export-led growth hypothesis.<sup>25</sup> Many other studies, however, do support the export-led growth hypothesis whereby economies that increase the share of exports in GDP have higher rates of growth. Otani and Villanueva, for example, estimate that increasing the export/GDP ratio by 2 percentage points would lead to a sustained increase in per capita GDP growth of 4-5 per cent per year.<sup>26</sup> These studies, however, show the existence of a <u>correlation</u> between growth and exports, but do not address the causality issue directly.

Other articles do attempt to address causality explicitly. Chow, for example, concludes that growth in manufacturing exports was responsible for industrial development, either unidirectionally or bidirectionally, in seven of the eight Newly Industrialized Countries (NICs) that he studied.<sup>27</sup> Jung and Marshall also employ

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<sup>&</sup>lt;sup>25</sup>It should be noted that Figure 4 is an oversimplification of the complexity of the actual export share-real GDP growth relationship, but it does provide us with an indication of the correlation between the two variables. Other factors which may be important in determining the importance of exports as an engine of growth include the size of the domestic market, the extent to which domestic and international markets are efficient, the level and degree of relative price distortions, etc. See Santo Dodaro, "Exports and Growth: A Reconsideration of Causality," *Journal of Developing Areas*, Vol. 27, No. 2 (January 1993), pp. 231-2 for a discussion.

<sup>&</sup>lt;sup>26</sup>Ichiro Otani and Delano Villanueva. "Determinants of Long-Term Growth Performance in Developing Countries," IMF Working Paper No. 88/97 (November 1988). For evidence of this in the case of Africa, see Augustin Kwasi Fosu, "Exports and Economic Growth: The African Case." World Development, Vol. 18, No. 6 (June 1990), 831-5. The other articles frequently cited in support of the export expansion hypothesis are: Gershon Feder, "On Exports and Economic Growth," Journal of Development Economics, Vol. 12, Nos. 1 & 2, (February/April 1983), 59-73: Rostam M. Kavoussi, "Export Expansion and Economic Growth: Further Empirical Evidence," Journal of Development Economics, Vol. 14, Nos. 1 & 2 (Jan-Feb 1984), 241-50; Rati Ram, "Exports and Economic Growth: Some Additional Evidence," Economic Development and Cultural Change, Vol. 33, No. 2 (January 1985), 415-25; Bela Balassa, "Exports, Policy Choices, and Economic Growth in Developing Countries After the 1973 Oil Shock," Journal of Development Economics, Vol. 18, No. 1 (May/June 1985), 23-35; Deepak Lal and Sarath Rajapatirana, "Foreign Trade Regimes and Economic Growth in Developing Countries," World Bank Research Observer, Vol. 2, No. 2 (July 1987), 189-217. William L. Wilbur and Mohammed Z. Haque, "An Investigation of the Export Expansion Hypothesis," Journal of Development Studies, Vol. 28, No. 2 (Jan. 1992), 297-313, explicitly address the link between exports and domestic savings.

<sup>&</sup>lt;sup>27</sup>Peter C.Y. Chow, "Causality Between Export Growth and Industrial Development: Empirical Evidence from the NICs," *Journal of Development Economics*, Vol. 26, No. 1 (June 1987), 55-63. Chow's methodology, however, can be criticized on the grounds that his chosen sample was biased since it included only eight industrialized countries, and not other countries that were not industrialized.