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P A P E R S

Industrial Policy In Developing Economies:  
Developing Dynamic Comparative Advantage  
In The South African Automobile Sector.

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# **Industrial Policy In Developing Economies: Developing Dynamic Comparative Advantage In The South African Automobile Sector.**

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## **SUMMARY**

Mainstream economics and the Washington Consensus caution against industrial policies that target sectors, firms and regions. At the most they favour cross-sectoral policies which address generalised market failures. This paper analyses the success of an industry-specific policy, South Africa's Motor Industry Development Programme. It documents significant learning processes and shows the impact of the sector's growth on macroeconomic performance. It also addresses the "costs" of industrial policy and shows how well-designed scale-enhancing selective policies can provide domestic consumers with global-quality products at global-price levels, without subsidy from the exchequer. The Conclusion addresses the relevance of such selective policies to other developing economies, arguing the case for intelligent and appropriately crafted industrial policy.

**Keywords:** Industrial policy, Market failures, Automobile and components sector, Washington Consensus, South Africa

## 1. INTRODUCTION

The first half of the 1990s saw a vibrant debate on the efficacy of industrial policy in developing economies, after which there was solidification in the policy environment, both within multilateral agencies and in most developing country governments.

The context was one in which the Washington Consensus of the early 1980s had led to the increasingly rapid spread of structural adjustment programmes in LDCs. These programmes promoted the power of markets over states in resource allocation, and were associated with trade policy liberalisation, deregulation, the promotion of Foreign Direct Investment (FDI), and the dismantling of policy and administrative regimes which were designed to promote industrial development. In response to this increasingly hegemonic policy agenda, the Japanese representatives in the World Bank promoted a process of research enquiry into determinants of industrial success in eight “highly performing Asian economies” (HPAEs) – Hong Kong, Indonesia, Japan, Korea, Malaysia, Singapore, Taiwan and Thailand. The intent of this Japanese initiative was to promote the use of a policy agenda that Japan had itself used in its very rapid industrial development, one which provided an active market-guiding role for the state in the promotion of selected industries.

The outcome of this study on industrial policy (World Bank, 1993), and the process whereby it reached its conclusions is well known, and has been extensively documented (Wade, 1996; the various papers in the Special Issue of World Development, Vol. 22, No. 4, 1994). In brief, the upshot was a report which concluded that the only positive role which these governments had played was to promote generic economy-wide incentives to compensate for market failures. These, for example, covered areas such as education and research and development. The Report explicitly argued that targeted industrial policies had been a failure, even though it acknowledged that providing unambiguous “proof” was difficult: “Thus, in attempting to distinguish interventions that contributed to growth from those that were either growth-neutral or harmful to growth, we cannot offer a rigorous counterfactual scenario. Instead we have to be content with what Keynes called an ‘essay in persuasion,’ based on analytical and empirical judgements” (World Bank, 1993: 6)

On the failure of targeted policies, the Report concluded that “[o]ur judgement is that in a few economies, mainly in Northeast Asia, in some instances, government interventions resulted in higher and more equal growth than otherwise would have occurred [a sop to the Japanese lobby]. However, the prerequisites for success were so rigorous that policymakers seeking to follow similar paths in other developing countries have often [in reality they meant usually] met with failure” (passim).

Thus, there were two central conclusions arising out of this study of the HPAEs. The first was that targeted industrial policies cannot be shown to have had a net positive impact on industrial performance (although, as they point out, this is a matter of belief and judgement). The second was that even if it were true that targeted policies might be effective in some environments, the call on administrative expertise was so significant that few developing economies could hope to benefit from their use.

A recent paper by Pack on the effectiveness of industrial policy in Japan and Korea supports this latter view (Pack, 2000). In general Pack is sceptical of the positive role which selective policies played, even in the successful cases of Japan, and Korea (during the 1960s, but not the 1970s). He concludes that in these successful cases, “industrial policy may [only] have been a minor hormone” (p 64), and ran the risks of encouraging the development of a bloated and fragile banking sector designed to promote sectoral shifts in industrial structure. Thus, Pack points to the danger of industrial policies for the developing world – “Countries attempting to extract the benefits from an industrial policy that Japan and Korea obtained have to possess not only an exceptionally capable bureaucracy but also the political ability to withdraw benefits from non-performing firms.... [Thus, developing] countries should be exceptionally cautious before embarking on such policies” (ibid: 64).

This view of extreme scepticism about the benefits of industrial policy for developing countries has become hegemonic and influences virtually all bi- and multi-lateral assistance support for developing countries. Its rationalisation in the theoretical and policy literature has also led to a great reluctance by developing country actors to promote industrial policy.

The case against a selective industrial policy is most often made in relation to sub-Saharan Africa. The Chief Economist at the UK’s Department for International Development for example concludes that “I am also persuaded, however, that most selective interventions in most countries have been ineffective, costly and corrupt. This makes me sceptical that the East Asian approach could be replicated in other now-poor regions. The past performance of both Africa and South Asia suggests to me that neither has political or administrative systems capable of implementing a Korean development strategy” (Wood, 2002).

In this paper we bring evidence to bear concerning the Motor Industry Development Programme (MIDP) in South Africa. We show how a carefully targeted policy, cognisant of administrative weaknesses, has led to the rapid growth of an industry, which in turn has been a primary factor in fuelling the recent growth in non-traditional exports and in industrial output; it has also led to the growth of dynamic comparative advantage as firms have begun to catch up with the global frontier. We believe that this story has positive implications for industrial policy in general, and in developing countries in particular, including in sub-Saharan Africa.

In the following section, we provide a brief review of the changing nature of industrial policy in South Africa, and in Section 3 at the development of a sectorally-specific programme focused on the automobile sector. In Section 4 we show the impact of this programme on South African industrial performance. This is a prelude to a discussion in Section 5 of the way in which the MIDP and other policies contributed to the development of learning capabilities in the auto components sector, thereby promoting the development of dynamic comparative advantage (a factor neglected in much of the critique of industrial policies) in the assembly sector. This is followed in Section 6 by an analysis of who, if anybody, pays for the costs of this industrial policy, since one of the major critiques of industrial policy is in relation to its high cost, particularly to consumers and users of intermediate inputs. The Concluding section draws on this specific experience to discuss its wider relevance to other sectors and other developing countries.

In identifying a framework for the analysis of industrial policy, we are informed by a review of the role which technology policies played in East Asian growth (Lall and Tuebal, 1998).<sup>2</sup> They distinguish between three types of policy, namely:

- “functional” policies which improve market operations; for example, policies designed to enhance competitive pressures (competitions policy; lowering tariffs)
- “horizontal” policies which cross sectors, such as generalised incentives to promote greater R&D and training
- “selective” policies designed to promote the advance of particular sectors (for example, preferential access to capital; sector-specific subsidies) or particular firms (for example, the promotion of “national champions” such as the Proton auto firm in Malaysia).

In the discussion which follows we utilise this threefold classification to review industrial policy, since we believe it not only provides an accurate picture of evolving industrial policy in South Africa, but also because it provides a constructive framework for thinking through the potential role of industrial policies in other economies, including in least developed countries.

