

AN ANALYSIS OF MARKET INTEGRATION FOR TWO
VEGETABLES IN WEST JAVA, INDONESIA

*A Dissertation Submitted in Partial Fulfilment
of the Requirements for the Degree
of Master of Economics*

by

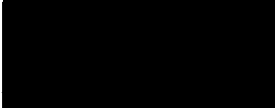
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DECLARATION

I certify that the substance of this dissertation has not already been submitted for any degree and is not being currently submitted for any other degree.

I certify, to the best of my knowledge, that any help received in preparing this dissertation, and all sources used have been acknowledged in this dissertation.

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ABSTRACT

Vegetables are important in Indonesia from the point of view of consumption, production and income. Vegetable production has been increased every year since the early 1970s and, in 1983, it increased by 35.1 per cent over the 1982 level.

Marketing is one of the constraints in Indonesian agriculture. One of the important problems in agricultural marketing is the farmers' lack of knowledge of the local conditions and potential market. Therefore, the government has implemented marketing information services since 1979, which are designed to assist farmers and buyers to understand the price movement and other marketing parameters.

West Java is one of the most important provinces in Indonesia in terms of agricultural production and is the biggest supplier of vegetables for the capital city of Indonesia, Jakarta. In West Java, the vegetables which have the main role in the economy are potatoes, cabbages, carrots, tomatoes, red peppers and onions.

The general objective of the study is to identify the price integration among markets for selected vegetables. More specifically, the objectives of the study are: (1) to study the price integration of market places for major perishable vegetables over time; (2) to study the price integration of market places for relatively non-perishable vegetables over time; and (3) to draw policy implications from the foregoing analysis.

The measurement of price integration is undertaken using the concept of market integration. The market integration model can be employed to measure the extent to which local prices are influenced by prices elsewhere (Ravallion 1986). The present study used local prices in the production area of West Java and the reference prices are from Jakarta and Bandung. The study employed the index of market connection (IMC) constructed by Timmer (in Heytens 1986) to measure the degree of

market integration between the local and reference markets.

With the availability of appropriate data, the study used daily prices of potatoes and cabbages which are broadcast nationally every weekday at 8.05 p.m. (West-Indonesian Time). Potatoes were studied in two reference markets (Jakarta and Bandung) and three local markets (Pangalengan, Cikajang and Ciwidey) over the period 1986-1988. Cabbages, like potatoes, were studied in two reference markets and four local markets (Pangalengan, Cikajang, Cipanas and Lembang) during 1987-1988. The analysis of the degree of market integration was undertaken in two parts, i.e., for the whole study period and on a year by year basis.

Firstly, the model was run by using the ordinary least squares (OLS) method where R squared values were satisfactory and F tests were satisfied. However, the Durbin h statistic indicated most of the models had autocorrelation (positive or negative). Therefore, the model was re-estimated using the moving average first order (MA (1)) error method.

For the whole study period, the degree of market integration between the local markets and the reference market of Jakarta was found to be maximal. The highest degree of integration with a local market was for Ciwidey (for potatoes) and for Cipanas (for cabbages). The degree of market integration for potatoes is higher than that for cabbages. On the year by year basis, the results were not very different, although some differences were found. For example, these results indicated that in some years the markets are segmented rather than integrated for all years as suggested by the results of the whole period analysis.

Finally, following the results of the study and assessment of the hypotheses, some possible policy recommendations and limitations of the present study are noted, and directions for further research are suggested.

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