

Natural vs Market Prices: Comparison on Japan for 50 years

Topic: Prices in IO models

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David Ricardo thought that market prices fluctuate around natural prices, and that natural prices are regulated by the total labour requirements of producing each commodity. That is, total labour required to produce that commodity (total labour requirements) determines the value of each commodity, and relative prices are determined by its value. This paper tries to examine this proposition using data from input output tables, supporting tables and other labour statistics from Japan from 1951 to 2000.

Market prices and natural prices for outputs of 32 unified industries of Japan for years 1951 to 2000 were calculated. A set of natural prices was calculated solving simultaneous equations based on input output tables as prices that achieve equal return to all those engaged in production. It should be mentioned that depreciation cost of capital are proportioned to each sector producing capital goods by this final study.

Findings are as follows: (i) Divergence between market prices and natural prices for all industries fluctuates. The gaps between the two prices are relatively small for 1960 and 1980, while the gap widens for years 1970, 1990 and 2000. A simple statement such as market prices converge towards natural prices does not hold with all industries, by standard deviation. (ii) When agriculture is taken into consideration, market prices of agriculture diverge from natural prices. (iii) When narrowly defined manufacturing industries, only are taken into account, market prices do have a tendency to converge towards natural prices. These movements may be explained by international competition of free entry and exit as machineries are traded goods and also by the standardised wage negotiation process of manufacturing sectors, especially machineries. (iv) Profitable industries at profitable periods diverge from natural prices.