## **2. The Evolution of Industrial Policy in South Africa**

The roots to industrial policy in South Africa are to be found in the promotion of the indigenous steel industry during the 1920s (Kaplan, 1977). During subsequent decades, industrial strategy was built around a readily recognised import-substituting model – heavy tariffs, generally escalating with the degree of value added, coupled with preferential purchasing and the occasional picking of “winners” (such as the state-owned steel company). The distinctive feature of South African industrial policy in the 1960s, 1970s and 1980s was the promotion of selected industries. During the 1980s the desire to mitigate sanctions against Apartheid resulted in the promotion of a coal-based synthetic-fuels capability, heavy investment in an uncompetitive offshore gas deposit, and the bolstering of military capability.

By the early 1980s, the protective regime had become extraordinarily complex. In the context of a small economy, the consequence of a large number of protective tariffs and non-tariff barriers was that these in effect became firm-specific.<sup>3</sup> At the same

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<sup>2</sup> Wade’s discussion of industrial policy (Wade, 1990: 30-32) provides a similar approach. He distinguishes between “functional” policies (proximating to the “horizontal” category in Lall and Tuebal’s classification), “sectoral” policies (analogous to their “selective”) category and then to a range of overlapping policies designed for other purposes (macroeconomic, public goods and distributional policies) which also affect industrial performance.

<sup>3</sup> By the early 1990s the coefficient of dispersion of South Africa’s tariff regime was only exceeded by one other country (Belli et. al., 1993).

time, despite this protective cordon, balance of payments deficits were constraining economic growth. Consequently, and prior to the transition to democracy in 1994, two major changes in trajectory were evident during the second half of the 1980s. First, attempts were made to clean-up the protective regime. Non-tariff barriers were replaced by tariffs, which in turn were simplified. And, second, in an attempt to learn from the success of the East Asian economies, exports were promoted through a subsidy scheme based on the degree of value added.

At Transition in 1994, the incoming democratic government reviewed both of these “demand-sided” policies. With regard to the protective regime, priority was given to the intensification of reform. Further attempts were made to reduce the number of tariff codes and a commitment was made to speed-up a reduction in tariff protection, in excess of the demands of the General Agreement on Tariffs and Trade (GATT). The logic of this was to force domestic industry to sharpen its competitiveness and to reduce the cost of inputs for user-industries. Insofar as export subsidies were concerned, these were removed since they were very costly (the value of subsidies were approximately 0.5 percent of GDP at their high point in the mid 1990s), were subject to growing corruption, and were anyway becoming GATT-illegal.

However, the revision of these demand-side measures did not signify a withdrawal of the government from industrial policy. From the early 1990s, the government-in-waiting had begun a process of enquiry which ultimately resulted in a new industrial strategy. The upshot of this programme was a series of “supply-sided measures” designed to promote the adoption of world class manufacturing capabilities. The significant element of these supply-sided measures was that, with two exceptions, they comprised a series of “horizontal policies” designed to operate across sectors. Key amongst these were horizontal measures to:

- ❑ promote technological capabilities through R&D subsidies – the THRIP programme
- ❑ promote the adoption of World Class Manufacturing – the Competitiveness Fund
- ❑ support firms working to achieve collective efficiency – the Sector Partnership Fund
- ❑ adopt new progressive labour processes – The Workplace Challenge
- ❑ schemes to promote industrial training – Skills Support Programme, subsidised apprenticeships and learnerships

Each of these “horizontal” measures involved budgetary support designed to leverage complimentary private-sector investments.

In addition, the new government’s macroeconomic policy was geared towards promoting greater competitiveness (not just through tariff reform, but also a new competitions policy), increasing transparency in the incentive system, and in

achieving macroeconomic stability.<sup>4</sup> This package of measures can be characterised as “functional” policies in the Lall/Teubal taxonomy.

But almost conspicuous by its absence were the selective policies adopted so widely in East Asia (and in previous import-substituting policy regimes). There were a number of reasons for this, including the influence of the World Bank and other external parties promoting policy in the new dispensation.<sup>5</sup> But perhaps most persuasive was the judgement that the new government lacked the administrative capacity to define and implement selective industrial policies. Notwithstanding this judgement, a decision was made to continue with the two selective sectoral programmes inherited from the previous dispensation.<sup>6</sup> These affected the automobile and textile and clothing sectors.

### **3. The Motor Industry Development Programme (MIDP)**

The selective industrial policy analysed in this paper is that which relates to the automobile and the automobile components sector. This policy environment stretched back to 1961, when the first of a series of six local content programmes were introduced. These local content programmes were designed to save foreign exchange rather than to rationalise production (Black, 2001), so that over the next three decades there was a sharp proliferation of assembly plants (seven), assembling 34 different platforms by 1993. An added and distinctive twist to this programme was that for the first five phases (until 1989), local content was defined by weight rather than value.

In 1989, during the sixth phase of the local content programme, the definition of local content changed from weight to value. And, for the first time, exports could be considered as “local content”. Moreover, a tradable system of export credits was instituted which therefore allowed assemblers to also include the value of component exports. But as Black points out (*ibid*), this programme failed to engage with the problem of model proliferation so that scales were suboptimal and production costs high. Duty levels of 115 percent on fully built up vehicles permitted this, with the ultimate cost of the industry’s inefficiencies passed on to the consumer.

The Motor Industry Development Programme (MIDP) succeeded the local content programmes in 1995 and heralded a marked shift in vision and aims. Its new objectives were to:

- improve the international competitiveness of firms in the industry

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<sup>4</sup> The Growth Employment and Redistribution (GEAR) strategy was introduced in the latter half of the 1990s. It was successful in reducing government budget deficits and inflation, but failed to meet targets on growth and employment (Padayachee and Vallodia, 2001).

<sup>5</sup> This judgement is not an ideological one, since one of the authors of this paper was deeply involved in the definition of the post-1994 policy regime. For background to this see Joffe et al (1995).

<sup>6</sup> The reasons for this anomaly in policy are complex. But a significant factor was the power of the two trades unions involved. Not only had they influenced pre-Transition policy, but the new government was in effect a coalition of a political movement (the ANC) and a trade union movement (COSATU). COSATU in turn was heavily influenced by two of its most powerful constituent members, NUMSA (the metalworkers union, covering the auto sector) and SACTWU (the union organising clothing and textile workers).



