

## CHAPTER THREE

### PROTECTION AND ITS IMPLICATION FOR COMPETITIVENESS

#### 3.1 Introduction

It is widely accepted that industrial development should be one of the core objectives of government policy. Industrial development is seen as a vital pillar of economic growth. It is necessary for, inter alia, the creation of employment, meeting the basic needs of the population and diversification of the economy. One of the fundamental objectives of industrial policy is to ensure efficiency in production. Export-oriented strategies (rather than import substituting strategies) have been advocated as the best means of achieving rapid, efficient and sustainable industrial development (Bhagwati, 1990; Little, Scitovsky and Scott, 1970; World Bank, 1987). Export production, it is argued, facilitates an efficient allocation of resources. The discipline of the (world) market promotes constant productivity improvements, which in turn, is taken to be one of the main pillars of economic growth (Bhagwati, 1990).<sup>1</sup> Stated very simply, the policy implication is that domestic producers should be subjected to international competition since reduced protection increases competitiveness, which in turn facilitates efficient industrialisation.

However, four points can be made about the argument in the preceding paragraph. Firstly, the conventional divide between the export orientated trade strategy and import substituting trade strategy has been called into question. Liang (1992) has shown that in a three-sector model, five mutually exclusive trade strategies can be identified.<sup>2</sup> Secondly, while there is little dispute that export production can make a meaningful contribution to foreign exchange earnings, employment creation and efficiency in the allocation of resources, the causal relationship between exports and economic growth has not been emphatically established. Thirdly, the East Asian experience has shown that

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<sup>1</sup> This discipline works itself through the price mechanism since international prices are assumed to reflect a situation where marginal costs equal marginal revenue. This is based on the notion of perfect competition, and as such, monopoly and oligopoly situations are ruled out.

<sup>2</sup> This is explored in more detail in chapter five.

the path to export production may indeed be via the route of import substitution which in turn may mean that protection may not only be desirable but also necessary for export production. Fourthly, industrialisation is today considered to be a multi-dimensional phenomenon. It is taken to imply more than just an increase in physical capacity or output. It involves the efficient utilisation of the increased capacity, the growth being characterised by increases in productivity and an increasing quantity of domestic resources (both human and non-human) being used in the production of the output (Lall: 1990: 121). In addition, modern management theorists stress the social, cultural and political aspects of intra-firm strategic resource allocation as an important element in successful industrialisation. As far as the organisation of production is concerned, for example, industrialisation should entail greater worker participation in the design, execution of work and share in the gains of a job well done (Bowles and Gintis, 1990: 174).

Chapter two has already highlighted that the relationship between reduced protection and improved competitiveness may not be as straightforward as is sometimes advocated in the economic literature. What is the implication of this for government policy? This question informs the analysis in this chapter. A critical analysis of some theoretical aspects and empirical evidence of trade policy is considered in sections 3.2 and 3.3 respectively. Section 3.4 considers the empirical relationship between tariff protection and economic growth. The penultimate section reviews the concept of competitiveness while the last section concludes.

### **3.2 Trade incentives and industrialisation: Some theoretical considerations**

For the neoclassical economist, the competitive position of a product on the international market provides *the* indicator of whether production is efficient or not. In summary, the competitive position of a product is determined by the price of that product relative to its competitors or substitutes on the international

market.<sup>3</sup> Thus, for orthodox economics, one of the primary objectives of industrial policy is “getting prices right” with world prices being the “right prices”. Allocative efficiency is thus achieved by getting domestic prices to equal world prices - which in turn is best achieved through free trade.<sup>4</sup> International prices reflect the international marginal rate of transformation in a competitive international economy and as such provide the benchmark for efficiency in the allocation of resources (Berg and Krueger, 2003). In addition, it is expected that free trade will lead to the specialisation in goods in which the country has a comparative advantage.<sup>5</sup> The "infant industry" argument has been presented as one of the main - and some would probably argue, the only - justifiable reason for protection.<sup>6</sup> However, traditional models based on the assumptions of perfect competition and full employment in essence means that industries that should be protected during their infant stages should in essence be Heckscher-Ohlin type industries. Thus, trade is driven by the principles of comparative advantage. However, as was shown in chapter two, new trade theory incorporating assumptions of external economies of scale and imperfect competition have questioned the assumption that international trade is driven solely by comparative advantage.

