

Evaluating the Current Industrial Policy of South Africa

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Abstract

This paper looks at some of the relevant and critical issues facing the South African government in devising an industrial policy. It provides an overview of some of the key theoretical issues in industrial policy and looks at some of the critical choices facing South Africa with reference to the international experiences. The paper refers to areas where the industrial policy debate in South Africa requires more attention specifically around ways of increasing physical investment, issues of market structure, and the need for better economic co-ordination.

Introduction

Despite some considerable successes in establishing certain critical upstream industries based on natural resource advantages, South Africa's industrial policy under the Apartheid regime was burdened with many objectives that ultimately undermined its viability in the long run - such as the building up of Afrikaaner capital, job creation of Afrikaaner workers, military objectives, evasion of international sanctions, and the satisfaction of the aspirations of the elite consumers to imitate the consumption patterns of the most advanced economies. However, thanks to its outstanding natural resource wealth, the country was able to sustain such "irrational" industrial policy for a considerable length of time.

With the end of Apartheid, there has been a clear recognition that such policy is politically unacceptable and economically unsustainable, and accordingly the new South African government has been trying to find an alternative industrial policy framework. The fruits of these search efforts are best summarised, first of all, in the recent DTI document, "Support Measures for the Enhancement of the International Competitiveness of South Africa's Industrial Sector" (a submission by the Government to the Trade & Industry Chamber of Nedlac, November 1995), or the "supply-side" document as it is frequently called, and secondly, in the Industrial Strategy Project document, *Improving Manufacturing Performance in South Africa*, or the so-called ISP study (henceforth referred to as ISP), which influenced the thinking behind the above-mentioned "supply side document" (henceforth referred to as SSD) in many important ways. There is a broad agreement that the industrial policy framework that is spelt out in these documents is in many ways more forward-looking and sophisticated than that of the past. However, there is still a widespread feeling, within and outside the DTI, that it may not quite measure up to the enormous challenges that lie ahead of the country.

In passing such judgment, we need a word of caution. There are many international and domestic economic factors that affect the country's industrial performance but are beyond the scope of industrial policy - such as international business cycle, domestic macroeconomic policy, and the education and training system, to name just a few. Also, there are many international and domestic political factors which constrain the scope of South African industrial policy - such as the need to act as the leader in the process of southern African regional integration, and the existence of powerful economic interest groups which may thwart too radical an industrial restructuring programme. Thus, it is possible that some of the apparent weaknesses and shortcomings of the current industrial policy stem from the incorporation of such constraints into policy design, rather than from defective thinking, on the part of the policy-makers.

However, even considering such economic and political constraints on industrial policy, it is doubtful whether South Africa's current industrial policy can be regarded as the best that the country can get. For example, is the current policy based on a clear and feasible vision for the future of South African industries? If so, is this vision supported by "adequate" intermediate policy objectives at the implementation level? Are these objectives compatible with each other? Are there adequate administrative and institutional capabilities to achieve the pronounced policy objectives? If not, what can we do to provide such capabilities? Is there enough coordination between industrial policy and other related economic policies? Is the current policy over- or under-estimating the difficulties posed by the constraining factors that we mentioned above? Is there any way that some of these constraints can be removed in the medium-run, if not in the short-run? These are some of the questions that need to be asked in order to form a balanced judgment on the current state of industrial policy in South Africa.

The present paper aims to provide an assessment of the current industrial policy of South Africa, and make some recommendations to improve it. The paper is organised in the following way. In the first section of Part I, we start by discussing the definition of industrial policy. This may seem a rather academic exercise in the context of the present report, which is after all a "practical" document, but it is justified by the fact that how we define industrial policy affects the way we design and implement it. The second section of Part I will discuss why we need an industrial policy in the current South African context. Part II, which is sectionalised along broad policy areas, will provide an evaluation of the current industrial policy of South Africa in 7 major areas and offer some policy suggestions. In the last part, we summarise the policy recommendations and conclude the paper.

