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International trade and industry policies

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ABSTRACT

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This paper surveys the contributions of economists since the 1960s to our understanding of Australia's evolving production and trade pattern and to the policies affecting it. Changes in comparative advantage only partly explain the trade pattern. Much of the residual explanation has to do with Federal Government policies and their reform since the early 1970s. Attention here focuses on manufacturing tariffs and other trade policies, and on trade-related sectoral/industry assistance policies. The recent policy reforms have not been unrelated to developments in the multilateral trading system (and, as part of that, in the Asia Pacific Economic Forum), so contributions by Australian economists to those developments are also briefly reviewed. The survey concludes by reflecting on the influence economists have had in shaping Australia's trade and trade-related policy reforms since the 1960s.

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Introduction

When the Australian Federation formed in 1901, trade policy was a major point of difference between the colonies that were to become states within that federation. It turned out that the protectionists dominated the free traders, and before World War I Australia had adopted a firm protectionist stance. For seven decades thereafter, tariffs on imports of manufactures continued to rise. The average tariff level on non-food manufactures almost doubled in the decade to 1920, and doubled again by 1932. It dropped only a little in the latter 1930s, and then rose again after World War II. Protection was further increased in the 1940s and 1950s with the adoption of quantitative import restrictions, and there was a ban on exports of iron ore and coal. Unlike most other industrial countries, Australia did not take part in the multilateral tariff reductions negotiated under the General Agreement on Tariffs and Trade (GATT) during the 1950s and 1960s. Hence by 1970 Australia was rivalled only by New Zealand in having the highest manufacturing tariffs among the industrial countries (Anderson and Garnaut 1987).

That seven decades of import-substituting industrialization cost Australia dearly in terms of its comparative standard of living. In 1900, Australia was arguably the highest-income country in the world on a per capita basis. But by 1950 its rank had slipped to third; by 1970 it was eighth; and by the 1990s Australia was not even in the top twenty.¹

Australia's comparatively poor growth performance for most of the twentieth century contrasts with that of the final decade, when Australia out-performed all other advanced economies other than Ireland and Norway in terms of GDP per capita growth (World Bank 2000b, Tables 1, 3 and 11). This was a period of especially rapid productivity growth (Parham et al. 1999; Dowrick 2001), in contrast to Britain where much of its catch-up has been due to growth in employment and hours worked per worker (Card and Freeman 2002).

The difference between the economy's recent and earlier relative performances is due very substantially to the economic policy reforms of the past three decades. The belated opening of the Australian economy to the rest of the world, coupled with many domestic economic reforms, not only has arrested the decline in Australia's per capita income ranking. It also has had a remarkable influence on the pattern of Australia's production and trade.

This chapter surveys the contributions of economists since the 1960s to our understanding of Australia's evolving trade pattern, and to the policies affecting it. Changes in comparative advantage partly explain the trade pattern, but much of the residual explanation has to do with the reform of interventionist policies that started in the early 1970s and accelerated in the mid-1980s. Attention here focuses on manufacturing tariffs and other trade policies, and on trade-related sectoral/industry assistance policies. The recent policy reforms have not been unrelated to developments in the multilateral trading system (and, as part of that, in the Asia Pacific Economic Forum), so contributions by Australian economists to those developments are also briefly reviewed. The survey concludes by reflecting on the influence economists have had in shaping Australia's trade and trade-related policy reforms since the 1960s.

Attention is mainly confined to literature from the past quarter-century.² The focus is on open economy microeconomics applied to understanding Australian trade and the influences on it of trade policies and trade-related sectoral/industry policies. Space constraints exclude contributions to pure trade theory and to open economy macroeconomics (including exchange rates and balance of payments), and foreign investment is treated only briefly.

Australia's evolving trade pattern

For the natural resource-rich, lightly populated Australian economy, the most appropriate theory of comparative advantage is a blend of the two core models developed in the 20th century: the Heckscher-Ohlin-Samuelson model which assumes all factors of production are mobile between sectors, and the Ricardo-Viner model which assumes some factors are sector-specific. Such a blend is provided by Krueger (1977) and explored further by Deardorff (1984). They consider two tradable sectors each using intersectorally mobile labour plus one sector-specific factor (natural-resource capital or industrial capital). Assuming that labour exhibits diminishing marginal product in each sector, and that there are no services or nontradables and no policy distortions, then at a given set of international prices the real wage is determined by the aggregate per worker endowment of natural-resource and industrial capital. The commodity composition of a country's trade -- that is, the extent to which a country is a net exporter of primary or industrial products -- is determined by its

endowment of natural relative to industrial capital compared with that ratio for the rest of the world.