- ❑ enhance its growth through exporting
- ❑ improve vehicle affordability
- ❑ improve the industry's highly skewed trade balance
- ❑ stabilise employment levels

In order to achieve these aims a series of export-oriented incentives were introduced, coupled with a reduction in import tariffs between 1995 and 2002. The key elements of these export-incentives were:<sup>7</sup>

1. The abolition of a minimum content provision and the introduction of an import-export complementation (IEC) scheme that allowed both automobile and component manufacturers to earn duty credits from exporting. These duty credits were tradable and could be used either to offset import duties on cars, components or materials; it thus allowed assemblers to buy credits from component exporters to finance the import of completely assembled vehicles (which they did not produce locally) or components which they preferred to source from abroad.
2. A tariff phase down schedule designed to reduce nominal rates of protection to 38 percent for completely built-up units (CBUs), and 29 percent for completely knocked down (CKD) components by 2003.
3. A duty free allowance for assemblers of 27 percent of the wholesale value of the vehicle.
4. A small vehicle incentive (SVI), which provided a subsidy for the manufacture of more affordable vehicles. It operated via a duty drawback mechanism with the value of the drawback linked to the value of the motor vehicle.<sup>8</sup>
5. A Productive Asset Allowance (PPA) was introduced, providing duty credits equivalent to 20 percent of the investments, spread out over a period of five years. However, this only applied to investments which were designed for exports and which enhanced scales of a particular product line.

Since its inception, the MIDP has been subjected to two reviews, the first in 1999 and the second in 2002. The first review extended the programme to 2007, whilst the second extended it to 2012. The key element of both reviews was predictability in the incentive scheme, with this taking the form of declining trade facilitation support and a gradual reduction in import tariffs, with CBU and CKD duties reaching 25 percent and 20 percent respectively by 2012.

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<sup>7</sup> For more details on these policies, see Barnes and Kaplinsky (2000), Barnes and Morris (2000), Black (2001, 2002) and Barnes and Black (2003).

<sup>8</sup> This was, however, withdrawn in 2001. It was perceived to be having a limited impact on making vehicles more affordable to the poor.

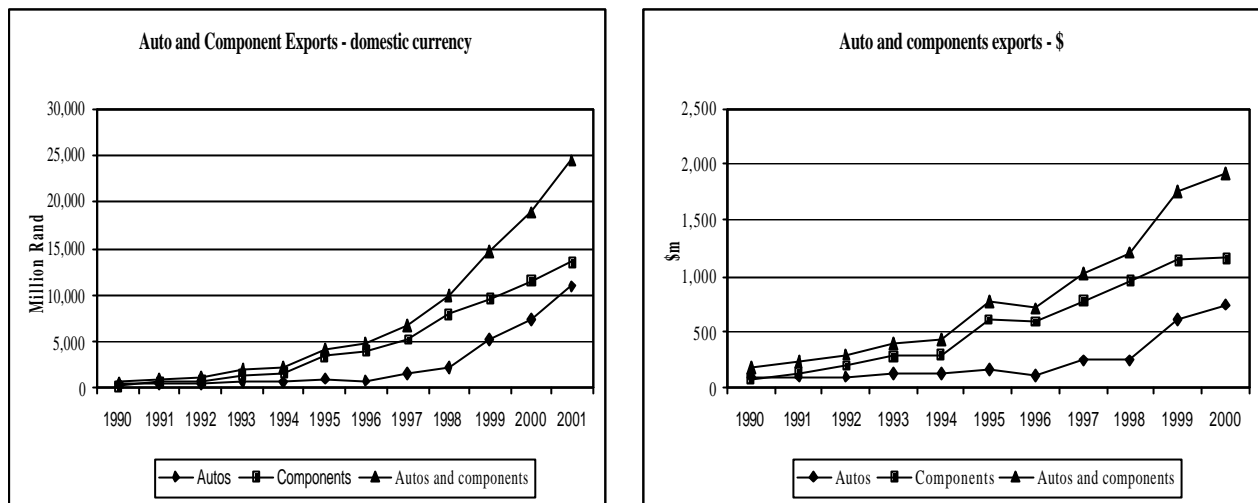
In summary therefore, we can observe a selective industrial policy targeted at the automobile and components sector. It has a long history, in two phases. The first phase (1961-1989) was focused almost entirely on increasing local content. The second phase (post 1989) was targeted at rationalisation and the reaping of scale economies as well as net import saving, achieved through a series of export-incentives built around access to duty-free imports for the local market. Although predating the recent vintage of functional and horizontal policies introduced after Transition in 1994, this selective industrial policy was synergistically imbedded in a coordinated framework in which it gained from the macroeconomic incentive regime, and drew on new horizontal policies introduced in the latter half of the 1990s.

#### **4. Impact of the MIDP on Industrial Performance**

What impact did this selective industrial policy have on industrial performance in the economy as a whole? This is a conceptually difficult question to answer (when do spillovers end, and how are these to be measured?). But even if it were conceptually simple, data constraints would make it difficult to develop a general equilibrium answer to this challenge. As the World Bank's East Asian study observed (to repeat an earlier quote), "we cannot offer a rigorous ... scenario. Instead we have to be content with what Keynes called an 'essay in persuasion,' based on analytical and empirical judgements" (World Bank, 1993: 6). And here is our judgement.

First, there can be no doubting the impact of this incentive scheme on auto and component exports, not just in a depreciating local currency, but also in relation to the international purchasing power it provided. These increased from a negligible quantity to almost \$2bn over the decade of the 1990s (Figure 1) (\$1 is approximately R8). This was part of a more general outward reorientation of the manufacturing sector in which the trade balance improved between 1994 and 2001. This improvement was due to rapidly growing exports (since imports also expanded). The auto sector played an important role here, and although the sector's balance of trade remained in the red, this fell from -R14.1bn in 1996, to -R10.6bn in 1997, -R9.8bn in 1998, -R8bn in 1999, -R9.7bn in 2000, and -R8bn in 2001 (Dept. Trade and Industry, 2002). (Since the Rand depreciated significantly over this period, the \$ value of this deficit fell substantially - from \$3.3bn in 1996 to \$930m in 2001).

Figure 1. Auto and component exports, 1990-2001



Source: Calculated from NAAMSA Annual Report, 2000-2001

Second, the rapid growth of the auto sector – and particularly its exports – contributed to a change in industrial structure. The auto sector's share of gross output value increased from 9.7 to 13 percent between 1994 and 2002, the largest growth in share of any of the 29 2-digit ISIC sectors. This was on the back of a doubling of the export/output ratio.<sup>9</sup> But it was not just the share of gross output value which grew, but also of value added. Between 1991 and 2000, the auto sector's ranking in the share of value added rose from 35 to 18 in a categorisation of 46 subsectors (van Seventer, 2002). And, thirdly, even though employment in the auto sector remained stable over this period and did not grow, this was in a context of growing labour displacement from the industrial sector as import competition began to bite. Thus the share of the auto sector in manufacturing employment grew from 5 percent to 6.2 percent between 1993 and 2001 .