Part I. What is Industrial Policy and Why does South Africa Need One?

I-1. Definition of Industrial Policy

A serious academic debate on industrial policy, at least in the English-speaking world, started from the late 1970s. With the end of the so-called "Golden Age of Capitalism" in the early 1970s, most advanced capitalist economies entered a phase of sluggish growth and painful structural change. Many of their traditional industries went into decline, partly because of the slowing-down of the domestic economy, and partly because of international competition, but the market mechanism

seemed unable to manage smoothly the process of channeling the resources released by these industries into new industries. This made state intervention in industrial restructuring, or "industrial policy", necessary to an unprecedented degree, even by some avowedly "free market" governments such as the Reagan administration and the Thatcher Government. Moreover, when many commentators attributed the success of the East Asian economies, especially Japan, in international markets to their effective industrial policy, the amount of interests that the debate initially generated is more than understandable.

The debate seemed to lose its momentum somewhat during the mid-1980s, as the New Right achieved a brief period of ideological domination, but it flared up again from the late 1980s, sparked off by the debate on the cause of economic success in the East Asian NICs (newly industrialising countries). This second phase of the debate culminated in the policy and academic debates preceding and following the so-called "Miracle Study" by the World Bank published in 1993 (*The East Asian Miracle*, Oxford University Press, 1993), where the World Bank finally acknowledged the existence and importance of industrial policy in East Asia, although it gave a largely negative verdict on the effect of the exercise. Many commentators made serious theoretical and empirical criticisms of the World Bank study, to which the World Bank has yet to respond effectively, and the debate continues (for some criticisms, see the special symposium in *World Development*, 1994, no. 4; UNCTAD, *Trade and Development Report, 1994*, ch. 1; essays in Fishlow et al., *Miracle or Design? - Lessons from East Asian Experience*, Overseas Development Council, 1994). However, this point need not detain us here.

One problem with the industrial policy debate was that even the people in the same camp in the debate, not to speak of those who belonged to different camps, could not agree on a definition of industrial policy (for a more detailed discussion of this definitional problem, refer to H-J. Chang, *The Political Economy of Industrial Policy*, Macmillan Press, 1994 and 1996 (paperback edition with a new preface), ch. 3). At one extreme, there are those who define industrial policy very broadly and include in it every government policy that affects industrial performance, including even macroeconomic, infrastructural, and education policies. At the other extreme, there are those who define it very narrowly, and equate it essentially with sector-specific "targeting" exercise. In between, there are those who see the "core" of industrial policy as targeting (or "selective" or "sectoral" industrial policy) but include other non-sector-specific policies (or "general" or "functional" industrial policy), such as generalised support for R&D or industrial training, in the definition.

While there is no one correct definition of industrial policy, the present author believes in using a relatively narrow definition, which defines targeting (mainly, but not exclusively, at the sectoral level) as the "core" of industrial policy. The paper would therefore exclude from the realm of industrial policy those "general" policies such as pro-investment macroeconomic policy, general support for R&D, or human resource development policy, although they are all very important for industrial development. This is because otherwise the concept of industrial policy becomes so overloaded that it loses its analytical edge. From a more practical point of view, adopting such a relatively narrow definition allows us to equate it (almost) with what the DTI does, thus making the discussion of command structure, accountability, and coordination (within and between ministries) in the conduct of industrial policy much clearer.

One interesting thing that has emerged from the debate on industrial policy of the last two decades or so is the recognition that industrial policy is more about broad "vision" and coordination than about doling out subsidies or providing trade protections. Many commentators have pointed out that the East Asian countries do not necessarily spend more money on industrial policy than others, but that their industrial policy is more successful because they have a dense institutional network of coordination that facilitates information flows between the government and business, on the one hand, and between firms, on the other hand. It is also pointed out that industrial policies in these countries work not only by providing detailed solutions to specific sectoral problems but also by providing a broad "vision" of the future of the economy, along which a voluntary coordination of activities could be achieved by private sector agents. In short, the recent debate has revealed that the issue of organisational design and institutional building is as much, if not more, important in determining the success of industrial policy, as the issue of designing incentive schemes.