Leamer (1987) develops this model further and relates it to paths of economic development. If the stock of natural resources is unchanged, rapid growth by one or more economies relative to others in their availability of industrial capital per worker would cause those economies to strengthen their comparative advantage in non-primary products. On the other hand, a discovery of minerals or energy raw materials would strengthen that country's comparative advantage in mining and weaken its comparative advantage in farm and other goods, *ceteris paribus*. It would also boost national income and hence the demand for nontradables, which would cause mobile resources to move into the production of nontradables, further reducing farm and industrial production (Corden 1984).³

Domestic or foreign savings can be invested to enhance the stock and/or improve the quality not only of industrial capital but also of labour or natural resources, and to providing capital to the nontradables sector. Any such increase in the net stock of produced capital per worker will put upward pressure on real wages. That will encourage, in all sectors, the use of more labour-saving techniques and the development and/or importation of new technologies that are less labour intensive.

Which types of capital would expand fastest in a free-market setting depends on their expected rates of return. The more densely populated, natural resource-poor a country, the greater the likelihood that the highest payoff would be in expanding its capital stocks for non-primary sectors. At early stages of development of such a country with a relatively small stock of natural resources per worker, wages would be low and the country would have a comparative cost advantage in unskilled labour-intensive, standard-technology manufactures. Then as the stock of industrial capital grows, there would be a gradual move toward exporting more capital- and skill-intensive manufactures. Natural resource-abundant economies such as Australia, however, would develop a comparative advantage in manufacturing at a late stage of development, and their industrial exports would be relatively capital intensive.

The above theory of changing comparative advantages has been used successfully to explain the evolving pattern of exports of Australia and its Asian trading partners (Anderson and Garnaut 1980, 1987; Anderson and Smith 1981; Anderson 1995). It can also be used to explain shocks to that evolutionary pattern, as

with mining booms.⁴ But the evolving pattern of a country's production and trade specialization also depends on policy choices and their changes over time.

In Australia's case, its long history of industrial protectionism, together with its ban on iron ore and coal exports until the early 1960s, ensured a smaller share of Australia's GDP was traded than would be normal for an economy of its size (Anderson and Garnaut 1987, pp.14-15). It also ensured a bigger manufacturing sector than would have emerged under free trade, which was possible in a full-employment setting only at the expense of other sectors. The sector's share of GDP by 1960 was the same as the OECD average (29 per cent), even though Australia has always been lightly populated and so has a weak comparative advantage in manufactures. The removal of the ban on key mineral raw materials in the early 1960s and the tariff reforms of the 1970s and 1980s corrected that though: between 1960 and 1990 manufacturing's share of GDP fell much more rapidly for Australia than for the average OECD country (to 15 per cent compared with the OECD average of 22 per cent -- Anderson 1995, p. 49).

The excessive size of the manufacturing sector was particularly at the expense of the natural resource-based sectors in which Australia had its strongest comparative advantage. We have known since Lerner (1936) that an import tax is equivalent to an export tax, but how it affects the sector producing nontradables depends heavily on the elasticities of substitution in production and consumption as between tradables and nontradables. Sjaastad and Clements (1982) suggest that in Australia nontradables were relatively close substitutes for importables, and so their production would have been encouraged by protection of import-competing industries, further drawing mobile factors of production away from export industries.

It was not only natural resource-based exportables that Australia's protectionism discouraged, however. Also discouraged were export industries *within* the manufacturing sector, as well as services exports. Together those two sectors contributed only one-twelfth of Australia's exports in the early 1950s. Even by 1980 their contribution was barely above one-quarter, but by 1990 it had risen to one-third and by 2000 to 44 per cent or 22 per cent each (thus each surpassing the 21 per cent share for agriculture for the first time -- Anderson 2001, Table 2).

These impacts of Australia's protectionism on the composition of its production and trade, and on the share of production traded internationally, were made ever-clearer by economy-wide, computable general equilibrium (CGE)

modellers. The first economy-wide models began appearing in the early 1970s, in Australia's case thanks to Evans (1972), and by the early 1980s they were being used routinely for policy analysis in Australia as elsewhere.

