



RESEARCH NOTE

Number 54, 25 June 1996
ISSN 1323-5664

Performance of Australian Merchandise Exports in East Asia: A Constant Market Share Analysis

Issues

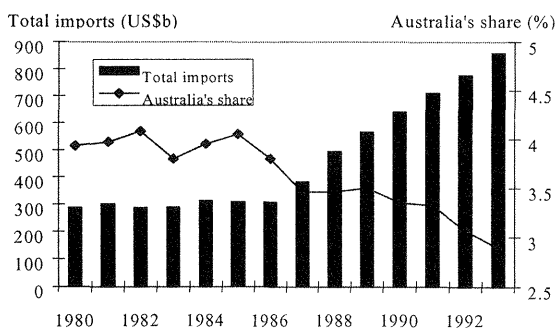
Since the mid 1980s, Australia has achieved impressive growth in exports to East Asian countries.ⁱ Total exports doubled during 1985-1993 with manufacturing exports having increased threefold, agricultural exports by nearly 100 per cent and fuels, minerals and metals by 60 per cent (Figure 1).

However, despite the strong growth, Australia's overall market share in East Asian merchandise imports declined from 4.05 per cent in 1985 to 2.89 per cent in 1993 (Figure 2). In view of the size of the East Asian import market, the loss of this 1.16 per cent market share was significant and was equivalent to about \$A12 billion worth of potential exports.

The declining share of Australia in the East Asian market has been an issue subject to hot debate in Australia. The Industry Commission, in its review of Australia's recent comparative economic performance, has discussed several possible reasons for Australia's decline in market share.ⁱⁱ These include:

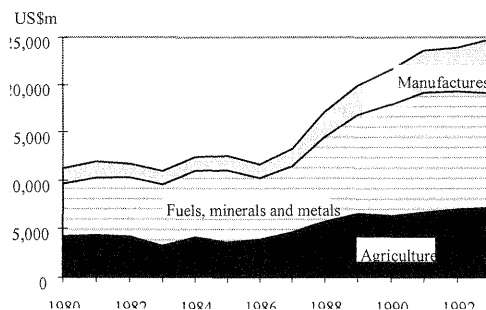
- a decline in the relative prices of primary commodities;
- faster growth of manufacturing imports from the East Asian

Figure 2 Australia's share in East Asian imports, 1980-93



Source: UN trade data, International Economic Data Bank, The Australian National University.

Figure 1 Australia's exports to East Asia, 1980-93



Source: UN trade data, International Economic Data Bank, The Australian National University

- countries;
- export supply constraints from Australia;
- a decline in Australia's competitiveness; and possibly
- the distance factor.

This note uses a statistical tool, called the constant market shares (CMS) analysis, to examine Australia's export growth attributable to 'world trade effect', 'commodity composition effect', 'market distribution effect' and 'competitiveness effect'. The method has several limitations, but, treated cautiously, it helps to identify the areas in which possible explanations should be looked for and supplements earlier findings. The identification of these different effects is important as this has policy implications.

CMS model

The CMS model can be expressed in a schematic representation as shown in Figure 3:ⁱⁱⁱ

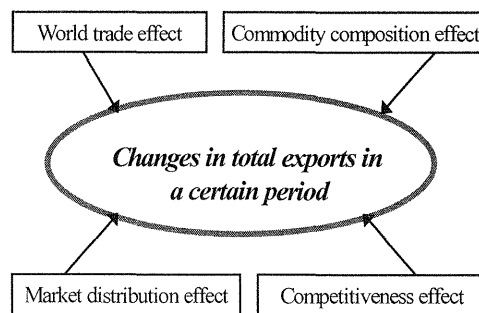
'World trade effect' indicates that part of Australia's export growth is attributable to the general increases in East Asian imports. The magnitude of

this effect shows the potential increase of Australian exports if it were able to maintain its share of East Asian imports.

'Commodity composition effect' shows whether Australia has concentrated on the export of commodities for which markets have been expanding rapidly, or on commodities for which markets have been expanding less rapidly. This effect reflects the factor endowment of the export country (for instance, Australia is well endowed with land and mineral resources) and the income and price elasticities of demand for the products in which that country specialises.

'Market distribution effect' indicates Australia's ability to concentrate on

Figure 3 Schematic representation of the CMS model



relatively rapidly growing countries. The change in exports due to market distribution depends on trade policies and income growth in foreign countries.