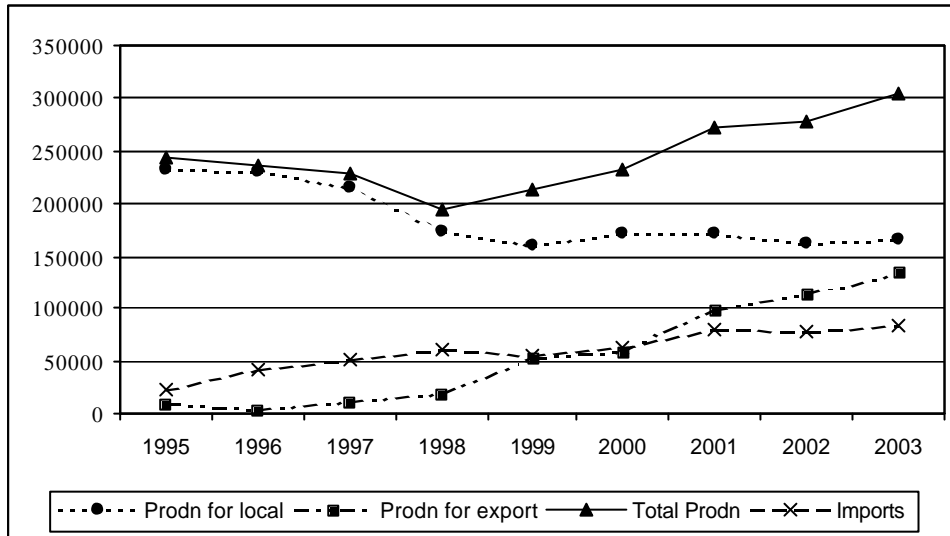
This impact on the composition and growth of the manufacturing sector was based on a rapid rise in the exports of completely-built-up units (CBUs), especially after 1998. (Figure 2). In addition to these exports of CBUs (and the components embodied in them) there was also a rapid growth in direct component exports. These growing exports, increasing at an annual rate of 33.8 percent between 1995 and 2001 (Barnes and Black 2003), took the following form:

- With respect to CBU exports, three German assemblers sourced large numbers of cars from South Africa for their global markets. *BMW* decided to specialise on the 3-Series car in order to obtain scale economies, and displaced local production of the 5- and 7-Series with imports. Its exports of CBUs increased steadily from 4,346 units in 1998 to 43,583 units in 2002. Its exports were destined for the North American, Australasian, European and Japanese markets. *Volkswagen* sourced an increasing number of Golf 4 cars for the UK and European markets, with these exports growing from 10,485 units in 1998 to 30,533 units in 2002.

<sup>9</sup> Data provided by David Kaplan and drawn from South African Statistics and Revenue Services data bases.

*Daimler-Chrysler* exported 36,324 C-Series Mercedes Benz's to Japan, the UK and Australasia in 2002, a 20-fold increase on exports of only 1,752 vehicles in 1998. In 2001, following the example of the German assemblers, *Toyota* announced that it would begin exporting the Toyota Corolla to Australia and New Zealand in April 2003 with these exports projected to grow to 30,000 units by 2004. In aggregate, therefore, CBU exports are expected to have grown from 18,342 units in 1998 to 135,000 in 2003 and 150,000 in 2004.

Figure 2: SA passenger vehicle production, exports and imports



Source: NAAMSA

- Ford has built a new engine plant, which is the sole supplier of the 1.3 litre Rocam engine to Ford plants globally, and the 1.6 litre Rocam engine for designated markets. These exports reached full annual volume of 180,000 at the outset of 2003.
- Component exports have also grown, particularly that of catalytic converters (48 percent of total component exports in 2001) and leather seats (13 percent of the total). A major conduit for these exports were the non-German OEMs who satisfied their need for duty credits by purchasing these from components suppliers, many of whom they eased into export market niches. Catalytic converters are an especially interesting case, since initially the level of value added was low. However, as scale built up, investments of more than R2 billion (more than \$200m) were made into a deepening of the production process. In 2002, South Africa supplied 12 percent of the global catalytic converter market and was the most important supplier of catalytic converters to the EU.

There is an important difference between the German assemblers and those with Japanese and US parentage. The three German firms concentrated on exporting CBUs – we will discuss the significance of this in the concluding section of this paper. By contrast, Nissan and Toyota (which until recently were never owned by Nissan and Toyota, but were rather South African owned licensees) and General Motors (via their

49 percent equity in Delta Motor Corporation, a majority South African owned joint venture operation) and Ford bought-in duty credits from their suppliers.

This reflected two different strategies. The German firms – and in the immediate future Ford (in engine production) and Toyota – have sought to include their South African subsidiaries in their global production programmes in order to achieve scale economies in local production. The other assemblers have thus far decided to hang on to local market shares without this specialisation of production. (An unintended consequence of this, however, is that it led to global specialisation and comparative advantage in the catalytic converter and leather seats subsectors). How durable this latter strategy will be in future phases of the MIDP must be open to question.

## **5. The MIDP, the Endogenisation of Learning and Dynamic Comparative Advantage in the Components Sector**

The rise of South Africa's auto and components sector and its growing contribution to output, employment and exports reflects the growth of capabilities and dynamic comparative advantage. With respect to process upgrading, we chart the progress of learning in relation to auto sector specific Critical Success Factors (CSFs). Based on our research in this sector, we have identified five CSFs:

- ❑ cost
- ❑ quality
- ❑ flexibility
- ❑ capacity to change based on HR development
- ❑ innovation capacity

Each of these five CSFs has an associated set of Key Performance Indicators (KPIs); based on industry practice (as well as in the measurement of lean production and World Class Manufacturing – Womack, Jones and Roos, 1990; Schonberger, 1986), these are measured as physical parameters (days of stock, percentage scrap, etc) rather than in terms of financial performance.

Table 1 shows both the learning path and the distance between South African component firms and their international competitors.<sup>10</sup> It is based on detailed interaction with 32 South African based component firms over a four-year period (there is uneven data on KPIs amongst this sample hence the varying sample size), providing longitudinal data on performance enhancement. Performance in 2001 is matched by a sample of 26 international firms, for which we unfortunately do not have time-series data. The two population samples are largely matched by sub-sector. We have split up the comparative sample since we wish to chart the performance of South African component firms in relation both to old and new competitors.

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<sup>10</sup> For an analysis of the auto components sector in emerging markets, see Humphrey (2001).

Table 1. Learning and comparative advantage in the auto components sector

CSF	KPI	South African Firms						Comparator Firms	
		N	1998	1999	2000	2001	Improvement 1998/99-01	W. Europe N=14	Emerging economy N=12
Cost control	Total inventory (Days)	32	62.6	54.3	47.6	42.0	32.8%	31.2	38.6
	Raw material (Days)	32	32.3	27.9	25.2	21.8	32.7%	17.2	19.2
	Work in progress (Days)	32	12.4	8.9	8.1	8.2	34.3%	5.3	8.6
	Finished Goods (Days)	32	17.8	17.5	14.3	12.1	32.0%	8.6	9.5
Quality	Customer return rate (PPM)	23	3270	2638	1406	1240	62.0%	549	624
	Internal reject rate (%)	25		4.9	4.2	3.9	20.7%	1.9	3.5
	Supplier return rate (PPM)	21		21989	14637	18518	16.0%	8319	13213
Flexibility	Lead time (Days)	17		19.9	19.1	17.9	9.9%	16.8	12.0
	Supplier on time & in full delivery (%)	23		78.7	82.1	82.2	4.5%	92.2	92.3
	On time & in full delivery to customers (%)	25		92.2	92.8	92.7	0.6%	96.1	93.5
Capacity to change	Training spend as % total remuneration	30		1.3	1.7	2.0	56.2%	1.3	3.1
	Absenteeism (%)	27	4.4	4.3	4.1	4.0	9.4%	4.2	5.7
Innovation capacity	R&D expenditure (%)	24	1.64	1.70	1.67	2.12	29.5%	1.83	2.90