Is free trade the panacea for trade policy problems and challenges? Three pertinent points, *inter alia*, can be made in this regard. Firstly, "free trade" is an illusive concept usually taken to mean "freer trade" defined from a developed country perspective. With the reduction in tariffs in developed countries there

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<sup>3</sup> Such an approach does not give due recognition to other important determinants of competitiveness, for example, quality of product, brand names, marketing techniques, tastes, etc.

<sup>4</sup> For the neoclassicist, free trade also results in an improvement in welfare. This is so since trade makes available consumption possibilities that are outside the production possibility frontier. There are only two justifiable reasons for intervention in international trade, namely, the optimum tariff argument and the infant industry argument. Most standard texts on international economics would include an explanation of these two aspects.

<sup>5</sup> This is captured in the famous Heckscher-Ohlin theorem.

<sup>6</sup> The essence of the argument is that short-term production welfare losses will be offset by long-term gains. One of the early proponents of the infant industry argument was List (1856). However, Baldwin (2003) mentions that Alexander Hamilton made reference to the concept as early as in 1791. Prebisch (1950) argued that the decline in the prices of primary products (of the developing countries) relative to the prices of manufactured goods (of the developed countries) and the low elasticity of demand for primary products warranted the use of infant industry production to expand manufacturing production in developing countries.

has been a proliferation of non-tariff barriers.<sup>7</sup> Secondly, the justification for free trade is based on the assumption of a perfectly competitive market structure. Perfect competition is for all intents and purposes a theoretical ideal, which very rarely exists in practice.<sup>8</sup> This leads to the third point, namely, that new trade theory has shown that, under conditions of imperfect competition, government intervention is not only justifiable, but may also be necessary for successful export production.<sup>9</sup> On the issue of government intervention, two pertinent points can be made. Firstly, there is no firm evidence that proves that less government leads to faster economic growth (Rapley: 1994: 501). Secondly, more government does not necessarily mean less market. Government interventions could be market enhancing rather than market repressing.<sup>10</sup> Thus, it is not so much the size of the state but the quality and nature of the intervention by the state that is important.<sup>11</sup>

Two conventional arguments that have been advanced in favour of trade liberalisation relate to the reduction in "*static*" inefficiencies and an increase in "*dynamic*" efficiency. The former is based on the Ricardian view that trade is beneficial (i.e. welfare enhancing) even within a comparative advantage context. In the case of static efficiency gains, the distinction is between "technical" and "allocative" efficiency. The former refers to the case where maximum output is produced from the available inputs, while the latter concerns the optimal allocation of resources. "*Dynamic*" efficiency gains, on the other hand, refer to an increase in the growth potential, usually achieved through improvements in technology, productivity gains and economies of scale in production. In this case, there is an increase in production with a given quantity of inputs. The impact of protection on "*dynamic*" and "*static*" efficiency

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<sup>7</sup> It is mainly the developed countries that have been leading the call for free trade. Two issues are important here; one relates to the increase in the use of non-trade barriers (mainly involving environmental legislation, labelling restrictions, health considerations) and secondly, many of the countries that are leading the call for free trade have themselves used high levels of protection to reach their present stage of development.

<sup>8</sup> The assumption of perfect competition is usually made for statistical and analytical convenience. However, new trade theory provides a rich set of models, which circumvent some of the measurement problems associated with earlier trade models.