I-2. Industrial Policy in the Current South African Context

Why does South Africa need industrial policy? South Africa at the moment needs, and is committed to, a major industrial restructuring and this requires a more active industrial policy than under other, more "normal", circumstances. Even in "normal" times, industrial policy can, and should, play an important role in resolving the coordination problems that cannot be easily dealt with by the market mechanism. Moreover, the market mechanism is particularly bad at resolving coordination problems that require large-scale changes - as exemplified by the employment of most forceful industrial policy measures by self-proclaimed "free market" governments in times of industrial crisis (the best examples being the nationalisation of the declining shipbuilding industry by the openly anti-interventionist Swedish right-wing coalition of the late 1970s, or the Reagan Administration's rescue of Chrysler in the early 1980s). And it is fairly obvious to say that South Africa has plenty of such major problems.

The scale of industrial restructuring that is required by South Africa during the next 5-10 years is enormous by any standard. To put it bluntly, the attempt to maintain a "California" standard of living for 25% of population, surrounded by the rest of the population in conditions which are not much better than in most other African countries has created an industrial structure which is not sustainable in the longer run, despite the country's incredible mineral wealth. To change such industrial structure into one that is capable of improving the living standard of the vast majority of the population who were underprivileged under Apartheid within a politically acceptable time frame is a truly mind-boggling exercise.

Moreover, the country is now committed to lowering trade protection substantially over the next 5-8 years following the conclusion of the Uruguay Round, which makes the restructuring process much more difficult.

There are many theoretical reasons that make us believe that such large-scale industrial restructuring is not likely to be achieved by market forces alone (for a modern exposition of such point, see the first two chapters of H-J. Chang & R. Rowthorn (eds.), *The Role of the State in Economic Change*, Oxford University Press, 1995). However, what makes our case for industrial policy even stronger is historical experience. Perhaps except in the very first industrial nations of Britain and Belgium (even here economic historians disagree), industrialisation was never achieved by market forces alone - even the US, the quintessential free-market economy, used very heavy infant industry protection until the early 20th century to protect its producers from the more advanced firms from Europe. Especially in the postwar period when the gap between the leader countries and the follower countries became bigger, more targeted industrial policy was necessary to close the gap. And when the scale of necessary industrial transformation is as big as the one in South Africa's hands, it is highly unlikely that it will be achieved without a coherent industrial policy.

Let us discuss the case of South African automobile industry at some length, comparing it with that of South Korea, to illustrate our point. In response to the desire of the elite population to have a wide range of choice over cars of similar quality (whatever the prices) to the ones that are found in the most advanced capitalist economies, the Apartheid regime allowed too many producers assembling excessively upmarket models with substantial scale diseconomy. In contrast, the Korean government, being very conscious of the importance of scale economies in the automobile industry, strictly limited the number of the producers, and, being conscious of the country's low income, restricted the models produced to down-market ones while banning all imports. Also, the Korean government took direct measures to push its firms to design their own cars (which they did in the mid-1970s, when one of the existing producers was "de-licensed" for failing to do so), localise their parts and components, upgrade their technologies, and compete in the world market. The result is that Korea, whose per capita manufacturing value added in 1961 was 1/7 that of South Africa and whose car production was 1/6 that of South Africa as late as 1980 is now a major independent player in world auto industry, with almost complete localisation of parts (95% by 1988, when it was 55% in South Africa), whereas South Africa still basically remains a typical Third World producer assembling too many models at high costs under foreign licensing.

