

AUSTRALIA

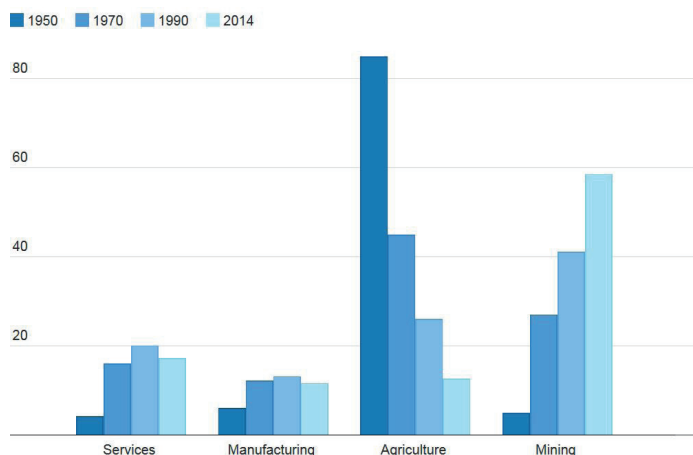
Raw Materials Strategy and Priorities #2



The **invention of bulk carrier vessels decreased transportation costs** of ores. This was important for Australia, as an island nation, and allowed diversification of its commodity portfolio and increase in trade with Japan and other Asia Pacific countries following World War II. This increase in export was supported by **flexible trade policies**.

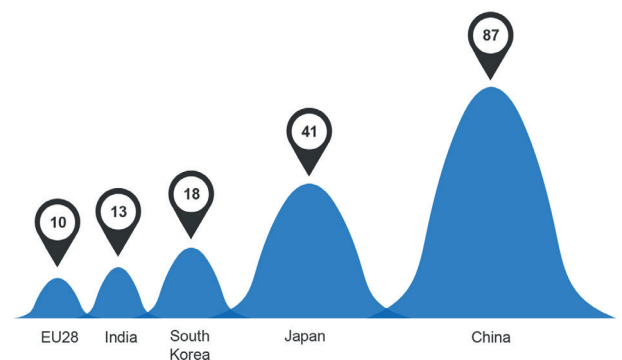
Australia has a **strong history of research and innovation** in the mining sector, including the development of the flotation method of ore separation, and heap leaching of low-grade ores. Australia is currently leading in the use of automation at mine sites. Several mines in the Pilbara region are currently piloting technologies such as driverless haul trucks, automated wheel changes for haul trucks, driverless trains, remote train and ship loading, remotely-operated drill and blast technologies, and development of new underground tunnelling machines. These innovations are expected to greatly increase mine productivity and provide a competitive advantage.

Australia has **historically been able to adapt its economic and trade policies to international conditions** in order to ensure a prosperous mining sector that endeavours to make full use of Australia's mineral resources.



Contributions to Australia's exports by sector (%) (2015).
Source: Garnett

Australia's **mining education sector is well-established** and has a good reputation globally. The strength of this sector has provided the mining industry with a **skilled workforce**, which has been further supplemented through **employment-based immigration**. Local workforce shortages in rural areas have typically been overcome through fly-in fly-out or drive-in drive-out schemes. A lack of synchronisation between the supply of graduates and mining booms has arisen from students enrolling in mining-related studies during an upward mining cycle and graduating during a downward mining. However, this is being addressed by a number of measures to consistently attract a large number of students to mining courses, driven by Mining Education Australia.



Major markets for Australian exports (AUD) (2018).
Source: Resources and Energy Quarterly