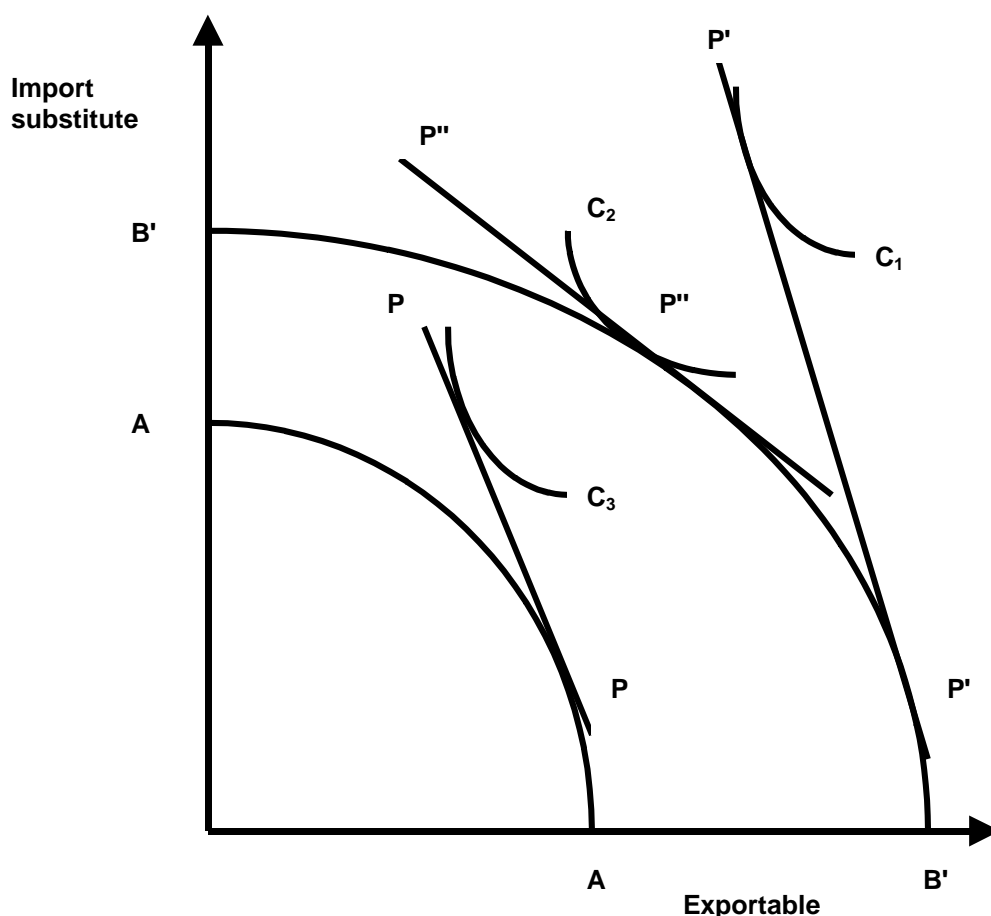
<sup>9</sup> This was discussed in the previous chapter.

<sup>10</sup> Many economists advocate such policies in practice (see Lall, 1990: 60; Killick, 1993; Garnaut, 1991).

can be conveniently represented with the aid of the conventional production possibility frontier and indifference curves as indicated in figure 1.

B'B' represents the production possibility curve depicting potential output (i.e. the maximum quantities of exportable and import-substitutes) that can be produced under conditions of free trade. Under conditions of free trade (perfect competition) "static" and "dynamic" efficiencies are optimised; production is specialised in exportables (the good in which the country has a comparative advantage) at say P', and welfare is maximised with consumption on indifference curve C<sub>1</sub>. In addition, the relative price is given by P'P'.<sup>12</sup>

**Figure 1: Impact of protection on production and resource allocation**



<sup>11</sup> Even the World Bank has moved away from its earlier radical free market approach. See World Bank (1991) in which an increased role for the state is advocated.

With protection (say tariffs) on import-substitutes, the relative price of import substitute (depicted by  $P^*P^*$ ) increases attracting resources from the production of exportables into import-substitutes. This leads to a reduction in the production of exportables, the good in which a country has a comparative advantage. The net result is that welfare decreases since consumption is on a lower indifference curve  $C_2$ .<sup>13</sup> It is important to realise that under these conditions, that while production is still efficient (still on the production frontier), it is not optimal since production is not specialised in the production of goods (exportable goods) in which the country has a comparative advantage. Hence, any price (such as  $P^*P^*$ ) that makes the relative price of import-substitutes greater than exportables will not result in "optimal" production.

However, the common effect of protection is to reduce potential output because of rent-seeking behaviour or trade incentives inducing x-inefficiency (Sharma, 2000: 7). This causes the production possibility frontier to move inwards to AA. In this case, welfare is further reduced (consumption is now on  $C_3$ ) even if the country engages in some trade. With the inward movement of the production possibility frontier, production is neither efficient nor optimal.

The basic point that emerges from the analysis is that under conditions of perfect competition, free trade promotes "*static*" and "*dynamic*" efficiency. Firstly, considering the issue of "*static*" efficiency, it is argued that protection creates a bias against export production in favour of import-substituting production (Krueger, 1978; Bhagwati, 1988a, 1988b). However, this view is based on a two-sector framework (importables and exportables) and does not necessarily hold in a three-sector framework; import-substitution and export-promotion need not be viewed as alternatives but as complementary strategies (Liang, 1992).<sup>14</sup> Under conditions of imperfect competition, trade liberalisation may result in an excessive volume of imports, which does not promote an

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<sup>12</sup> The shape of the production possibility frontier indicates that the country has a comparative advantage in exportables.