Source: KwaZulu-Natal/Eastern Cape and Gauteng Benchmarking Club database<sup>11</sup>

The conclusions to be drawn from this longitudinal and comparative benchmarking are as follows:

- With the exception of delivery reliability to customers, progress for all of these KPIs in South Africa has been significant. We do not have matching data for the global sample, but it is unlikely that their learning has been as rapid as the South African sample. This is because they are closer to the global frontier of performance and therefore have less scope for improvement.
- Despite improvement, the South African components sector has in most respects some way to go before it reaches the global frontier.
- However the upper tier of South African component suppliers operates close to the global frontier, and the significant characteristic of the industry is the length of its tail. For example, with regard to work-in-progress and finished goods inventories, customer return rates, reject rates, scrap rates, rework rates and absenteeism, the upper quartile of South African firms (the major exporters) outperform the upper quartile of international firms.
- In general performance in the South African component firms which is bound by internal factors (work-in-progress control, training, absenteeism) is better than

<sup>11</sup> These benchmarking clubs are 65% funded through the Sector Partnership Fund of the national government's Department of Trade and Industry. They operate as continuous improvement networks for automotive component manufacturers, with member firms benchmarked internationally and against one another on an annual basis. "Best in class" performers then host quarterly workshops where other Club members are exposed to the practices they have employed to generate world class performance levels. The benchmarking clubs are a clear example of firms taking advantage of the horizontal industrial policies created post 1994 (see [www.bmanalysts.com](http://www.bmanalysts.com))

when external factors are involved (raw material inventories, supplier performance). Much of the inventory problem which remains is due to logistic problems with incoming materials (minimum-sized import quantities; problems at the ports) and distance to the export market (for stocks of finished goods).

- ❑ With regard to quality, inter-firm quality performance is often difficult to interpret since it reflects the perceptions of buyers; in heavily protected economies for example, good external quality performance was often associated with very poor quality and undemanding buyers. However, despite the evidence of substantial progress on both internal and external quality, the continued existence of quality inefficiencies (reflected by relatively high internal reject rates) suggests that there continues to be room for improvement.
- ❑ South African auto component suppliers (especially the suppliers to the first tier component manufacturers) perform relatively poorly on delivery flexibility, and this is one area where rates of improvement are slow.
- ❑ Despite its reputation of industrial conflict and poor labour relations, human resource indicators are positive, both compared to the international group of firms, and in relation to the rate of improvement.
- ❑ Investment in R&D has risen in South Africa, and compares favourably. However these rates of investment are somewhat misleading, since most of this involves minor changes to customise components to the local market.

In summary, therefore, the improved performance of the auto and components sector as a whole – in terms of output-growth, net exports and employment – is built on a foundation of rapid and sustained improvement in production efficiency. As a result of our detailed research we are able to chart this rising competitiveness in the components sector, but no equivalent data exists for assembly. The major factors driving this improvement were horizontal industrial policies such as the Sector Partnership Fund (see below), macro-economic functional policies and the sector-specific selective policies which induced the demanding OEM buyers to force through productivity improvements in their domestic supply base. However, it is not possible to determine the relative contribution made by each of these different factors.

## **6. Who Pays for the MIDP?**

The more measured critics of industrial policy generally acknowledge that the various policies – be they be functional, horizontal or selective – do have positive impacts on industrial output and manufactured exports. However, as the argument goes, these achievements are realised at great cost, so that it is the *net benefits* of industrial policy which are really the issue at stake.

Four sets of costs can be identified in the literature. The first of these is the cost to the consumer and/or users of the capital and intermediate goods favoured by industrial policy. Industrial policies are said to result in lower quality and higher priced final products. This is a well-rehearsed point in the global debate, probably most clearly identified with the critique of industrial policies which emerged during the 1970s

(Bhagwati and Desai, 1970; Little, Scitovsky and Scott, 1970; La1, 1983). In the context of the South African auto industry the most strident critic argues (albeit without presenting any evidence) “Who pays the subsidy? Superficially, the cost of the subsidy is borne by the government budget in the form of lost tariff revenues. In a more fundamental sense, however, it is borne by South African consumers of automobiles. The import duty on motor vehicles means that the domestic price is higher than comparable world prices.” (Flatters, 2002:7). Second, industrial support policies cost the exchequer because of the subsidies which it provides to industry. The third problem associated with industrial policy is its promotion of rent-seeking behaviour – entrepreneurs not only bribe their way into concessions but, more pertinently, divert their energy from entrepreneurship to working their way through complicated incentive schemes (Krueger, 1974). And, fourth, the promotion of some sectors leads to the distorted growth of other sectors, often (as is said to be the case with East Asia) resulting in a heavily indebted banking system which constrains long-term growth (Pack, 2000).

The evidence which we present below only addresses the first of these criticisms – that is, the cost to the consumer of a selective industrial policy in the South African auto sector. But before we present this data, we briefly address the other three criticisms noted above. With regard to the promotion of rent-seeking behaviour and the diversion of entrepreneurial energy there is little talk in the South African industry of the MIDP being a source of corruption. Similarly, although there are some mutterings about the costs associated with meeting the requirements of the policy regime, these are muted, not least because most potential critics also gain significantly from the MIDP’s incentive scheme. With regard to the cost to the exchequer, duty drawbacks create no budgetary costs; the cost to government is confined to the costs of running a small MIDP administrative team and the subsidies to the three benchmarking clubs (totalling less than R2m - \$250,000 - over four years) which are time-bound. As to the negative impact on other sectors, the incentive scheme which has been developed does not appear to have led to distortions in the financial sector (selective financing is not part of MIDP) and insofar as other industrial sectors are concerned we would argue that the demonstration effect of the spread of lean production in the auto sector on other sectors has been massive in the South African context (as elsewhere in the world). One reason for this is that the extensive input-output linkages in this sector are buttressed by supply chain management programmes which improve the efficiency of second-, third- and sometimes fourth-tier suppliers. These suppliers feed inputs not just into the auto sector, but into a range of other sectors. Thus the benefits of process and product improvements are widely felt in the industrial sector. Finally the major distortion that does exist in the intermediate products within the auto value chain (cost of domestic steel through a near monopoly and import parity pricing) has nothing to do with the MIDP, but is a result of inherited trade policy protecting this sector.

What evidence is there that the MIDP has disfavoured the consumer through higher prices? In the analysis which follows we look at three different segments of the auto sector:

- Those cars which are exported from South Africa through the global production networks of leading assemblers – the Volkswagen Golf 1.6 VVT-1 T2, the Mercedes-Benz C180 Kompressor Classic, the BMW 318i, and in the future the



Toyota Corolla 1.4 – and hence whose specifications allow direct comparability with their corresponding international models.