Building on Evans work, a group of Melbourne-based economists led the world in developing for Australia a very detailed CGE model for practical policy analysis. Known as ORANI (Dixon et al. 1982), that model was used to estimate impacts on sectoral production, employment and trade, and on economic welfare, of a wide range of policies. Those results had a major impact on policy debate in Australia during the acceleration of microeconomic reform in the 1980s (Powell and Snape 1993).

Since the 1980s CGE models have become even more sophisticated, and in particular have added regional, occupational and household disaggregations and have become dynamic. Australia has again been at the frontier of those developments, as manifested in the transforming of the Australian ORANI model into the MONASH model (Dixon and Rimmer 1998). The dynamic feature of MONASH has been particularly important because it allows forecasting through time and hence can show paths of adjustment to shocks (Dixon, Menon and Rimmer 2000). But the disaggregation of results by region and occupation within Australia has also been important in two respects. One is that it makes it easier to identify which household groups might lose from a structural or policy change, thereby making it easier to fine-tune any safety nets in advance; the other is that it identifies more precisely which groups are likely to gain, and so makes it easier for government to point to and seek support from the beneficiaries of policy reform.

While the national CGE models have been able to show the effects of structural or policy changes on the composition of Australia's trade, they have not been designed to estimate the effect on the bilateral pattern of that trade. For that a multi-country global CGE model is needed, together with an appropriate theory of bilateral trade. Early contributions to bilateral trade theory included ANU theses by Peter Drysdale, who focused on the growth of the Australia-Japan trading relationship, and Ross Garnaut, who applied them to Australia's trade with Southeast Asia. They stressed the importance not only of relative distance between countries but also of similarities in such things as culture, business practices and legal systems. The theory and measurement ideas are brought together in Drysdale and Garnaut (1982), where the index of intensity of a trading relationship is defined as the product of an

index of trade complementary (how closely the product composition of country A's exports matches that of country B's imports) and an index of special country bias (which captures all other factors). Those indexes have since been measured for all bilateral trades among Pacific rim countries and used in public policy discussions about the growth in Australia's trade with Asia, most notably following the publication of a popular report prepared for the government by Garnaut (1989).

Global CGE models were slower in coming because they require so much more data than national models. Early examples from North America are Whalley (1985) and Deardorff and Stern (1986, 1990). In Australia they first emerged as the SALTER model, developed by what was the Industry (and now is the Productivity) Commission in association with the Department of Foreign Affairs and Trade (Jomini et al. 1991). Part of the government's motivation was to model bilateral trade in the Asia-Pacific region, in the wake of the Hawke Government's push to launch of the Asia Pacific Economic Forum (APEC) in 1989.

A copy of the SALTER model was taken to Purdue University and, since the early 1990s, it has been improving constantly and been made publicly available as the so-called GTAP model and database (Global Trade Analysis Project – see Hertel 1997). The extraordinary efforts by Tom Hertel to train users and recruit willing helpers to revise and update the production, trade and protection data, to improve the theory in the model, and to encourage econometric estimation of the elasticities embodied in it, has resulted in hundreds of people becoming users and thousands of simulation experiments being published since its creation (see www.gtap.agecon.purdue.edu/). That openness, which has been characteristic of some other CGE modelling groups including ORANI and MONASH, has been a great spur to modelling innovations.

The basic global GTAP model is similar in architecture to the Australian ORANI model, but more complex versions are being developed all the time. Among the modifications that have been incorporated for particular applications are scale economies and imperfect competition (Francois 1998) and dynamics through capital accumulation (Francois and McDonald 1996). In addition, computational tools for practical policy analysis have been developed to enable systematic sensitivity analysis (Pearson and Arndt 2000) and the decomposition of economic welfare results (Huff and Hertel 2001). Trade and related policy analysis is now possible for any of the 66 countries or country groups in Version 5 of the GTAP model and any of its 57 sectors

of production (20 agricultural and processed food sectors, 22 other manufacturing sectors, and 15 services sectors). Since Armington (1969) elasticities are included (in part as a proxy for the special country bias concept that was highlighted by Drysdale and Garnaut), products can be differentiated by country of origin. This allows bilateral as well as total trade effects to be better explored.