<sup>13</sup> In the example, it is assumed that protection leads to autarky. However, even if protection did not prevent trade completely then consumption will still be on a lower indifference curve.

<sup>14</sup> This aspect will be considered in more detail in chapter five.

efficient allocation of resources (Levy and Nolan, 1992: 56). In addition, increases in export production may be more difficult to accomplish in practice given the low elasticities of supply in developing countries (Mosley, 1993), which are primarily due to skills shortages and technological and institutional constraints (Lall, 1991).

Within the neoclassical framework, protection is said to adversely influence "dynamic" efficiency through its impact on productivity improvements. Protection reduces external competition and restricted access to imported technology (Srinivasan and Bhagwati, 1999). However, there are strong theoretical (Rodik, 1992a, 1992b) and empirical evidence (Tybout et al, 1991; Young, 1995; Deraniyagala and Fine, 2001) that contests the strong positive relationship between reduced protection and productivity improvements.<sup>15</sup> In addition, the impact of liberalisation on import penetration is ambiguous. On the one hand, liberalisation could result in increased imports. On the other hand, increased competition and access to imported technology could improve the competitiveness of domestic industry with the result that import penetration may decrease (Sharma, 2000).<sup>16</sup>

On the basis of the brief review presented thus far, it is not unreasonable to assume that "...the importance of openness for growth is therefore an empirical question" (Berg and Krueger, 2003: 7). The next section is devoted to a review of the empirical evidence relating to trade liberalisation and growth.

### **3.3 Trade policy and economic growth: The empirical evidence**

One of the issues that has dominated the international economics literature has centred on the relationship between trade policy and economic growth. More specifically, empirical analysis has focussed on identifying a link between trade policies and long-run performance – measured in either per capita or productivity growth. Over time, the availability of better data and more sophisticated econometric techniques has resulted in numerous studies

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<sup>15</sup> See Hobday (1995) for a good summary of the empirical literature.

<sup>16</sup> The decrease in import-penetration will not occur instantaneously but over time.

analysing the impact of government policy on economic growth.<sup>17</sup> However, based on the evidence to date, it is fair to say that there is still much disagreement on the empirical relationship between trade policies and economic growth (Baldwin: 2003: 1). Given the voluminous literature on the subject, this section provides a very selective review with the emphasis being on developments during the 1990s.

The early 1900s was characterised by the extensive use of protectionist policies (especially tariffs) to foster inward-oriented industrialisation. Germany, France, United States and Japan made extensive use of protectionist policies to foster their industrialisation process (O'Rourke, 2000; Clemens and Williamson, 2001). The success of the Soviet Union in the 1920s and 1930s, and China after 1949, gave credence to the use of protectionist policies as the basis for industrial policy. The experience of these countries served to inspire similar policy in countries that gained independence from their colonial powers after World War II (Baldwin, 2003: 4). It was these developments that gave prominence to the infant industry argument.<sup>18</sup> According to Baldwin (2003: 4), the extension of the infant industry argument to the entire manufacturing sector adversely influenced macroeconomic variables such as exchange rates, aggregate exports and imports and fiscal and monetary policy. By the late 1960s, a policy shift towards export-oriented industrialisation began to gain popularity.

A critical appraisal of import-substituting industrialisation began to emerge. Firstly, Little et al (1970) and Balassa (1971) used effective rate of protection measures to show that protection had highly distortionary effects on manufacturing value added in developing countries. The empirical work then increasingly shifted towards testing the relationship between trade and growth. The policy prescription emanating from influential studies of the time advocated outward-oriented industrialisation (Krueger, 1978; Bhagwati, 1978), which in essence entailed trade liberalisation (Balassa, 1971).

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<sup>17</sup> Government policy has been proxied by the openness or bias of the trade regime.



