale) dominated trade in iron ore. So China's government, acting through state-owned enterprises