The increasing importance of services trade and investment and related policy issues in the WTO and regional trade negotiations has placed further demands on modellers. In response, the Productivity Commission has incorporated foreign direct investment in a version of the GTAP model with imperfect competition and scale economies, to create what has been named the FTAP model (Dee, Hanslow and Phamduc 2000).

GTAP is of course not the only such CGE model, but it is certainly the most widely used. Others were also used in the ex post analysis of the Uruguay Round (see the various chapters in Martin and Winters 1996). Another popular family of models arose from expanding a global macro model by adding some sectoral detail (McKibbin and Wilcoxon 1995). While having far fewer sectors and regions than GTAP, and while relying heavily on the GTAP database, the subsequent McKibbin family of models includes capital markets and is dynamic and so was able to generate paths of adjustment to simulated shocks earlier than other models. As in dynamic national CGE models such as MONASH, the latter feature has obvious appeal to policymakers concerned with the short to medium term effects of reform on their constituents. These models are now being used for ex ante analyses of the current WTO round of trade negotiations and the numerous bilateral and regional free-trade-area proposals that have become fashionable again in recent years.⁵

Reform of Australia's industrial tariff protection

Disenchantment in Australia with its interventionist trade policies gradually increased over the 1960s, not least because of the writings of academic economists and especially Max Corden. Drawing on a paper on Canada's protection by Barber (1955), Corden (1963) developed and applied to Australia the concept of the effective rate of protection (ERP). The distinction between nominal and effective protection is that the former measures the extent to which the tariff raises the domestic price of a producer's output whereas the latter indicates the extent to which the producer's value added per unit of output is enhanced, taking into account any tariffs on importable

intermediate inputs and the share of the industry's value added in the value of final output.

The ERP concept gained immediate recognition as a practical way of indicating more appropriately the level of industry protection against import competition not only in aggregate for a country but also – and more importantly -- between industries within a country. Its first official use was by the Australia Government with the publication of the Vernon Committee Report (Vernon et al. 1965), to which Corden contributed. The next few years saw an avalanche of both theoretical and empirical ERP papers and reports. In his first seminal book, Corden (1971) brings together most of the key theoretical ideas, while his survey of empirical studies (Corden 1975) covers the first decade of quantitative applications of the concept. The early empirical work includes numerous comparative studies of both industrial countries (Balassa et al. 1967) and developing countries (Little, Scitovsky and Scott 1970; Balassa et al. 1971), a testament to its widespread popularity. A striking feature of this literature is the genuine interaction between theory and empirical work, and between academic researchers and the policy community including the GATT.⁶

These studies reveal many things, but three points in particular are worth mentioning here. First, the estimated ERP averages and their dispersion far exceed those of nominal rates of protection (NRPs), suggesting that the resource pulls and hence costs of protection are much greater than the NRPs on their own might suggest. Second, the differences between NRPs and ERPs are not constant across countries, so that ERPs are to be preferred to NRPs for cross-country comparisons of the extent of protection. And third, while the NRP and ERP rankings of industries within countries are not greatly different when the degree of aggregation is fairly high, the rank correlation falls as the degree of disaggregation increases. This means ERPs are also better than NRPs for across-industry comparisons within a country, since the resource-pull cost of protection tends to increase with the range of ERPs, particularly within sub-sectors where substitution in production is high.

Since its first adoption in Australia, the EPR concept has been broadened to the effective rate of assistance (ERA) to industries, so as to capture in principle all forms of governmental assistance to producers.⁷ This is helpful not only for those concerned with national resource allocation but also for trade negotiators, given the

increasing tendency of negotiators to focus also on trade-related measures inside national borders as border protection falls.

The work of academics such as Corden, of the Tariff Board and its successor institutions (the Industries Assistance Commission, the Industry Commission and now the Productivity Commission),⁸ and of the maverick farmer and Federal Politician C.R. (Bert) Kelly via his weekly column syndicated to rural newspapers and the national financial newspaper on why primary producers were being effectively (albeit indirectly) taxed by manufacturing tariffs (see Kelly 1978), gradually changed the climate of opinion of economics/business journalists towards one of advocating trade liberalization.