If it is to maintain a viable automobile industry, South Africa should devise a serious sectoral restructuring policy. If imports are too quickly liberalised, this industry is soon bound to disappear. This may actually be an option. However, for whatever reason, the government is not willing to contemplate such an outcome. It is at the moment treating it as a "sensitive" industry and is granting it exceptional protection to give the producers the time to restructure. But the heart of the matter is that, without a serious policy to achieve scale economies, the industry is not going to survive in the long run. This requires reducing the number of producers, reducing the number of models produced by the remaining producers, possibly striking some kind of "market segmentation" deals between existing producers, and compelling the remaining producers to export - all politically unpleasant and difficult policies, which may also have to involve tough negotiating with foreign transnational corporations.

As briefly described in the example of the automobile industry, the industrial restructuring that is required of South Africa at the moment is of a scale that is comparable to, or even greater than, that achieved by even the fastest-growing East Asian economies with all their impressive array of industrial policies. A serious industrial policy is not an optional extra for South Africa. It is crucial for its future.

Part II. Evaluating the Current Industrial Policy of South Africa

A. The Issue of Targeting

Targeting constitutes an important part of industrial policy, however one may define it, and is the essence of industrial policy as we defined it in the present paper. Consequently, the critics of industrial policy, both in South Africa and elsewhere, have focused their attacks on the difficulty and corruptibility of the "targeting" exercise, for which they hardly lack supporting evidence, and have even turned the word "targeting" into almost a dirty word. In this context, it is perhaps understandable that the SSD and the ISP dissociate themselves from targeting, although many of the policies that they, especially the SSD, propose in fact amount to targeting (the SSD in fact openly advocates the practice in many places without using the term itself).

The truth of the matter is, however, that, whichever form of industrial policy one pursues, there is always going to be some degree of targeting involved in a world of limited financial resources and limited administrative capabilities. For example, it may be thought that the current emphasis on skills and R&D found in the SSD or the ISP means that South Africa's industrial policy has moved away from a "targeting" approach involving sectoral attention and towards a "functional" approach that does not discriminate between industrial sectors. At one level, it is true that such shift in policy emphasis means less *explicit* favouring of some sectors over others. However, unless there are unlimited financial and administrative resources, devoting more resources to support R&D activities means that R&D-intensive industries are now *implicitly* being favoured over other industries. In this way, the so-called "functional" industrial policy may end up targeting certain sectors without acknowledging it, with the consequent risk of policy incoherence.

Moreover, to be successful, many types of "functional" interventions may in the end entail explicit targeting. Let us take the case of human resource development. While supporting primary education involves relatively little targeting (but even here there could be some targeting in terms of ethnic groups or geographical locations), supporting science and

engineering education in universities, given the highly specialised nature of such education, will require explicit targeting of the industries which are going to benefit from such supports - there is no point in producing too many electronics engineers in South Africa when the industry is still very underdeveloped, unless, that is, there is an explicit policy to develop the industry in the medium term.

All in all, what is clear is that targeting is not something that we can wish away. It has been with us all the time, and it will always be. While there may be a "public relations" case for not explicitly using the term itself, the practice itself is an issue that has to be, and in fact is being, routinely confronted by the makers of industrial policy. Indeed, when most of what DTI does involves targeting anyway, it is better far to go about it in a systematic way after acknowledging its inevitability, rather than trying to pretend that there is no targeting going on, thus increasing the danger of incoherence between different targeting exercises. Indeed, given the widely recognised weakness of South Africa's administrative capacities, policies are more likely to succeed when they are more precisely targeted (see subsection F. below for a more detailed discussion of the capabilities issue).

The crucial question then is identifying the right kind and degree of targeting, given the overall industrial policy objectives. For example, should the financial resources released by the forthcoming abolition of GEIS be re-directed towards other forms of export supports, or R&D funding, or even a new restructuring programme of the automobile industry? For another example, should a possible new fund to support R&D in, say, the machinery industry specifically target electrical machinery, engineering machinery, or no particular type of machinery at all? Or still for another example, should South Africa develop its electronics industry, which will require a coordinated targeting in a number of areas such as financing, education, R&D support, foreign investment or borrowing policy, export promotion, to name just a few? These questions of targeting have to be confronted when designing and implementing industrial policy.