Developments in endogenous growth theory during the 1980's (Romer, 1990; Lucas, 1988; Grossman and Helpman, 1991) and availability of better data and developments in statistical techniques gave renewed impetus to the investigation of the relationship between trade policy and growth during the 1990s. As pointed out in chapter two, while new trade theory questions the optimality of free trade policy under certain conditions, it does not necessarily justify protection. In fact, the new growth literature establishes cases where openness is positively correlated with long-run growth.<sup>19</sup>

In the remainder of this section a brief review of some of the influential trade policy analysis undertaken during the 1990s, is provided. Much of the empirical work during this period focussed on the relationship between exports and growth rather than on trade policy and growth. In a review of the literature Edwards (1993: 1389) asserts that:

*“The theoretical frameworks used have been increasingly simplistic, failing to address important questions such as the exact mechanism through which export expansion affects GDP growth, and ignoring potential determinants of growth such as educational attainment...All of this has resulted, in many cases, in unconvincing results whose fragility has been exposed in subsequent work.”*

However, despite these reservations multilateral institutions have been vociferous in arguing that:

*“...more open and outward-oriented economies outperform countries with restrictive trade and investment regimes”* (OECD, 1998: 36).

This view has been premised on the belief that:

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<sup>18</sup> Baldwin (2003) argues that the foreign exchange shortage emanating from increased pressures to import capital goods (and also consumer goods) for reconstruction purposes after the war in some respects forced countries into adopting import-substituting policies.

<sup>19</sup> Edwards (1998) argues that technological change is a positive function of a country's openness and the technology gap *vis-a-vis* the rest of the world. Coe and Helpman (1995) argue that the recent models of economic growth imply a positive relationship between openness and total factor productivity growth. Their argument is that openness to trade allows for both the importation of new imports and quicker domestic production of these inputs, which in turn, positively impact on total productivity growth.

*“Policies toward foreign trade are among the more important factors promoting economic growth and convergence in developing countries”*  
(IMF: 1997: 84).

One of the recent studies to emphatically question the alleged positive relationship between openness and economic growth is Levine and Renelt (1992). They use different measures of trade policies, yet find no positive relationship between openness to trade and economic growth in the long-run. However, their work does find a positive correlation between investment and trade shares, thus leading them to the conclusion that the benefits of trade reform may be enhanced resource accumulation rather than a more efficient allocation of resources.

Dollar (1992) analyses the relationship between outward orientation and economic growth for 95 countries. His argument is that outward orientation is conducive to economic growth. Much of the criticism of the empirical work on trade policy has centred on the narrow definition of the trade restriction measure. Ben-David (1993) has found that trade liberalisation promotes convergence among integrating countries.<sup>20</sup> Economic integration led by trade relations promotes convergence among countries. Sachs and Warner (1995) construct an openness measure for 79 countries by considering five factors; namely, tariff barriers, non-tariff barriers, the economic system of the country, whether there is state monopoly control over exports and the parallel market premium on the exchange rate.<sup>21</sup> The Sachs and Warner (1995) study find a positive relationship between the growth rate of per capita GDP and the openness measure. Edwards (1998) considers nine measures of openness and finds that six of these measures are significant determinants of total factor productivity growth. However, all of these studies have been meticulously criticised by Rodriguez and Rodrik (1999, 2001). They prove that these studies have methodological, conceptual and statistical deficiencies, which lead to doubts about their main result, namely, the existence of a strong positive

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<sup>20</sup> For Ben-David (1993, 1996) trade liberalisation is the main factor promoting convergence among integrating countries.

relationship between trade openness and growth.<sup>22</sup> More specifically they assert that;

*“Our bottom line is that the nature of the relationship between trade policy and economic growth remains very much an open question. The issue is far from having been settled on empirical grounds. We are in fact sceptical that there is a general, unambiguous relationship between trade openness and growth waiting to be discovered. We suspect that the relationship is a contingent one, dependent on a host of country and external characteristics”* (Rodriguez and Rodrik, 1999: 4).

In addition, Slaughter (1997) has shown that convergence in income can occur because of a convergence of capital-labour ratios rather than factor prices.<sup>23</sup> In addition, there is no firm evidence to show that trade liberalisation leads to faster convergence among countries that liberalised trade as compared to those that did not liberalise their trade (Slaughter, 2001).

Frankel and Romer (1999) attempt to avoid the controversy in choosing an appropriate openness measure by considering geographic factors and the use of instrumental variable techniques to analyse the relationship between trade and income. Their results confirm some of the earlier results, namely, that trade does influence income growth. However, Rodriguez and Rodrik (1999) have argued that the geographical measures used by Frankel and Dollar as instrumental variables may not be valid (cited by Baldwin, 2003: 25).