Even so, it was not until the 1970s that major tariff reductions began. A 25 per cent across-the-board cut in 1973, preceded by some cuts in 1970-71, started the tariff reform process, following an initially confidential report to the government by six economic advisors on possible ways to expand imports as a means of reducing inflationary pressures (Rattigan et al. 1973). The reform process accelerated in the 1980s and continued through the 1990s. As a result, the average effective rate of assistance to Australian manufacturing fell from 36 per cent to about 5 per cent over those three decades. In the 1990s alone, both the mean and the standard deviation of Australia's import tariffs on goods halved. This brought the average tariff for manufactures down to 4.2 per cent in 1999.⁹ The only manufacturers with significant tariff protection at the start of the new millennium were motor vehicles and parts, and textiles, clothing and footwear. Excluding them, the average effective rate of assistance to Australian manufacturing was just 3 per cent (Productivity Commission 2000a).¹⁰

Reductions in assistance to/taxation of other sectors

Agricultural subsidies and regulatory interventions also have been reduced. During the 1960s the standard arguments for agricultural support programs in Australia were being shown to lack merit (see the survey by Edwards and Watson 1978, and the update by Edwards 1992). Following a rural policy report to the new Whitlam Labor Government by four economists (Harris et al. 1974), there was some debate about the virtues on second-best grounds of farm subsidies as compensation to farmers to offset the resource-pull effects of the tariff on manufactures (Harris 1975; Lloyd 1975). However, after that debate which included two persuasive analytical

papers by Warr (1978, 1979), most agricultural and other economists advocated the first-best option of lowering tariffs in preference to tariff compensation. Then an incisive study by Sieper (1982) on who really was gaining from farm policies made it even more difficult for anyone to advocate the retention of agricultural regulatory/support policies. By that time even the peak farm bodies were instead behind the idea that their best strategy was to support the so-called 'economic rationalist' line of manufacturing trade liberalization, even if it meant giving up some direct farm support measures.

As a consequence, the average effective rate of assistance to the farm sector fell from above 25 per cent in the early 1970s to well below 10 per cent today. Dairying was the only farm group still benefiting significantly from government programs in 2000.¹¹ When dairying is excluded, the estimated effective rate of assistance to Australian agriculture in 1998-99 falls from 8 to 3 per cent (Productivity Commission 2000c, p. 27). Thus distortionary government assistance to both manufacturing and agriculture has now all but disappeared.

The mining sector has been mostly taxed rather than supported by the government. The lifting of the export ban on iron ore and coal in the early 1960s allowed the inevitable minerals trade with Japan to get under way. But it was some time before the application of more-efficient instruments such as resource rent taxes (as advocated by Garnaut and Clunies Ross 1975, 1979, 1983 and scrutinized by Emerson and Lloyd 1983). There have been some further reforms since then (Smith 1992), but the sector remains somewhat discriminated against relative to agriculture and manufacturing.

Service sector interventions also have begun to be dismantled, beginning with the Hawke Labor Government following its election in 1983. Markets for banking, post and telecommunications, ports, higher education, health, and rail, air, and to some extent sea transport have been opened up; there has been progressive outsourcing of many government services; and substantial reforms to competition policy and practice, including the corporatization and de-monopolization of numerous government enterprises, are well advanced.¹² In addition, a comprehensive program of review of government regulations at all levels has been under way since the mid-1990s, with the aim of reducing/removing regulations that unjustifiably impede economic activities (Productivity Commission 2000b).

Moreover, by 1983 the Australian dollar was floating and foreign investment flows began to be freed up. That has complemented financial sector reform and has contributed to foreign direct investment, equity and foreign currency transactions growing at more than three times the pace of Australia's GDP during the past 15 years (see Shields 2001). And even the previously highly unionised labour market has undergone considerable reform (Wooden 2001), which with higher education reforms has encouraged growth in human capital (Chapman and Withers 2001).

The freeing of the market for foreign exchange, together with domestic microeconomic reforms, has increased competitiveness in the Australian economy substantially. That, together with the greater scope it has provided to specialize in production so as to reap economies of scale, has added considerable dynamism to the Australian economy. It was especially important in contributing to the flexibility with which the Australian economy was able to respond to the East Asian financial crisis in the late 1990s. Despite Australia's much greater trade exposure to East Asia than most other OECD countries, and the consequent decline in its terms of trade, the Australian economy weathered that crisis remarkably well, in part through temporarily re-directing its trade back to Europe and North America.