B. The Question of Vision

One important condition for the success of industrial policy is for it to be based on a coherent vision for the future industrial structure of the economy. Especially when we engage in detailed sectoral targeting, such vision is necessary in order to ensure that the policy does not simply reflect narrow sectoral concerns. It will be, of course, wrong to say that the current industrial policy of South Africa totally lacks a vision, but on the other hand, it will not be too much of a misrepresentation to say that its vision remains vague, blurred, and too abstract. We all want to "enhance the international competitiveness of the industrial sector" (SSD) or "improve manufacturing performance" (ISP), as the titles of the two most important industrial policy documents proclaim, but what does this actually mean in concrete terms? In other words, in the current South African context, there is a need for a more concrete vision that can guide industrial policy.

One simple, but very useful, way of clarifying, and making less abstract, the vision that should guide South Africa's future industrial policy is to identify certain advanced countries with most *prima facie* similarities and check whether South Africa can use them as "models" for its developmental strategy. Indeed, being able to learn from earlier experiences is one of the very few advantages of being a backward country. One very obvious "model" for South Africa to follow, in the author's view, is provided by the Scandinavian countries.

These countries first developed on the basis of natural-resources-related industries - paper and pulp industry based on rich forestry resources (especially Sweden and Finland), steel industry based on high quality iron ore deposits (Sweden), or even agro-processing industry based on the strong tradition of farming and animal husbandry (especially Denmark) - and then upgraded and diversified their industrial structure, using these industries as "springboards". The importance of above-mentioned industries in South Africa is too obvious to mention, suggesting its natural affinity with the Scandinavian countries. Also, the recent experience of Norway in wisely managing the resource rents from its newly found North Sea oil may provide another useful lesson for South Africa, where it is deemed that the management of mineral resource rents has not been very successful.

Moreover, there is even a significant political parallel between South Africa and the Scandinavian countries. The latter achieved important parts of their industrialisation under a corporatist political settlement, based on the class compromise between highly organised labour and capital, mediated by a progressive government (since the 1930s in Sweden and Norway, and since the 1950s in Finland). It is even more interesting to note that the Scandinavian countries reached such settlements only after a period of intense political struggle - Sweden, for example, had the highest incidences of strikes in Europe during the 1920s, and Finland experienced a bloody civil war between the Right and the Left throughout the first half of the 20th century (with a civil war in 1918). There is thus quite a striking parallel here with the current political settlement in South Africa.

Obviously, such parallels should not be drawn too far, as there are many other things that distinguish South Africa from these countries (e.g., country size, ethnic division, international economic environment). However, given such obvious and important similarities between South Africa and the Scandinavian countries, studying the experiences of the latter may save South Africa a lot of time and energy in devising the vision behind its industrial policy. For example, how did Finland upgrade its paper and pulp industry, which was not much more advanced than its South African counterpart until the 1950s, and eventually diversify into the paper-making-machine industry? How did Sweden use its strength in steel industry to develop an excellent engineering sector? What was the role of industrial policy in all these? Is the concept of "developmental block" used in Swedish industrial policy (see E. Dahmžn, "'Development Blocks' in Industrial Economics", *Scandinavian Economic History Review*, 1988, no. 1) relevant for the current attempts at cluster studies in South Africa? These are some of the useful questions that can be raised in relation to the Scandinavian experiences.

While the "Scandinavian road" may be an obvious one open to South Africa, this should not be interpreted as meaning that the country should only be thinking about developing industries related to its natural resource endowments. The fact that South Africa is earning high levels of resource rents from minerals and forestry does not mean that the only way forward is to upgrade into industries related to such natural resources. It is, for example, entirely possible, and may be desirable, for South Africa to invest in developing electronics or telecommunications industries by using the resource rents (in fact, Sweden and Finland boast two of the world's most famous firms in such industries - Ericsson and Nokia, respectively). And in developing such industries, the experiences of the East Asian countries, such as Japan, Korea, Taiwan, and Malaysia, may serve as useful "models" (for an enlightening account of the Korean industrial policy regarding the "information industries" from a comparative perspective, see P. Evans, *Embedded Autonomy*, Princeton University Press, 1988).