- ❑ Those cars which are imported into South Africa in a fully-assembled form – our examples are the Renault Clio 1.2 16v Dynamique, and the Alfa Romeo 147 Spark Turismo
- ❑ Cars at the budget-end, targeted at low income consumers. Here there is more of a problem with the comparison, since cars at the low-end of the European market (Perodua Kelisa 1.0 Ex, Fiat Seicento S and the Seat Arosa 1.0) are not imported into South Africa. At the same time, the low-end of the South African market is served by cars which are outdated in Europe, old designs which do not meet European emission standards (Fiat Uno, Toyota Tazz, and VW Citi Golf)<sup>12</sup>.

In assessing the costs to the consumer we need to take account of quality, and price. In relation to price it is necessary to factor out VAT and excise duties. In the UK VAT rates are 17.5 percent, whilst in South Africa they are 14 percent, supplemented by a variable excise duty ranging from 2 to 4.4 percent on the cars we are comparing. It is more difficult to take account of dealer margins, partly because dealers and manufacturers are understandably cagey about this data, and also because they vary depending on the number of units sold, the mix of units, and so on. However, we have managed to ascertain that UK dealer margins vary between six percent on the Toyota and Alfa Romeo and 10 percent for some Mercedes Benz dealers. A similar figure emerges from South Africa (although dealer profitability is low because high interest rates penalise stocks).

The price comparison is made between South African Rands and sterling. Two further pricing decisions need to be made before this comparison is made. The first is the Rand/£ exchange rate used to provide a common numeraire. Here we use a rate of R15.2=£1, the average rate for 2002. And secondly, the UK auto price is a poor comparator since it is generally recognised that UK prices are above the levels found in Europe. Therefore in the calculations which follow we use the most recently-available EU Commission data which is model-specific on relative prices in Europe to correct for this distortion.<sup>13</sup> We use this comparative intra-EU price data to compare difference between UK prices for each model and:

- ❑ the South African price
- ❑ the EU average price
- ❑ prices in EU economies with a significant domestic auto industry; this matches South Africa's current position as a producer<sup>14</sup>

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<sup>12</sup> The Fiat Uno and Toyota Tazz are face-lifted variants of successful late 1980s models, whilst the CitiGolf is an upgraded Golf 1, introduced in the late 1970s. All three vehicles remain strong sellers in South Africa, with the Toyota Tazz the top selling model in South Africa in both 2001 and 2002. Whilst not meeting current European emission-, economy- and ride-standards, they offer far more space than their European comparators.

<sup>13</sup> [http://europa.eu.int/comm/competition/car\\_sector/price\\_diffs/](http://europa.eu.int/comm/competition/car_sector/price_diffs/)

<sup>14</sup> Germany, Spain, France, Italy, Sweden and the UK

- prices in EU countries without significant auto production,<sup>15</sup> arguably a better counterfactual for an analysis of South African industrial policy since this would be the case if there was no industrial policy to protect the domestic industry; it could be argued that prices in these markets where there is no domestic industry to protect are likely to be lower than those in which there is a domestic industry.

The comparisons which follow are conservative in that since the EU intra-European price comparisons were generated (May 2002 in the EU study which we use to compare intra-European prices), UK car prices have fallen and are now closer to those in Europe.<sup>16</sup> Furthermore, although we have taken the yearly average exchange rate, the SA prices used are December 2002 published prices incorporating the final yearly price increases and are hence the highest car prices for the year. Given the fact that car prices tend to increase on a quarterly basis, this further increases the conservativeness of the comparisons, both relative to the yearly average exchange rate used and the comparison to the EU prices.

We begin with quality and auto specifications. With the exception of the budget group, all the cars in Table 2 are produced to global quality standards. Their specifications differ slightly but it is clear that those in South Africa are not inferior to those in Europe. (In fact, the J D Power industry initial quality ratings for the US in 2002, measured in faults/100 vehicles, ranks South African BMW products second after Toyota's Tahara plant in Japan)<sup>17</sup>. Where there is a difference, the inclusions in some markets (number of seat bags in the UK) are counterbalanced in the other (air-conditioning and anti-theft devices in South Africa). The clearest systematic difference arises with regard to the budget range where the South Africa cars are both made to a lower specification and are dated in design and performance.

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<sup>15</sup> Austria, Belgium, Finland, Greece, Ireland, Luxembourg, Netherlands, Portugal and Denmark. Some of these countries do indeed produce cars in small numbers, notably Finland, Netherlands and Portugal, but volumes are small.

<sup>16</sup> Price-deflation in the UK was between one and two percent for all categories of cars, except for the budget class (-7.8 percent) – [www.carpriceindex.com](http://www.carpriceindex.com)

<sup>17</sup> <http://www.jda.com/presspass/pr/images/200204bfull.gif>

Table 2: Comparison of specifications, South Africa and the UK

	Engine Size (cc)	Sound System	Central Locking	Aircon.	Power Steering	Electric Window	ABS Brakes	Airbags	Anti-theft
<b>PRODUCED IN SOUTH AFRICA</b>									
<b>Golf 4</b>									
SA - Comfortline	1.6	N	Y	Y	Y	N	Y	2	Y
UK - 1.6s	1.6	Y	Y	Y	Y	Y	Y	2	N
<b>Toyota Corolla</b>									
SA 1.4i GLS	1.4	Y	Y	Y	Y	Y	Y	1	Y
UK 1.4 VVT-I T2	1.4	Y	Y	N	Y	Y	Y	3	N
<b>M-Benz</b>									
SA - C180 K Classic	1.8	Y	Y	Y	Y	Y	Y	6	Y
UK - C180 K Classic	1.8	Y	Y	N	Y	Y	Y	6	Y
<b>BMW</b>									
SA - BMW 318i	2.0	Y	Y	Y	Y	Y	Y	6	Y
UK - BMW 318i	2.0	Y	Y	Y	Y	Y	Y	6	Y
<b>FULLY IMPORTED INTO SOUTH AFRICA</b>									
<b>Renault Clio</b>									
SA - 1.2 16v	1.2	Y	Y	Y	Y	Y	Y	4	Y
UK - 1.2 16v Dynamique	1.2	Y	Y	N	Y	Y	Y	4	N
<b>Alfa-Romeo</b>									
SA - 147 1.6T Spark Turismo (3dr)	1.6	Y	Y	Y	Y	Y	Y	6	Y
UK - 147 1.6T Spark Turismo (3dr)	1.6	Y	Y	Y	Y	Y	Y	6	Y
<b>BUDGET</b>									
<b>South Africa</b>									
Fiat Uno 3dr	1.1	N	N	N	N	N	N	N	Y
Toyota Tazz	1.3	N	N	N	N	N	N	N	N
VW Citi Golf (Golf 1)	1.4	N	N	N	N	N	N	N	Y
<b>UK</b>									
UK Perodua Kelisa 1.0 Ex	1.0	N	N	N	Y	N	N	2	Y
Fiat Seicento S	1.1	Y	Y	N	Y	Y	N	1	Y
Seat Arosa 1.0	1.0	Y	N	N	Y	N	N	1	Y

Source: Car Magazine, December 2002; What Car, March 2003 for the UK

Table 3 provides a price comparison between these markets, corrected in the manner described above. It shows that:

- In all those cases where the same models are sold in both the UK and South Africa, South African prices are lower. This ranges from 12.4 percent (VW Golf) to 25.5 percent (BMW 318i).
- It is indeed the case that in general UK prices are not just higher than those in the EU, but are relatively higher when compared to countries without an indigenous auto industry. In other words, countries which are only final markets for cars have relatively lower prices than those which have a domestic industry.
- Comparing South African prices with EU average prices (done by comparing column 4 with column 5, that is the degree to which the UK margin on South Africa is greater than that on the EU), South African prices are either broadly the same (Golf) or lower (BMW and Mercedes Benz) than for those cars which are produced domestically and subsequently exported; they tend to be higher on those which are exported into South Africa as completely-built-up units.