Costs of trade-distorting policies

Australian economists have contributed significantly to understanding and measuring the costs of trade-distorting policies. In a seminal paper Corden (1957) critiqued the Brigden et al. (1927) report's approach and in so doing provided both partial and general equilibrium ways to consider those costs. The partial approach was and continues to be widely used, while large-scale computable general equilibrium modelling of those costs had to wait until computing power became affordable. The first such effort for Australia, by Evans (1972), was refined by Dixon and Butlin (1977) and Dixon (1978) as the ORANI model was being developed (Dixon et al. 1982). It has since been finessed even further thanks to the development of the MONASH model (Dixon and Rimmer 1998). Nonetheless, measurement of the costs of protection (or the net benefits of trade reform) remains controversial, with most economists confident that those benefits are several orders of magnitude larger than existing empirical models suggest, not least because the dynamic effects of reform on investment incentives are poorly understood and therefore poorly modelled.

Meanwhile, the standard arguments for industrial protection in Australia and elsewhere have come under close scrutiny, and found wanting. Corden (1974, revised 1997) examines all the major arguments that have been put forward over the decades as to why particular trade policy measures are needed. In virtually all cases, he shows there is a more efficient way to achieve society's goals. Tariffs might have a legitimate role at some point in a small economy's history only where other means of either raising government revenue or of redistributing taxes are more expensive in terms of administrative or by-product distortion costs.¹³ That suggests, just as Sieper (1982) found with Australia's agricultural policies, that the real motive behind manufacturing protection policies has more to do with who gains and who loses, and that the net welfare loss from intervention is but a minor part of the political economy of such policy setting.

Distributional effects of trade-distorting policies

The Australian debate about who gains or loses from protection stems back to Federation, but it was enlivened for economists by the publication of the Brigden Committee report in 1929. That led to students and their professors focusing on the issue, an important consequence of which was a theoretical publication by Stolper and Samuelson (1941). They modelled a small economy and, by assuming there were two sectors producing tradables and just two mobile factors of production, they were able to conclude that a tariff on imports would raise the real income of the owner of the factor used relatively intensely in the import-competing sector and lower the real income of the owner of the other factor. In the Australian setting that suggested labourers would gain at the expense of capitalists (which in their model included landowners).

No allowance was made in the Stolper-Samuelson model for the facts that labourers are heterogeneous and that workers can raise their skills over time (Lloyd 1978). Perhaps even more importantly, the reality that natural resources such as farm land and mineral deposits are specific to the primary sectors was not taken into account. A Ricardo-Viner model popularised by Jones (1971) was thus more appropriate for Australia, given the importance of the primary sectors. That model still involves just two tradable sectors but each is assumed to have one factor of production that is specific to its sector, in addition to a perfectly mobile factor (labour). With those assumptions Jones predicts that a tariff on imports will raise the

real income of the owners of the factor that is specific to the import-competing manufacturing sector, and lower the real income of the owners of the farmland or minerals that are specific to the primary export sector. Moreover, he shows that the real incomes of wage earners could go up or down, with the latter more likely the larger the share of manufactures in their consumption bundle (since the price of manufactured goods is raised by the tariff).

That set of conclusions is dramatically different from the perception many people had based on the Stolper-Samuelson model and the earlier debate in Australia. If labour were in fact not to be gaining from tariffs, and that instead the gains were being captured only by industrial capitalists (many of them foreigners, since the tariff encouraged foreign direct investment in Australia), then any residual credibility in the traditional income distributional argument for tariffs collapses (Anderson and Garnaut 1987, Ch. 5).

Australia and the multilateral trading system

Prior to the mid-1980s, Australia was not very engaged in trade agreements with other countries except Britain, and even the British connection diminished following the UK's accession (with Ireland and Denmark) to the European Community in 1973. Australia was disappointed that earlier multilateral trade negotiations under the General Agreement on Tariffs and Trade (GATT) failed to address the growth and spread of agricultural protectionism.¹⁴ When that protectionism reached the point in the early 1980s of generating surpluses of farm products that Europe could dispose of only with the help of export subsidies, the United States responded in kind. That export subsidy war drove real international food prices down to record lows. Australia decided to respond through forming the Cairns Group of non-subsidizing agricultural exporting countries in 1986, the key aim of which was to keep agriculture on the agenda of the just-launched Uruguay Round of trade negotiations (Higgott and Cooper 1990). While the implementation of the Uruguay Round's Agreement on Agriculture itself has not yet lowered agricultural distortions greatly, it has at least placed agriculture in the GATT mainstream ready for further cuts in farm protection in the World Trade Organization's next round of multilateral trade negotiations which began in 2000.