Whether South Africa wants to become the next Finland, the next Korea, the next USA, or the next Germany, or for that matter some kind of hybrid form of all these economies, can only be fully decided when the currently conducted sectoral and/or cluster studies are concluded and discussed in depth, and, more importantly, when the past experience of more successful countries are fully digested, especially at the sectoral level. However, at least identifying a broad vision - is it going towards East Asia, Scandinavia, or North America? - is feasible even at this stage, and will be extremely helpful for increasing the internal coherence of the industrial policy.

C. From "Demand-side" to "Supply-side" Orientation

In SSD and ISP, it is strongly emphasised that the orientation of South Africa's industrial policy has changed from a "demand-side" to a "supply-side" industrial promotion with the end of the Apartheid. The former refers to the past practice of promoting certain industries by providing a "captive market" to producers through tariffs, quotas, and other policy measures. The latter refers to the new array of measures - such as investment incentives, human resource development, support for R&D, provision of information on production methods, and international market conditions, etc. - that are intended to enable the producers to increase their market shares by increasing productivity.

The present author believes this shift in policy emphasis to be, on balance, a wise one. First of all, as the past experiences of South Africa and many other countries show, guaranteeing domestic demand alone is hardly enough to get a viable "infant industry" going. Producers in developing countries suffer from underdeveloped financial institutions, deficient human capital base, difficulty of acquiring information on technology and marketing, etc., and government supports in overcoming such "supply-side" problems have been critical in the success of industries in many countries throughout history. Secondly, given the previous political economy of industrial policy in South Africa, a strong statement by the government that there will be no more simple doling out of protection and subsidies may be necessary to change the behaviours of the producers.

However, the shift is not entirely positive. The rhetorical separation of the supply-side measures from the demand-side measures has obscured the point that *both* types of measures are necessary for a viable industrial policy. It is true that guaranteeing demand is hardly enough for increasing productivity, but there are many industries where, without some guarantee of demand, investment will not occur and as a result productivity is going to suffer, whatever one does with, say, skills or marketing.

In industries where there is a significant scale economy, such as the automobile industry, low production volumes increase unit costs, and therefore small markets both reduce the productivity of currently employed assets and discourage producers from investing further. Declaring demand-side measures "unacceptable" may be argued to serve a political purpose, but is not going to help save, for example, the South African automobile industry, which needs a restructuring that involves certain "demand-side" measures such as (possible) exit of some producers, conversion of certain producers into mainly export-oriented producers, an explicit (and of limited duration) market segmentation arrangement, and so on. Supplying more skills, R&D, information, etc. will not be enough to save such industries.

In other words, the shift of emphasis from demand-side to supply-side measures should not lead to a neglect of the crucial demand-side factors in designing industrial policy, nor should it serve as an excuse for avoiding politically difficult questions like arranging a restructuring programme for certain industries with significant scale economies. In the end, supply-side measures have to work with demand-side measures in order to be successful.

D. Increasing Physical Investments

Currently, there is a widespread agreement that South Africa needs to increase its physical investments in order to accelerate growth and structural change. South African physical investment has collapsed since the mid-1980s, from around 30% of GDP, to well under 20% in the early 1990s (16-7%). Although this has more recently crept up to over 20%, this is way below the investment rates typically observed in other well-performing middle-income developing countries which are in competing positions with South Africa. Currently, countries like Korea, Malaysia, Thailand, and China frequently manage investment/GDP ratio of 40% (and sometimes even above), and many other developing economies invest around 30% of their GDP.