The basic point to emerge from the empirical analyses undertaken during the 1990s is that the debate on whether trade openness promotes growth is far from settled. Given the interplay between trade policy and other

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<sup>21</sup> The openness measure is a dummy variable and assumes a value of zero (closed economy) if any of the five factors fall below the benchmark criteria.

<sup>22</sup> Harrison and Hanson (1999) also review the work of Sachs and Warner (1995). They show that the Sachs and Warner index (which attempts to capture the influence of trade, exchange rate and institutional aspects) is significantly flawed as a measure of openness. As a result of this flaw, they argue that the Sachs and Warner index does not establish a robust link between more open trade policies and long run growth.

<sup>23</sup> On the issue of the convergence of product prices between trading countries, Knetter and Slaughter (1999) find little evidence of convergence toward common prices between Europe, US and UK. For Developing countries the evidence is mixed.

macroeconomic policies (e.g. monetary and fiscal policy), it is probably fair to argue that it is extremely difficult to construct models that give rise to robust relationships. It is therefore not surprising that the “...links between the empirical and theoretical work have never been too strong” (Rodrik, 1995: 1480). Probably, the problem has been that policy appraisal has relied too heavily on empirically testing the complex macroeconomic relationships between trade policy and economic growth.

The literature to date has emphasized that while there is a theoretical justification for a strong (or even a robust) relationship between open trade policy and economic growth, the empirical verifications have been unconvincing. In addition, since measures of economic growth (e.g. per capita GNP) usually (especially in developing countries) do not accurately reflect distributional and consumption effects, even if restrictive trade policies reduced economic growth, it does not follow that they necessarily reduce the level of welfare (Rodriguez and Rodrik, 1999: 4).

While a robust empirical relationship between open trade policy and economic growth has not been established, it is important to note that the converse is also true; namely, that there is no strong evidence to suggest that protection leads to economic growth.<sup>24</sup> Under conditions of perfect competition, efficient resource allocation requires a “levelling of the playing field” - however, economic reality (imperfect competition, economies of scale, etc) may mean that liberalisation has beneficial results only if it is done in a discriminating manner (Stewart, 1991, Lall, 1990). Subjecting producers to international competition can promote competitiveness, but it can also lead to the destruction of potentially competitive industries (Wade, 1990: 15-22; Adhikari et al, 1992: 7-8). In effect, this means that the impact of trade liberalisation is an empirical issue.

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<sup>24</sup> Although, Chang (2002) notes that developed countries have all used protection to industrialise.

### **3.4 Tariffs and economic growth: A brief review of the empirical evidence**

Recently, there has been much empirical work explicitly exploring the link between tariffs and economic growth (Irwin, 1998, 2000a, 2000b, 2001, 2003; Clemens and Williamson, 2001, 2002; Williamson, 2003; O'Rourke, 2000). This work follows on earlier work (Bairoch, 1972; Capie 1983; Eckes, 1995) which all found that tariffs were associated with higher growth rates before World War I - the so-called tariff-growth paradox.<sup>25</sup> The same result was found for the period between the first and second world wars (Vamvakidis, 1997 cited in Clemens and Williamson, 2001).

Clemens and Williamson (2001) use a larger sample of countries and confirm the tariff-growth paradox for the period preceding 1950 but find that tariffs were associated with slow growth after 1950. In an attempt to explain the reversal of the tariff-growth correlation after 1950, Clemens and Williamson (2002) find that after accounting for the significant reduction in tariff barriers in all countries since World War II, there is no incompatibility between the results pre-1950 and post 1950. They argue that high tariffs need not necessarily impede growth and the benefits of openness are neither inherent nor irreversible but rather depend upon the state of the world (Clemens and Williamson, 2002: 25).

Irwin (2001) has analysed the tariff-growth correlation of Argentina and Canada during the 19<sup>th</sup> century and argues that it was factor endowments (abundant land) coupled with sound institutions and policies that fostered growth - the tariff was used as a means of raising government revenues to fund institutional and infrastructural development conducive to economic growth. Chang (2002) argues that both Britain and the United States have relied extensively on protective tariffs to stimulate industrial development and having reached their objective, these countries are eager to kick away the "ladder" (protective tariffs) that helped them to industrialise in the first place. Irwin (2001), while conceding that there is a high correlation between tariffs and growth in late 19<sup>th</sup> century America, contests the hypothesis that high tariffs led to economic growth - non-tradable sectors (namely utilities and services) were the main drivers of

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<sup>25</sup> This paradox was also confirmed by O'Rourke (2000).

economic growth during this period. However, as mentioned earlier on, Rodriguez and Rodrik (1999, 2001) have shown that, when a variety of economic variables are taken into account, the results may be sensitive to the methodology and statistical measures used in empirical analysis.