With the greater engagement of Australia in the multilateral trading system (MTS) since the early 1980s, Australian economists (not to mention trade officials)

have become considerably more active in contributing more to the analysis of MTS issues of concern to their country. One example is in the design of modalities for services trade negotiations (Sampson and Snape 1985; Snape 1998). Others are in thinking about how the GATT/WTO should deal with subsidies (Snape 1991), and with the growth in regional/preferential trading arrangements.¹⁵

An especially important contribution to the place of regional arrangements in the multilateral trading system has been APEC, the Asia Pacific Economic Cooperation Forum (Drysdale and Garnaut 1989, Garnaut 1996). A creation launched by the Hawke government in 1989, it differs from other regional trade arrangements in two key respects. First, it advocates GATT/WTO-consistent open regionalism as distinct from adopting a preferential tariff structure that discriminates against non-members. And second, it provides a useful testing ground for new issues that the global trading system is likely to have to grapple with in the WTO in due course. In both respects APEC provides more of a stepping stone to freer global trade than so-called free trade areas or customs unions.

Have economists made a difference?

Cynics say that economists are unpersuasive because we have known about benefits of *laissez faire* and in particular the gains from trade for more than two centuries and yet trade restrictions remain in Australia as elsewhere. Economics advocates, on the other hand, will point to and claim some credit for the remarkable extent of trade and domestic market reforms that have occurred in recent decades. The relevant question is: *how much* credit can be claimed by economists? There is no way of answering this precisely, but a few points are worth making.

First, revealing the fact that Australia and New Zealand had the most protected manufacturers among the OECD countries until the 1980s – and noting that they were the slowest-growing of the OECD economies in the post-war period -- was helpful in bringing down their protection levels during the past two decades.

Second, revealing the vast across-industry differences within sectors of protection rates, which were much bigger than the differences in nominal rates, helped governments to resist domestic pressures to maintain or raise protection for the most assisted groups.

Third, the clarification of the theory and the empirical estimates of the consumer and net welfare costs of protection have made it easier for advocates of

reform to gain headlines than when relying on only abstract arguments about the gains from trade, while estimates of the cost of protection to less-assisted export industries (and to exporters abroad) have helped build coalitions for trade liberalization.

Fourth, revealing the extent of effective protection to agriculture relative to manufacturing in key OECD countries, and of the industrial sector relative to primary sectors in many developing countries (as in Australia), helped to alter the domestic political economy forces in both sets of countries. The large increase in the farmer/manufacturer assistance gap in OECD countries between the end of the GATT's Tokyo Round and the start of its Uruguay Round of multilateral trade negotiations also helped to ensure agricultural protectionism was placed and remained high on the agenda of the Uruguay Round and its creation, the WTO.

However, the policy ideas and analyses contributed by economists are only a small subset of the influences on governments to reform Australia's trade and industry policies over the past three or four decades. Brennan and Pincus (2002) argue that Australia governments have simply been reacting to developments in the global economy more than exogenously shaping Australia's economic climate. Certainly Australian liberalization in many ways has just followed (with a delay) the market reforms of other countries (Garnaut 1994, Corden 1995) but, given the relatively entrenched protectionist sentiment, economists probably had to work harder here than abroad to alter the climate of opinion in a liberal direction.

One final point. The influence of academic economists on Australian economic policies has gradually become more indirect rather than direct. In earlier decades there were very few economists working full time in government, so dependence on academics for policy advice was quite common. Since the 1960s, however, there has been a boom in employment opportunities for economists in federal government agencies. As a result, much of the required policy analysis is done in such agencies as the Productivity Commission and the Australia Bureau of Agricultural and Resource Economics, or in economic consulting companies staffed by former senior public servants, leaving academics freer to concentrate on research and on teaching the next generation of economists.

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Notes

¹ In 1999 Australia was ranked twenty-sixth, according to the World Bank Atlas method of measuring GNP per capita (or twentieth using the World Bank's Purchasing Power Parity method) -- not counting the several rich countries with less than one million people (World Bank 2000b).

² Earlier literature surveys can be found in Corden (1968) for writings up to the mid-1960s and, for the next decade, in Gruen (1978; 1983) and especially Lloyd (1978), Edwards and Watson (1978), and Smith (1983).