Despite such a dire situation, there does not seem to be enough emphasis on the importance of increasing physical investments in the current industrial policy documents of South Africa. The SSD and the ISP all clearly acknowledge the importance of physical investments for the success of industrial policy, but in their effort to emphasise the importance of human capital investments and the dissemination of technological and marketing information, physical investment seems to have been relegated to a secondary position. In the case of the ISP, the issue is raised at the beginning of the document, but

hardly gets any mention again. In the SSD, the issue receives more serious attention, but the discussion is confined to direct fiscal investment incentives. But is this all that the government can do to increase investment?

The most obvious policy action that can be taken in order to increase investment is in the area of monetary policy. In its attempt to reduce inflation, the South African Reserve Bank has for some time maintained a very tight monetary policy, resulting in real interest rates of 9-10%. As even the Reserve Bank itself admits, such real interest rates are detrimental for investment and growth. It should be noted that between 1960-73, the latter part of the "Golden Age of Capitalism", when all OECD countries achieved high investment and rapid growth, the average real long-term interest rates were 2.6% in Germany, 1.8% in France, 1.5% in the USA, 1.4% in Sweden, and -1.0% in Switzerland (*OECD Historical Statistics*, Table 10.10). Especially given that there is no proven negative relationship, even in a purely statistical sense, between economic growth and inflation rates of under 40%, the current stance of the Reserve Bank on interest rate policy is at best misinformed and at worst serving only the interests of the financial sector, to the detriment of the industry. Industrial policy-makers need to put far more pressure, through both formal and informal channels, on the Reserve Bank to reconsider its excessively restrictive stance on monetary policy.

Another relevant policy area is that of fiscal policy. The investment incentives that are already in place or are being considered obviously belong to this area, but this hardly exhausts the policy options in this area. One other way that fiscal policy relates to investment question in South Africa is through its impact on monetary policy, a tight stance on which is frequently justified by the claim that, with the current level of budget deficit, it is not possible to loosen the monetary policy. Whether or not we believe this argument, the surprising thing is that expenditure cut is currently seen by many people as the only way to reduce budget deficit, while the possibility of reducing it through increase in taxes is not even discussed.

Taxes, needless to say, can adversely affect the economy, and consequently the budget situation, if they are badly designed. However, certain types of taxes are capable of reducing fiscal deficits while providing more incentives for investments. For example, a higher tax on corporate dividends could give incentives to firms to retain and invest more profits than they are doing now. Another possibility is to introduce special taxes on luxury consumption (rather broadly defined, not just to include, say, fur coats, but also to include automobile over a certain size), which has frequently and successfully been used in countries like Japan and Korea. Such a tax will not only raise revenue and reduce the budget deficit, thus persuading the Reserve Bank that its monetary policy can be relaxed (which will boost investments), it will also switch resources from consumption to investment, if the resulting increase in tax revenue is used for investment purposes (e.g., public investment programmes, further investment incentives) rather than to increase government-mediated consumption.

Another possible area of policy intervention to increase investment is more direct control on the investment behaviour of large South African corporations. While there are no concrete data on this, there is a concern voiced in certain circles that the investment behaviour of many large South African corporations are too "internationalised" for the benefit of the national economy. South Africa, given its level of economic development, has private sector corporations which have unusually sophisticated capabilities to engage in transnational investment activities, and as a consequence it may be difficult for the government to control their domestic investment behaviours, especially with the proposed acceleration in financial liberalisation, unless some institutional constraints are put on their international investment behaviour. Currently, this possibility seems to be completely ignored, for obvious political reasons. However, a coherent national investment strategy will have to have a position on the issue, and for that a serious review of policies regarding corporate governance and financing may be required - even if the conclusion is that there is not much that can be done (more on this in section G).

Thus seen, there are many ways to boost investment in addition to those possible under the currently discussed fiscal schemes for investment incentives, using monetary, fiscal, corporate, and financial policies. Needless to say, many of these policies fall outside the domain of the DTI, and pose the question as to whether other ministries and the Reserve Bank can be persuaded to change their policies. This brings us to the question of policy coordination.

