

Although Kenya completely liberalized its maize market in December 1993, the country continues to experience frequent food shortages that greatly compromise the welfare of its citizens, more so the poor. In Kenya, food shortages are inextricably linked to maize, the major staple foodstuff. Persistent maize crises have sometimes manifested themselves in simultaneous existence of maize surpluses in some regions (North Rift and parts of Western Kenya) and maize shortages in others (Eastern and North Eastern Kenya). This scenario has placed great doubt on the nature and extent of integration of maize markets.

This study analyses two major aspects pertaining to integration of maize markets in Kenya. These are spatio-temporal integration of periodic markets and effects of liberalization policies on maize prices. The study examines the spatial distribution of market places and market days and also describes the relationship between population density and market provision. The study further assesses the degree spatio-temporal integration (synchronisation) of periodic markets. The study also presents a comparative assessment of the constraints female and male traders face in their maize trade. Another aspect that this study examines is the degree of integration of surplus and deficit maize markets. The study also evaluates how integration has been affected by liberalization policies. The study finally tests for Granger causality between maize markets.

Two complementary approaches were utilized in addressing the research theme: a quantitative analysis of spatio-temporal location of markets and maize price data and a qualitative inquiry into the constraints maize traders face. Data processing, analysis and presentation utilized the following techniques: computation of R_n values, correlation analysis, comparison of empirical results with the model of maximum synchronization of markets with a three day market periodicity, computation of summary statistics, frequencies, computation of measures of dispersion, cointegration techniques, Granger causality tests and use of percentages.

This study found that market places and market days are significantly uniformly distributed as indicated by the R_n values. A consideration of the underlying projected 2003 population in the sampled districts led the researcher to conclude that this regular spatial arrangement is an efficient pattern to serve the consumers. An analysis of the spatio-temporal integration of the periodic markets revealed that the marketing system favours the consumers more than the itinerant traders. This hampers proper movement of maize and other commodities from the areas of surplus to the areas of deficit by the itinerant traders. The activities of the itinerant traders, as integrating agents, are hampered by a number of infrastructural, institutional and policy constraints. The study further found out that female traders are more constrained than male traders in conducting maize trade. Cointegration analysis among spatially separated markets both in the pre- and post-liberalization eras revealed that liberalization policies have improved the transmission of price signals among various markets in the country, thereby strengthening the links between them. Granger causality tests revealed that strong central markets have emerged in the major production and consumption zones.

On the basis of the findings of this study, some useful policy recommendations are made. First, efforts should be made to synchronize market places and market days, establish new market places and market days and establish complimentary institutions. This could foster the integration of the rural economy leading to development. Secondly, efforts should be made to improve transportation and communication infrastructure, storage facilities and market facilities. Other recommendations include developing and implementing grading and standardisation of maize, establishing an effective and efficient agricultural market information system, establishing and promoting maize and other grain traders, dealers, transporters and processors

associations, devising a special credit policy especially for female traders and other market participants, providing short and long term training to various stakeholders in the maize industry and devising and implementing a gender sensitive maize marketing policy.