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PATTERN OF INTERNATIONAL TRADE  
IN CHROMITE AND FERROCHROMIUM

AN HISTORICAL PERSPECTIVE

by

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Department of Commerce

Faculty of Economics and Commerce

The University of Adelaide

Thesis submitted to the  
Board of Graduate Studies  
for the degree of  
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ABSTRACT

Pattern of international trade in chromite and ferrochromium -  
an historical perspective

Edward N. Eadie

Chromite is the ore of chromium consumed in a wide range of applications in the metallurgical, chemical, and refractory industries, while ferrochromium is a chromium-iron alloy produced from chromite and used in the manufacture of stainless steel as well as other chromium bearing steels and alloys. Chromium is one of the most strategic materials in the world.

Annual world chromite production has shown tremendous growth since 1892, and most chromium consuming countries have not generally been chromite producers so that international trade in chromite and ferrochromium has been of vital importance, particularly to the United States as the world's largest consumer. Detailed statistics on world chromite production, exports and imports, and on world ferrochromium exports and imports by country are presented in systematic form in terms of both tonnage and percentage on an annual basis over a long period to 1980. In addition, statistics showing trade ties between countries are tabulated for specific periods.

The main features of the production and international trade patterns are described in conjunction with a consideration of the great many factors that have exerted an influence in determining the pattern of international trade world-wide in chromite and ferrochromium over its history. In the case of trade aggregates these factors include, among others, new ore discoveries, types of ore, technological developments, transportation availability, price competitiveness, economic activity levels, the effects of war, United Nations economic sanctions, and strategic

stockpiling, while in the case of trade ties the factors appear to be metallurgical characteristics, geographical proximity, political relationships, international ownership links, established buyer-seller ties, and differential tariffs. The many different factors involved at various times in the global evolution of the pattern of international trade aggregates for chromite and ferrochromium make it most appropriate to use a descriptive analysis in which the most significant factors in operation at any time are considered in their relevant historical and geographical context. This is done on a decade by decade basis that corresponds to the tabulated data, and enables the more important countries during each period to be highlighted. Further, trade ties during specific periods are examined using a model suitable for analysing transaction flows, and anomalies generated by the model are useful in explaining the spectrum of trade ties observed.