Probably, the most important lesson to be learnt from the empirical analysis to date is that there is no robust relationship between tariffs and economic growth. If this is the case, then economists should strive, not only to identify the fundamentals driving tariff policy (Williamson, 2003: 38), but also to ascertain if these fundamentals (e.g. improved competitiveness) have been met. In the case of South Africa, tariff liberalisation during the 1990s was geared towards improving competitiveness. Thus the issue of importance is whether this did in fact materialise.

### **3.5 The concept of competitiveness**

The term competitiveness is usually used in a comparative context to refer to an advantage over competitors in the domestic or international market.<sup>26</sup> Krugman (1994; 1996a; 1996b) argues for a distinction between the macro and micro dimension of competitiveness - competitiveness among nations is not a zero sum game, and hence, competitiveness amongst firms cannot be likened to competitiveness amongst nations. Krugman (1994) and Helleiner (1989) have cautioned against the concept of economy-wide competitiveness arguing that a country cannot be competitive in all activities. In essence, the point to bear in mind is that if an economy-wide measure shows that there is an improvement (deterioration) in competitiveness, what does this mean in practice? Have all industries become more competitive (uncompetitive)? Hence, for policy purposes, it is imperative to analyse the impact at the sectoral or industry level.

The empirical literature to date has focused on both price and cost comparisons as indicators of competitiveness. Traditionally, real effective

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<sup>26</sup> The World Economic Forum (WEF) defines competitiveness as a country's ability to achieve sustained high rates of growth in GDP per capita while the International Institute of Management Development (IMD) emphasizes a country's ability to provide an economic environment that sustains an industry's competitiveness.

exchange rate (REER) and unit labour costs (ULC) have been used to analyse competitiveness across countries. The analysis of South Africa's competitiveness on the basis of REER movements has also been undertaken recently (IMF, 1998; Kahn, 1998; Walters and De Beer, 1999; Tsikata, 1999, Golub, 2000). However, since the REER is an aggregate trade weighted index, its relevance for the analysis of competitiveness at the sectoral level is limited.<sup>27</sup>

Relative unit labour costs, on the other hand, are assumed to reflect international differences in labour costs and labour productivity (Turner and Golub, 1997; Turner and van't Dack, 1993). Analysis based on ULC measures make the implicit assumption that labour costs are the most important determinant of trade. Turner and Golub (1997), in a survey of the literature conclude that relative unit labour costs represent the best indicator of competitiveness. However, within the South African context, there are three major limitations associated with ULC comparisons. Firstly, reliable data on labour productivity and wages may not be available on a timeous basis. Secondly, there is an implicit assumption that labour is the only factor of production and any discrepancies across countries are due to labour costs.<sup>28</sup> Other costs of production (e.g. those related to intermediate goods and capital costs) are ignored. It is also possible that unit labour cost differences may be due to technological differences. In the standard unit labour cost analyses there is an implicit assumption that underlying structural factors are constant (Lall, 2001a; 2001b). Thirdly, ULC comparisons are strongly dependent on the assumption of perfect competition. By using unit labour cost as a proxy for competitiveness, it is assumed that profit margins vary in the same ratio as relative unit labour costs. This should be subjected to empirical verification rather than assumed.

Viewing competitiveness purely in terms of changes in exchange rates or wages does not give due recognition to the importance of other factors such as

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<sup>27</sup> See Wood (1995) and Bell et al (1999) for an application to South Africa

<sup>28</sup> ULC analysis is based on a one factor Ricardian framework in which labour costs are the main determinant of export production.

learning or adjustment costs associated with imported technology (Wignaraja, 2001). Technological, productivity or institutional factors are important determinants of competitiveness (Boltho, 1996; Fagerberg, 1996; Lall, 1991, 2001b). In addition, factors such as levels of education, natural resource endowments and economic policies (e.g. tax rates) exert significant influences on the competitiveness of specific industries or sectors (Cockburn et al, 1998: 2). In addition, the aggregate measures do not reflect the influence of trade policy effects on competitiveness. Thus, in order to ascertain the impact of trade policy on competitiveness, one should undertake the analysis at the sectoral level.