³ In fact the increased demand for nontradables (and other products) would begin as soon as expectations about future income prospects rose, which could be well before the mining export boom shows up in the trade statistics in the case where the exports are preceded by FDI inflows for investments with a long lead time (Corden 1982).

⁴ Gregory (1976) was the first to focus on the mining boom issue from an Australian perspective following the 1973-74 hikes in international energy prices. His analysis was refined by Snape (1977). Corden (1984) placed those Australian writings in the context of the global booming-sector literature and provides a consolidated theory of the effects of such booms on the intersectoral distribution of production (including nontradables) and of trade.

⁵ In earlier Australian initiatives to form regional/preferential trading arrangements, economic analyses were more qualitative. Examples are the bilateral Closer Economic Relations with New Zealand (Lloyd 1991) and a proposed free trade area with the United States (Snape 1989; Snape, Adams and Morgan 1993).

⁶ See, for example, the conference proceedings volume edited by Grubel and Johnson (1971).

⁷ ERAs have been estimated for all Australian manufacturing industries at the 2-, 3- and 4-digit levels of disaggregation each year since 1968-69, for all rural industries since 1970-71, and occasionally also for mining industries (whose ERAs are close to or below zero). Details can be freely downloaded from the website of Australia's Productivity Commission at www.pc.gov.au. The Commission also estimates and publishes the consumer tax equivalent of industry assistance policy measures including the tariff. The availability of such comprehensive estimates of ERAs has made it easier to use the economics of politics to explain the intra-sectoral pattern of assistance to industries, as in Anderson (1980).

⁸ That transparency agency had an increasingly influential role within the government and in the wider community from the late 1960 until the 1980s (Glezer 1982, Warhurst 1982, Rattigan 1986), and it remains very influential today through publishing rational economic analyses on an ever-wider range of microeconomic policy issues.

⁹ This was still higher than for other OECD countries in the late 1990s though: New Zealand 3.4 per cent, European Union 3.2 per cent, Canada 2.9 per cent, United States 2.4 per cent, Japan 2.0 per cent (World Bank 2000a, Table 6.6). And WTO-bound tariffs average more than twice the applied rates (Productivity Commission 2000a, Table 2.3). However, Australia uses non-tariff import barriers less frequently than other OECD countries, apart perhaps from anti-dumping duties (Productivity Commission 2000a, Table 5.2 and 2000c, pp. 38-44).

¹⁰ Tariffs on motor vehicle imports fell from 40 to 15 per cent over the 1990s and are due to fall to 10 per cent in 2005; for clothing the decline over the 1990s was from 55 to 25 per cent, and for footwear from 45 to 15 per cent (with falls to 17.5 and 10 per cent due by 2005, respectively – Productivity Commission 2000a, Table 4.4).

¹¹ Tobacco also was highly assisted, but deregulation of tobacco marketing arrangements began in 1995 and was completed in 2000, bringing effective assistance to tobacco growing down from 30 to 2 per cent over that period. As from 1 July 2000, the remaining impediments to a free domestic market in fluid milk began to be dismantled, for which compensation to dairy farmers is to be paid over the next eight years (as provided also to tobacco producers in the late 1990s).

¹² For an early assessment see Forsyth (1992), while an update on the 1990s is in Forsyth (2000). All Productivity Commission reports on the myriad reforms are downloadable at www.pc.gov.au. Recent research on barriers to trade in a wide range of services in almost 40 countries found that services markets in Australia, relative to those in the other countries in the study, are now ranked as either very liberal (banking, distribution services, telecoms, engineering professional services) or just moderately restrictive (other professional services, maritime services) – see Productivity Commission (2000c, pp. 50-61).

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¹³ In Australia's case, if those ever were legitimate arguments, their relevance would have declined substantially over the twentieth century as fiscal governance improved.

¹⁴ See Arndt (1965), Snape (1984), and Anderson (1999). This and many other aspects of the history of Australia's trade policy are detailed in Crawford (1968) and Snape, Gropp and Luttrell (1998). A political scientist's perspective on Australia's engagement with the GATT/WTO is available in Capling (2001).

¹⁵ They have contributed also to the empirical estimation of the effects of global trade liberalization in agriculture (Tyers and Anderson 1992; Anderson 2002), and to the measurement of distortions in services trade and investment (Findlay and Warren 2001; Dee, Hanslow and Phamduc 2000).