- Although lower than prices throughout Europe, South Africa's performance is better when comparing prices with EU countries possessing a domestic auto industry (column 4 with column 7) than compared to those without a domestic industry (column 4 with column 6).
- Although not comparing like-with-like, budget cars in South Africa sell for a significantly lower price than those in Europe

The key factor influencing this price comparison is the Rand/£/€ exchange rate. The calculations above convert end-of-year prices for autos with year-average exchange rates. We used this approach to the exchange rate because of the volatility of the Rand, affected by hot-flows of money (reflecting a combination of regional political disturbances – Zimbabwe land expropriation – and high domestic interest rates), with no one month giving a typical figure. However in order to assess the extent to which this arbitrary choice of month (for car prices) and year (for exchange rate) has on the outcome of the price comparison, we undertook the same exercise for the previous year – December 2001 price comparisons, converted with a 2001 year-average exchange rate. The results of this exercise (not possible for the Toyota which was only introduced in 2002) confirmed our calculations for 2002; in actual fact with the exception of the Alfa Romeo they strengthen the result. That is, comparing UK price premium over South African prices (2001 versus 2002), the results were as follows: 13.4 percent versus 12.4 percent for the Golf, 32.5 percent versus 21.2 percent for the Mercedes Benz C180, 29.2 percent versus 25.5 percent for the BMW, 11.8 percent versus 9.4 percent for the Clio and 11.1 percent versus 9.6 percent for the Alfa Romeo.<sup>18</sup>

So, we can observe a complex picture. But on balance there is certainly no evidence for suggesting that the MIDP selective industrial policy has systematically raised prices for domestic consumers. If anything, given the conservative nature of our assumptions on the UK-EU price conversion, it would appear that the opposite is the case, that is it has resulted in lower final product prices (Table 3) at equivalent levels of quality and specifications (Table 2).

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<sup>18</sup> An additional adjustment which can be made is to correct for the 6.5 percent import duties levied on South African auto imports into the UK. This is a debatable exercise, since South African imports serve only a portion of the European market. But even if this is factored into the equation, South African auto prices are below UK prices by 6.8% for the Golf, 11.2% for the Toyota, 16.2% for the Mercedes Benz, and 20.7% for the BMW. It makes no sense to adjust for the Clio and the Alfa Romeo, since these are not exported from South Africa.

Table 3: Price Comparison, South Africa – Europe, December 2002

## Vehicles that are produced in South Africa

	Retail prices net of VAT in £		UK price premium (%) on			
	UK	SA	SA	EU average	EU non-auto producing countries	EU auto producing countries
Golf 4	10,064	9,163	12.4	11.1	15.9	3.9
Toyota Corolla	9,318	7,612	16.5	20.6	22.3	18.1
M-Benz	16,496	12,673	21.2	1.3	0.7	2.3
BMW	16,603	12,070	25.5	12.5	14.0	10.3

## Vehicles that are fully imported into South Africa

	Retail prices net of VAT in £		UK price premium (%) on			
	UK	SA	SA	EU average	EU non-auto producing countries	EU auto producing countries
Renault Clio	7,173	6,344	9.4	17.6	20.7	12.9
Alfa-Romeo	10,973	9,632	9.6	27.7	31.3	22.4

## Budget vehicles – no direct equivalent

	UK price premium on (%)			
	SA	EU average	EU non-auto producing countries	EU auto producing countries
UK Seicento (£4,901)/ SA Uno (£2,592)	89.1			
UK Arosa (£1,946)/ SA Taz (£3,837)	28.9			
UK Perodua (£4,124)/SA Uno (£2,592)	59.1			
Seicento		40.7	71.1	34.9
Arosa		-7.4	14.5	-4.4

Sources: Car Magazine, December 2002, ; What Car, March 2003 for the UK ; [http://europa.eu.int/comm/competition/car\\_sector/price\\_diffs/](http://europa.eu.int/comm/competition/car_sector/price_diffs/) for UK EU differentials.

What explains this outcome? Here there is a combination of factors – high productivity growth (see Section 5 above), rising scale economies, low labour costs<sup>19</sup> and paradoxically the low cost of imported inputs. This latter factor needs some explanation. On the face of it, an import regime which has high rates of tariffs of 30 percent on components would not suggest itself as a low input cost regime. But the nature of the MIDP with its import-for-export provisions is that *de facto* the auto assemblers can import on a virtually duty free basis. For example, by concentrating on the 3 Series range which is made both for the domestic and export markets, and importing the 5 and 7 Series, BMW is not only able to realise economies of scale in assembly (and in its domestic component suppliers) but also to operate in a duty free environment. Similarly VW's export of the Golf and Daimler-Chrysler of the Mercedes C180 provide enough duty credits to cover their needs for imported components and built-up cars. Assemblers who do not directly export cars – for example Toyota – obtain import duty remission by buying-in duty credits from their suppliers.

A final word on scale. The scales of assembly in South Africa are small by global standards; most assembly plants would expect to produce a single firm's products (although with an increasing model mix) in volumes of more than 250,000. So, how then can the South African industry be cost-competitive with a total domestic production of only 250,000-300,000 cars? The answer is twofold. First, small volumes at this scale are economic when there are low levels of value added (which are now around 50 percent). But, second, the local market is not only too small to provide sufficient economies of scale for assembly, but even more so for many component manufacturers. This is because the cost of tooling is much greater in the production of components since it involves conversion rather than an assembly process, and hence more tooling. This is even more the case for the 2nd and 3rd tier suppliers (many of whom are locally owned) as the 1st tier suppliers are increasingly becoming modular assemblers. By providing for larger volumes, either directly in greater volumes of car exports or indirectly through encouraging component exports (which the assemblers can use for duty-offsets, as in the case of GM's exports of catalytic converters), the MIDP simultaneously enhances scale economies in the components sector. It also forces the component producers to concentrate on their core competencies and focus on manufacturing only those components which they can produce competitively for both the domestic and the export markets.

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<sup>19</sup> The basic salary of an operator in the South African automotive industry in 2002 was US\$ 1.22 per hour, whilst a line function manager earned an average of approximately US\$2,060 per month (DTI 2002).

