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A Disaggregated Analysis of Product Price Integration in the Southern African Development Community

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Introduction

Integrated product markets are characterised by the absence of (or very low) barriers to commerce and the movement of goods. More integrated product markets are expected to experience higher volumes of bilateral trade, stronger competition and greater convergence in relative prices. Progress towards greater market integration should be reflected in lower price differentials for similar products across markets.

Price-based empirical evidence on the extent to which product markets are integrated in developing regions is noticeably limited, particularly in Africa. This is in spite of the obvious importance of studying market integration in the African context, where transport costs are high and other market rigidities that hamper the flow of goods – stemming from factors such as poor infrastructure, regulatory barriers and inefficient border controls – may segment markets.

Our paper addresses the shortage of price-based studies of product market integration in Africa. We do so by using highly disaggregated monthly retail price data for twenty-four narrowly defined products collected at the district level over the period from 2006 to 2009 in four Southern African Development Community (SADC) countries – Botswana, Malawi, South Africa and Zambia – to assess the extent to which product prices are integrated within and between these countries. Our sample of products covers a diverse range of categories from foods, and clothing and textiles, to machinery, equipment and electronics, and other products.

Key Results

Our empirical results suggest that product markets in the SADC region are fragmented. Product prices are dispersed both within and between the four SADC countries; and price dispersion is greater between countries than across districts within the same country. Within the four countries, product prices differed between districts by 34% on average in 2009; while between-country price deviations averaged 77% in that year. The magnitude of these deviations differs considerably across different types of products. Between countries, price differences are largest, on average, for the food products.

Our analysis reveals a number of key factors influencing product market integration. Average dispersion in retail prices is smaller between SADC country pairs that are adjacent to each other; and between Botswana and South Africa, who share common membership in the Southern African Customs Union (SACU). This suggests that geographic proximity and shared membership in a customs

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union are important factors driving greater integration of product prices between countries in the region.

Transaction costs of trade as proxied by distance hamper product market integration. Absolute price dispersion between district pairs in the region increases the further apart the districts are from each other. Border barriers also impede integration. Even after accounting for the distance between districts, price dispersion is higher in the case of districts separated by a national border. Our results indicate that 100 km in distance between districts causes prices to deviate by 17.5%, while crossing a national border in the SADC adds 11.8% to relative prices between countries. Our estimated average border effect for the SADC region is higher than equivalent estimates based on actual price level data for developed regions (see, for instance, Engel et al., 2005; and Broda & Weinstein, 2008), Nevertheless, our results fall in the middle of the range of existing estimates of border effects in different regions in Africa, which range from 7% in Central and East Africa (Brenton et al., 2014) and 13.6% among East African Community countries (Versailles, 2012) to as high as 23% in the case of the South Africa–Botswana border (Nchake, 2013) and between 17% and 26% in the case of the Niger–Nigeria border (Aker et al., 2014).

There is little evidence of increased product market integration in the SADC between 2006 and 2009, despite the liberalisation of tariffs on intra-regional trade under the SADC Protocol on Trade. When the four countries are considered together, our results indicate that product prices actually became less integrated in the region over this period. However, when looking at the trends for individual country pairs, there was some evidence of price convergence between the Common Market for Eastern and Southern Africa countries (Malawi and Zambia).

When directly analysing the relationship between tariff reform and borders using data for South Africa and Zambia, we find evidence that the reform of preferential tariffs reduced the border effect (Balchin, Edwards & Sundaram, 2015c). However, this reduction appears to be offset by other factors.

Policy Implications

Within the SADC region, significant progress has been made over the past two decades in advancing the broader vision of regional integration. This has been evident in notable reductions in tariffs on intra-SADC trade; a process that accelerated following the introduction of the SADC Protocol on Trade in 2000. However, trade costs still matter in the region. The large price gaps within countries suggest that transport infrastructure impedes integration within SADC countries. High additional price differences between countries imply border barriers to integration.

Trade reform is a potentially important source of lower border effects, but trade liberalisation alone appears not to be sufficient in generating greater product market integration within SADC. This will require complementary policies. Further research is required to determine the sources of the border barriers, which could, for example, arise due to the complex and restrictive rules of origin and import sourcing requirements contained within the SADC Protocol on Trade, inefficient trade administration procedures, delays at border posts, or other factors. This can form the basis for the development of effective policies designed to reduce border-related trade costs and drive greater product market integration in the SADC region.

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