Economic theory stipulates that prices are an important determinant of the direction and commodity composition of trade. Country X is deemed to be competitive in good A, if the price of good A ( $P_A$ ) for country X is lower than the prices charged by its competitors in a common currency. Kravis and Lipsey (1971) undertook the pioneering study on price competitiveness. Using actual prices rather than unit values, international price competitiveness (IPC) is defined as:

$$IPC = \frac{P_i^*}{P_i} \dots\dots\dots(1)$$

where  $P_i$  = price of domestic product  $i$  in a common currency

$P_i^*$  = foreign price of product  $i$  in a common currency

In terms of equation (1), an increase in IPC would indicate that the domestic product has become more internationally competitive (i.e. domestic prices have decreased relative to foreign prices). However, transport costs, packaging costs and other costs related to trade restrictions (e.g. tariffs) all influence price, and hence, can affect competitiveness. Any trade distorting measure (e.g. tariffs) affects price competitiveness (IPC) through its impact on domestic prices. Since prices reflect the effects of trade barriers (Bradford, 2003)<sup>29</sup>, an analysis of the impact of tariff liberalisation on the prices ( $P_i$ ) charged by domestic South African producers would indicate whether tariff liberalisation improved



competitiveness during the 1990s. In other words, *ceteris paribus*, one would expect tariff liberalisation to have led to a reduction in the prices of domestic producers ( $P_i$ ). The reduction in  $P_i$  would positively impact on the competitiveness of domestic producers. Thus, by analysing the impact of tariff liberalisation on  $P_i$ , one could ascertain whether the tariff liberalisation implemented during the 1990s in South Africa promoted competitiveness. This can be done by estimating the pass-through elasticity of tariffs to domestic prices. This is the point of departure used in the analysis of price competitiveness in chapter seven of this study.

The neo-classical notion of export oriented industrialisation - usually taken to be a manifestation of price competitiveness - entails, trade liberalisation (usually low uniform tariffs), abolition of non-tariff barriers, real devaluation and the reduction of labour costs or increasing labour productivity through technological advances (Bajraj, 2001: 2). Within this context, the benefits of tariff liberalisation is its positive impact on competitiveness. Some additional indicators of the positive impact of tariff liberalisation on competitiveness would include the following:

- *"Static" efficiency effects:* Here one could consider two indicators. Firstly, a more efficient allocation and use of factor resources would mean that liberalising sectors would have grown faster than the non-liberalising sectors. Secondly, liberalisation should shift production away from import-competing to exporting sectors. Liberalising sectors should increase export production.
- *"Dynamic" efficiency effects:* In this regard there are four readily available indicators. Firstly, since liberalisation promotes technology transfers, then liberalising sectors should increase their share of higher valued added products in production as compared to non-liberalising sectors. Secondly, *"dynamic"* efficiency would also entail liberalising sectors increasing their share of higher valued added export products as compared to non-liberalising sectors. Thirdly, allocative efficiency entails production being in line with a country's factor endowments. In South

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<sup>29</sup> This is premised on the assumption of perfect competition.

Africa's case, this could mean labour intensive production but dynamic efficiency gains would entail labour productivity increases in liberalising sectors outstripping those in non-liberalising sectors. So in effect, "*dynamic*" efficiency could entail increases in higher value added production and/or increases in labour productivity. Finally, liberalising sectors should be characterised by higher total factor productivity gains relative to non-liberalising sectors.

These indicators will form the basis of the analysis in chapter eight.<sup>30</sup>

### **3.6 Conclusion**

In this chapter, the theory of protection was reviewed and it was found that the relationship between trade liberalisation and growth is ambiguous, both from a theoretical and empirical standpoint. In addition, the empirical evidence on the tariff-growth relationship yields similar results. This, in effect, means that trade policy effects are an empirical issue - the results could vary over time and across countries. This is particularly relevant for the objective of this study, namely, to ascertain the impact of tariff liberalisation on competitiveness.

The next chapter documents the tariff liberalisation undertaken during the 1990s with the primary objective of ascertaining the extent of tariff liberalisation undertaken during this period.

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<sup>30</sup> This logic holds in a perfectly competitive world trading homogenous products and where qualitative factors (e.g. institutional influences) have no or little bearing on production outcomes. However, the effects of liberalisation on competitiveness may be vastly different under conditions of imperfect competition. This, in effect, means that the benefits of tariff liberalisation become an empirical issue.