'Competitiveness effect' is defined by the residual term of the CMS model. As a residual it picks up everything not explained by the first three effects. However, this term is taken to indicate the improvement or the deterioration in the competitiveness of exports depending on whether the term has a positive or negative sign. It is usually assumed that this effect is independent of the

three other effects discussed above and it largely reflects the role of domestic factors of the exporting country.

Analysis of sources of the loss in market shares

Standard International Trade Classification (SITC) product groups 0-8 (agricultural products, fuels, minerals & metals and manufactures) and East Asian markets (ASEAN, Northeast Asia, Japan and other East Asian countries) are considered for the CMS analysis. The period chosen for examination is 1985-93 as this period saw substantial growth of trade in these markets and a noticeable decline in Australia's market share.

Table 1 shows CMS breakdowns of Australia's exports. Several key points can be drawn from the table.

First, growth in Australia's exports to East Asia was largely caused by world trade effect. This can be also seen in the simultaneous growth in East Asian total imports and imports from Australia since the mid 1980s (Figures 1 and 2).

Second, the market distribution effect is positive, but very small. This indicates that Australia was able to

Table 1 CMS decomposition of Australian exports (SITC 0-8)

Million US\$	
Sources of Change in exports (SITC 0-8)	1985-93
Increase in exports	12,299 (100.00)
World trade effect	22,284 (181.18)
Commodity composition effect	-7,982 (-64.90)
Market distribution effect	1 (0.01)
Competitiveness effect	-2,004 (-16.29)

Notes: Figures in parentheses represent percentage changes.

concentrate to a limited degree on the countries whose imports grew relatively fast.

Third, the commodity composition effect was unfavourable during the period examined. This suggests that Australia produced commodities with below average increases in demand. Figure 4 illustrates this point more clearly. Manufactures were a group of commodities subject to the highest growth in East Asian imports during 1985-93. Although Australia's exports were able to match roughly that growth, the small base for manufacturing exports (less than one per cent in total East Asian imports) meant that the growth was far from enough to cover the loss of total market share due to Australia's concentration on slower-growth product groups.

Finally, the negative number for the competitiveness effect indicates the deterioration in the competitiveness of Australia's exports to East Asian countries. While it is possible that this effect may capture some external factors such as US and EU subsidies to farm exports which have depressed Australia's exports, the magnitude of the effect found in this study certainly warrants

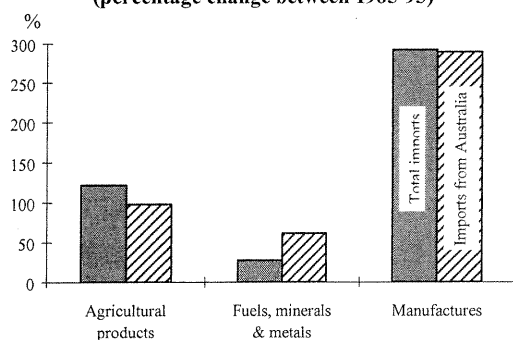
further consideration.

Policy implications

The above results show that Australia should concentrate on improving its export commodity structure and competitiveness if it wants to maintain its share in the East Asian market. Although the unfavourable commodity composition effect would become smaller if we take account of services exports in which Australia appears to have a comparative advantage, Australia should further adjust its economic structure to take advantage of the higher growth of manufacturing imports in the East Asian countries.

Export competitiveness is also shown as important. Competitiveness is influenced by many factors, with domestic ones usually being major determinants. Further study is called for which could help to identify the influences on competitiveness in the main industry groups. This would help in the development of sensible policy responses for the sake of improving Australia's competitiveness in the fast-growing East Asian market.

Figure 4 East Asian imports by commodity group (percentage change between 1985-93)



Source: UN trade data, International Economic Data Bank, The Australian National University.

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ⁱ East Asian countries include ASEAN and Northeast Asian countries plus Vietnam, Laos and Cambodia.

ⁱⁱ The Industry Commission, *Annual Report 1992-93*.

ⁱⁱⁱ For a formal algebraic expression of the CMS model, please refer to Richardson, D. 1971, "Constant-Market-Shares Analysis of Export Growth", *Journal of International Economics*, 1, pp. 227-239.