## 7. Conclusions

We have adopted a comprehensive framework to review industrial policy in South Africa. This includes three dimensions of policy - the functional (focusing on macro parameters), the horizontal (correcting for economy-wide market failures) and the selective (providing incentives for a specific sector). Our overall conclusion is that we can observe considerable success in this policy framework insofar as it affects the auto sector in South Africa. Macro policies - notably a competitive exchange rate (although this was undermined to some extent by considerable volatility), macroeconomic stability, a reducing inflation rate and effective property laws - provide a sound base for industrial activity. In particular they provided an incentive system which induced industry-leading TNCs to not just continue producing autos in South Africa, but also to use it as a production base for some of their global operations. Horizontal policies designed to promote industrial competitiveness also played an important role. The Sector Partnership Fund provided support for component firms to network their learning processes (the three benchmarking clubs which have played an important role in enhancing competitiveness in this sector were not a creation of this programme, but they were facilitated by it). The Workplace Challenge was drawn upon by a number of firms to change their labour processes and a number of the component firms also gained from the industrial training incentive scheme.

But the distinctive feature of the industrial policy affecting the South African auto industry is the effective array of selective policies which were adopted. The key conclusion here is not that selective policies always work, but that intelligently designed selective policies can be effective in developing countries. The critical component of the MIDP - informed by the Australian experience - was the introduction of an export-for-import scheme. That is, for firms to gain competitive access to the domestic market - not insignificant at more than 350,000 light vehicles a year, and potentially even more attractive once growth returns to the region - they would be required to export, either directly or indirectly through their value chain. This was achieved by an administrative regime which was not over-burdensome for users, and which provided little scope for corruption. It provided a relatively blunt series of incentives rather than the elaborate, intricate and often contradictory programmes used in other parts of the world (such as India during the 1960s and 1970s) and which frequently had a series of adverse unintended consequences (Bhagwati and Desai, 1970). Moreover, by reducing the incentives over time, the MIDP represents a moving frontier, undermining the solidification of rents which have often bedevilled selective industrial policy. And, recent initiatives such as the Productive Asset Allowance provide incentives for capital goods imports which are targeted at export markets and which favour economies of scale. Finally, the policy framework was driven by a coalition of government officers, industry representatives and academic analysts, with support from the trade union movement<sup>20</sup>.

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Whilst the custodian of the MIDP is the South African government's Department of Trade and Industry, it is closely monitored by the Motor Industry Development Council, which is a multipartite body comprising government representatives, component manufacturers, vehicle assemblers and retail industry associations, as well as the union movement and selected academic experts. It meets every six weeks, thus ensuring that the automotive industry's trajectory is closely monitored and the integrity of the MIDP maintained.

But intelligent, and successful industrial policy must be shaped by, and respond to contingent factors. These will be specific to the sector, the period, the country and often also to the major firms involved. The South African auto policy's success was to a considerable extent an outcome of the oligopolistic rivalry between the three major German auto TNCs. The key development here was the decision of BMW include its South African subsidiary in its global expansion plans and to make South Africa a base for its right-hand drive 3 Series cars. This not only drew-in key component suppliers but led to competitive reactions from VW and Daimler Chrysler. This was reminiscent of TNC positioning during the 1960s and 1970s (Knickerbocker, 1973) and much FDI in Africa during the same period (Kilby, 1969). BMW's decision in turn resulted from its shortage of global capacity during the second half of the 1990s, and an equivalent problem faced by VW when it launched its Golf 4 range.

But having benefited from these contingent factors, the MIDP has had the effect of forcing non-German firms into similar reactions. Toyota will begin to export the Corolla in large numbers from South Africa, Ford has built an engine plant to feed into its global operations and it is likely that other assemblers will have to confront the choice between integrating their South African plants into their global operations, or of foregoing significant access to this growing local and regional market.

The MIDP is now at a critical juncture, and although this paper does not focus on its future design, there is one dilemma which requires brief discussion. The existing environment is effectively tariff-free, for as a result of their auto exports (and in some cases bought-in duty credits from component producers) most of the assemblers are able to import their component requirements and the CBUs which they do not assemble domestically on a duty-free basis. If this is the case, why not now dispense with all tariffs and the MIDP, and allow what appears to be a cost-competitive industry to stand on its own feet? Two points need to be made here. First, it is important to bear in mind that even if the South African industry is cost competitive in an effectively duty-free environment *now*, it only got there because of this selective industrial policy. The MIDP has, and continues to level the global playing fields sufficiently enough for local assemblers and component manufacturers to prove themselves in international export markets and establish their cost competitiveness. And second, TNCs decisions on global location are not only made on the basis of costs, but also risk. South Africa is undoubtedly a more risky environment than competitive locations, so if left to act in an unfettered way, it is likely that the industry would migrate elsewhere. By providing a relatively stable and transparent policy environment, the MIDP has mitigated some of these risks and protected firms against exchange rate instability. There are associated questions with programme design however (again we do not have the space to discuss them here). The cost-competitiveness of the industry arises as a result of the relatively thin levels of value added which are involved; deepening these is likely to incur cost penalties, so intensification is probably unlikely. Instead, it is likely that growth can only occur through extensification, and here the MIDP needs to be appropriately fashioned in a dynamic way.

What are the wider implications of the success of this auto policy in South Africa? First, for South Africa itself it suggests that there is a call for other selective policies designed to complement the functional and horizontal policies which relate to the



industrial sector. But these selective policies will need to be as carefully focused as the MIDP. For not all selective policies in South Africa have been so successful. For example, and this is a case which needs detailed research, the duty drawback scheme in the clothing and textile sector has been much less successful – it is bureaucratically complex, has no industry representation on the board which runs it, and embodies contradictory needs between the textile and clothing sub-sectors.

Secondly, we are persuaded that the comprehensive analytical framework provided by Lall and Teubal (and foreshadowed by Wade) is a helpful way to structure industrial policy support. Although the functional category is very wide, and is generally defined to meet needs which are much broader than those of specific sectors or indeed the industrial sector as a whole, it is nevertheless an important component of policy, one which is often neglected by the proponents of industrial support. On the other hand, the drivers of the global policy agenda (encapsulated within the Washington Consensus) too frequently deny the validity and efficacy of selective policies and drive these out of the policy agenda.

And, finally, what of the implications for other developing countries? Returning to the global policy debate, there seems to be near unanimity that selective industrial policies are irrelevant and positively harmful to developing countries, who are said to lack the capacity to design and implement such a policy framework. Our analysis of the South African auto industry policy is to deny such a negative conclusion.<sup>21</sup> Selective industrial policies can clearly work in low income countries but they have to complement functional and horizontal policies and be matched to the local environment. In particular the degree of complexity has to reflect administrative capabilities. Whereas a Korean or Taiwanese state might allow for nuanced policies (such as those involving directed credit) (Wade, 1990; Amsden, 1989), the South African state could only operate with blunter tools. Similarly, other states in sub-Saharan Africa might have to fashion even blunter tools, but to deny the potential for such policies to provide the net benefits which are so clearly evident in this case and in other experiences of selective policy interventions is to allow ideological blinkers to cloud professional judgement.

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<sup>21</sup> For a similar perspective, see Chang 1994 and 1998.

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