

CHAPTER 5

SUMMARY AND POLICY IMPLICATIONS

5.1 INTRODUCTION

This thesis reviews the evolution of trade policy in South Africa over nearly the last quarter of a century and indicates the performance of the manufacturing sector during that period. In analysing productive efficiency, emphasis is placed on understanding total factor productivity and its components. The literature on stochastic frontiers and efficiency measurement is reviewed to provide the baseline analytical framework. The methodologies for decomposing the sources of total factor productivity into efficiency and technical change are explained. The methodologies are then applied to South African manufacturing data set to estimate efficiency and technical change. Using the results from the empirical work, the evolution of how the TFP components are related to the liberalisation episodes is explored.

The thesis also focused on the key determinants of total factor productivity with emphasis placed on the channels through which trade affects manufacturing productivity. Again, South African manufacturing data is used to investigate the suggested theoretical links. Finally, the effect of trade on derived labour demand is analysed. An interesting aspect of this part of the research is the use of a unique South African data set to investigate the postulated theoretical arguments regarding the behaviour of manufacturing. The main conclusions and implications of the research are summarised in Section 5.2, while the areas for further research are indicated in Section 5.3 below.

5.2 CONCLUSION: OVERALL POLICY IMPLICATIONS

A number of policy implications emerge from the analysis. These include and are not restricted to the following:

5.2.1 Trade and industrial productivity policies

Panel data econometric techniques are used to estimate productivity loss due to technical inefficiency and to determine the pattern of technical change in South African manufacturing industries. The results indicate scope for the average South African industrial establishments to improve their output level by as much as 14 per cent with the same set of inputs. However, openness appears to have been important for efficiency improvement in manufacturing. The estimation results also show that increased competition in foreign markets through export exposure benefits industry productivity. The benefits to productivity arise due to pressures for reduction in inefficiency and to lower costs from the exposure to more advanced technologies. Investment in equipment and machinery which represents technology embodied in capital equipment had a positive association with productivity. An increased use of intermediates also improved industrial productivity.

The results suggest that policy should focus on the improvement in the technological competencies of the labour force in terms of skill augmentation. Improvement of technical skills is required to enable local technicians to produce at full potential, avoiding waste of time and materials. Government policies should continue to allow companies to access good quality equipment at competitive world prices. Most importantly, policies should be designed to provide information and support that encourages industries to up grade their

technical competencies. This support is required for the attainment of a competitive edge that is necessary to gain comparative advantage. Government support is also needed in some enterprises to carry out restructuring and industrial training in new technology, marketing as well as international promotion. An outward oriented technology policy is therefore, an important complement of this overall process.

Promotion of modern export oriented industries can be done through enhanced incentives for technological catch-up. Part of the process for catch-up requires easier access to intermediates as well as to capital goods. The evidence on industrial efficiency suggests that South African industry may need to reorganise more regionally to capture the advantages of economies of scale that are required to improve industry-wide efficiency.

Overall, policy reversal is not recommended because open trade policy has an important role to play in fostering international best practice, learning and efficiency growth. A liberal external environment has a role to play in the acquisition of improved technology and the encouragement of foreign participation. The level of openness of South African trade policy in future will continue to determine access to international finance as well as to knowledge for skills upgrading. Trade has proved to be important in productivity improvement by increasing access of the manufacturing sector to better foreign machinery and equipment.

Tariff rationalisation is therefore a key aspect of trade policy that will ensure increased competition. Tariff liberalisation needs to be continued, in particular, to reduce the high dispersion in tariff rates. It is important to simplify tariffs by reducing tariff categories and encouraging greater uniformity in their range and number. Tariff rationalisation is important for administrative purposes and to

remove uneven protection that obtains in manufacturing. Removal of uneven protection will widen gains that arise from trade by encouraging manufactured exports.

5.2.2 Trade and labour market policies

The investigation of the impact of trade on industry level outcomes for the entire South African manufacturing industry shows that exports increased demand for labour in manufacturing while import volumes generally caused reductions in the level of derived labour demand. The import effect results from the fact that increased trade and openness serve to increase the efficiency with which labour is utilised in industry. In a nutshell, increased import penetration serves to reduce inefficiency and encourages the use of new technology. Commodities produced at lower cost from Asia in particular, tended to displace South African products and labour. South African trade with Europe and America appeared to absorb manufacturing labour. The findings show that trade has the potential to exact factor adjustment and needs to be taken into account in the policy sphere. In this vein, it is important to conduct periodic analysis at the industry and firm levels to identify product specific factors that affect labour demand. Policies that promote labour market flexibility are required to allow manufacturing to adjust to the changing and more competitive external environment.

In the light of the empirical evidence on efficiency and labour demand, it is important for South African industry to reorganise more regionally to capture the advantages of economies of scale. Intra-industry trade with Europe and America already provides South Africa with the global networks of production, where it supplies to the world market. In this arrangement, South Africa benefits from the use of the latest internationally available production and marketing techniques. These networks are important for accelerating the country's

development by transferring technology and innovation, as well as bringing new ideas, to increase its competitive advantage. This comparative advantage should be used to expand the untapped trade potential particularly, with the rest of Africa.

5.3. AREAS FOR FURTHER RESEARCH

There are potential directions in which the investigation of trade, productivity and labour demand in South African manufacturing can be extended. In the area of technical change and efficiency, further investigation could involve the computation of a malmquist measure of productivity change. The results obtained should then be compared with those generated in this study. Future research should examine the issue of productivity at a much lower classification level than the three digit categorisation. Such research should employ plant level rich data sets that were generated by the manufacturing censuses of 1991, 1993 and 1996 to examine issues related to trade, industry concentration and efficiency in South Africa.

On the issue of trade and labour demand, important avenues exist in which analysis can be expanded given more finely graded data. For example, it would be useful to explore the relationship for different categories of labour especially given the wealth of literature on the skills gap. Grouping of industries can also be done by relative factor intensity to provide another important area for investigation. It is also worth pursuing issues related to the speed of adjustment and the importance of intra-industry trade, especially with data broken more frequently, covering a longer period of time. Other extensions that merit analysis concern issues of imperfect competition in the labour market. Finally, it would be

interesting to investigate the impact of origin of imports on derived labour demand at the bilateral rather than regional level.