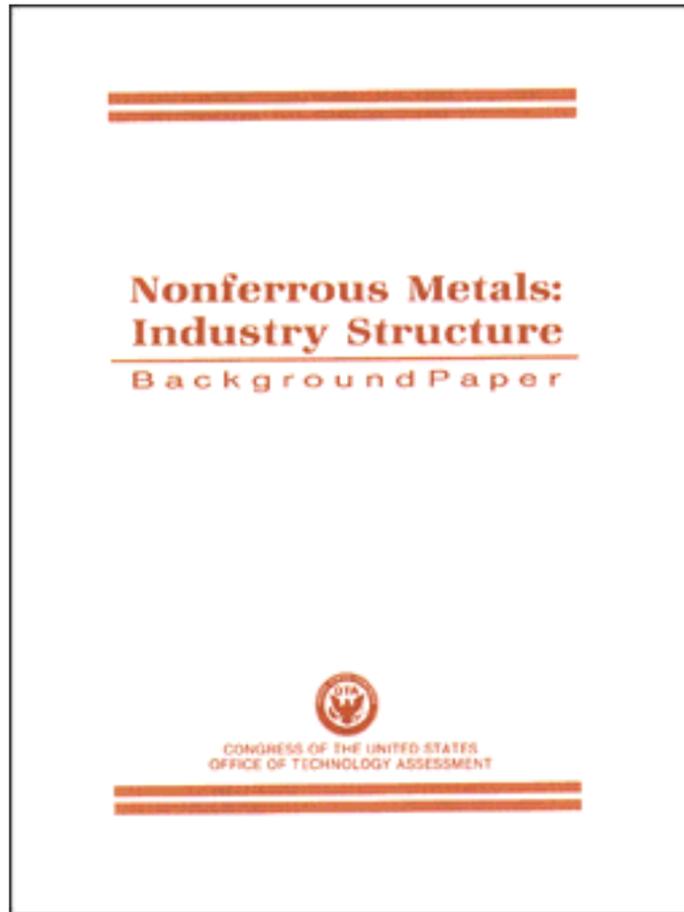


Nonferrous Metals: Industry Structure

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Foreword

The 1980s were turbulent for the domestic nonferrous metals industries. Many mines and plants were closed during the decade, because of a variety of factors including aging facilities, environmental regulations, and low metals prices. The corporate structures of the industries also changed drastically as companies bought, sold, and merged businesses in order to become more competitive.

OTA examined the copper sector of the nonferrous industry in its 1988 report *Copper: Technology and Competitiveness*. That report describes the conditions the copper industry faced during the early 1980s. It documents the steps U.S. copper companies took to improve their position in the mid- 1980s, and evaluates the industry's present and possible future status.

This paper, requested by the Subcommittee on Mineral Resources Development and Production of the Senate Cornrnittee on Energy and Natural Resources extends the analysis of the earlier report. This report profiles the structures of four domestic nonferrous metals industries (copper, aluminurn, lead, and zinc) and the changes they have undergone since 1980. The study also outlines the U.S. position in the world markets.

The study found that the four industries are not homogeneous. They are distinct with each having its own experiences, problems, and structure. The copper industry had many temporary mine and plant closures during the 1980s, but rebounded late in the decade as a result of cost cutting programs and high copper prices. Though there were major changes in copper mine and plant ownership, most of the shifts consolidated assets among existing producers. There were, however, major changes in the ownership of the companies themselves. The last aluminum smelter built in the United States opened in 1980. Since then, about 20 percent of U.S. capacity has closed. The four 'major' U.S. firms have emphasized the fabrication sector of the business in the United States and expanded their primary aluminum capacity overseas. In the lead industry, much of the mine and plant capacity changed ownership in the 1980s. kad production declined by about a quarter to a third in the various primary sectors of the industry. The secondary (recycled) lead sector, which now accounts for 65 percent of domestic lead production, is a major influence on the market. Much of the primary zinc industry also changed ownership during the decade. The zinc processing sector experienced the greatest decline of the four industries. Its decline started in the mid- 1970s. The outlook for lead and zinc has improved somewhat in recent years. Several new mines opened late in the decade. The Red Dog, Alaska mine (slated to open in 1990) will greatly increase the U.S. presence in lead and zinc mining industries.

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