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The link between economic development and the income elasticity of import demand

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Abstract

In both the international economics and economic development literatures, it has been noted that there is a tendency for the income elasticity of import demand to rise over time. In the first part of the paper, data from a large sample of countries is used to show that this tendency seems to be a general phenomenon. However, the previous studies on this issue have not offered a general explanation of this tendency. The second part of the paper develops a general explanation of why the income elasticity of import demand rises with the level of GDP per capita. The starting point of the analysis is that the process of economic development normally is associated with a rising share of manufacturing in GDP. In turn, this tends to increase the share of manufactured relative to nonmanufactured imports. Given that the income elasticity of import demand is higher for manufactured than nonmanufactured imports, the changing composition of imports increases the overall elasticity of import demand. The empirical results indicate that this is a plausible explanation for why the income elasticity of import demand rises with the level of GDP per capita.

JEL classification: O1; F10

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1. Introduction

Since the mid-1980s, the ratio of imports to GDP has been rising in virtually all countries. Because of this, imports are becoming an increasingly important factor in determining the rate

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of growth of real GDP. In attempting to manage this growth, policymakers rely on forecasts of changes in real GDP. In this environment, forecasts of imports are becoming an increasingly important component of the overall forecast. In turn, this means that the determinants of imports become more important over time. In general, these determinants are real GDP, import prices, domestic prices, and the exchange rate. While all of these factors are important, imports do not respond to these determinants over the same time frame. Imports respond rather slowly to changes in relative prices and the exchange rate. On the other hand, imports respond to changes in real GDP within one to two quarters. In determining the short-run evolution of imports, changes in real GDP have more of an impact than either relative prices or exchange rates. The income elasticity of demand for imports becomes a more important factor in determining imports in the short run and by extension changes in real GDP. As a result, the size of this elasticity becomes important for policymakers concerned with short-run changes in real GDP. Any significant changes in this elasticity have obvious implications for the accuracy of macroeconomic forecasts and the efficacy of macroeconomic policy. The same is true on the other side of the trade balance. An important determinant of exports is the level of foreign real GDP. Changes in real GDP in other countries can quickly affect the level of exports with noticeable impacts on the domestic economy.

In both the international economics and economic development literatures, it has been noted that there is a tendency for the income elasticity of import demand to rise over time. This tendency was first noted by Houthakker and Magee (1969) in a study of U.S. import demand. Their results for the U.S. have been confirmed by Deyak, Sawyer, and Sprinkle (1997) which contains a review of studies for the U.S. and other developed countries.[1] In the economic development literature, several papers analyzing the demand for imports for a particular country have also noted a tendency for the income elasticity of import demand to rise over time. These studies include Melo and Vogt (1984), Boylan and Cuddy (1987), and Mah (1999) and the countries considered were Venezuela, Ireland, and Thailand, respectively.

The research cited above is incomplete in two respects. First, since the existing studies are country-specific, they have not established whether the tendency for the income elasticity of import demand to rise over time is a general phenomena. If the pattern holds for a large number of countries, this would imply that the income elasticity of import demand may be predictable and needs to be considered for economic policy. Second, the existing literature offers several competing explanations. These range from changes in development policy to changes in the degree of openness of the economy. However, these explanations are offered more in the way of suggestions for future research.

The purpose of this paper is to investigate the behavior of the income elasticity of import demand that has been hypothesized in the previous literature. The first problem noted above is that the literature on the subject is fragmented and deals with only a limited number of countries. This raises the possibility that the presumed increase in the income elasticity of import demand might not even be the case. As a result, the second section of this paper is concerned with establishing whether or not this phenomenon exists for a much larger sample of developed and developing countries. The third section of the paper offers a more formal explanation as to why the income elasticity of import demand may rise over time. This explanation is then examined using data

[1] Akhtar (1980) indicated that there was a tendency for the income elasticity of import demand to rise over time for a sample of industrial countries. Similar results for the U.S. were obtained by Deyak, Sawyer, and Sprinkle (1989). Clarida (1994) and Feenstra (1994) have considered the sources of increases in the income elasticity of import demand for the U.S.