E. Policy Coordination

As just pointed out in the context of investment policy, the success or otherwise of industrial policy depends not just on its own merits, but also on the "supportiveness" of other economic policies such as monetary policy or fiscal policy. Likewise, if literacy, numeracy, skills, and research capabilities are necessary for effective industrial upgrading, as it is emphasised by the current South African industrial policy framework, an effective coordination between industrial policy, on the one hand, and education, training, science, and labour policies, on the other hand, will be important for the success of industrial policy. Seen from the other side, it is also necessary that industrial policy is designed to allow other policy objectives to be achieved - for example, investment incentives have to be compatible with fiscal policy objectives; decisions on industrial location have to be coordinated with regional policy.

The need for policy coordination is certainly felt in and around the South African government. However, up to now, the effort at such coordination has been limited to very broad "framework" exercises, represented by the attempts made in the working group for the recently published document, *Growth, Employment, and Redistribution - A Macroeconomic Strategy*. This is very unfortunate, because many problems of coordination exist at more detailed levels, which cannot be fully captured by a broad "framework" exercise. Moreover, such exercises up to now have been rather *ad hoc*, thus making it difficult to monitor on a continuous basis the progress of the agreement reached in the coordination exercise.

In addition, up to now, such coordination has been rather lop-sided, in the sense that there has been an implicit assumption that monetary, and to a somewhat lesser extent fiscal, policy objectives are paramount, and other policies will have to be subject to the constraints set by such objectives. Whether or not one believes that the current macroeconomic situation in South Africa leaves no room for changes in monetary and fiscal policies, such assumption is hardly favourable for a genuine policy coordination, where no element should be assumed sacrosanct.

Thus, there is an urgent need for a mechanism for permanent, genuine, and detailed policy coordination, involving not just government ministries but also other important actors in the policy circle (e.g., IDC, the Reserve Bank, COSATU). This effort should be pursued at three levels.

The first level effort is to set up a pilot agency which would be in charge of policy coordination on a permanent basis. This is a practice that was successfully pursued in a number of East Asian and European countries (e.g., Korea, Taiwan, France), although the exact organisational form used varied across countries and across time even within the same country. If setting up a "Ministry of the Economy" or a "Ministry of Economic Policy Coordination" (which, to be effective, should have the power to over-ride individual ministries when necessary) is not favoured because of its resource implications, a more "lean" agency attached to the Vice President's Office may be considered as an alternative.

The second level effort is to hold regular high-level meetings for policy coordination, comprising all the economic ministers and the governor of the Reserve Bank, held every week or every other week. The meeting should be chaired by the Vice President or the Minister of the Economy (if such position is created) in order to give it a high profile (so that no minister is going to send a deputy to the meeting, unless he/she is out of Pretoria), and should serve as a forum where major policy coordination problems can be resolved.

The third level effort is to supplement the above-mentioned ministerial meeting by regular "business" meetings between the director generals and the chief directors of major ministries, in this case held every week, instead of every other week. This should be a forum where the details of the broad agreements made in the ministerial coordination meeting are sorted out, and where the more "down-to-earth" experiences of the DGs and CDs (that is, when compared to the ministerial experiences) can be distilled into a recommendations which can be put to the ministerial meeting or sent directly to the above-mentioned coordination agency.

F. Enhancing the Administrative and Institutional Capabilities

The success of industrial policy depends not only on policy coordination between the DTI and other relevant policy actors, but also on the administrative capabilities of the DTI itself. Currently, there is a widespread agreement that such capabilities are still inadequate and need to be significantly enhanced.

One obvious thing that can be done here is to enhance the capabilities of the individuals working for the DTI, both through the recruitment of new, competent staff and through the re-training of the existing staff. Here, it should be noted that "competence" does not necessarily mean a highly specialised training in an academic subject (e.g., someone with an advanced degree in economics or business studies). What is needed more, in an administrative context, is the general ability to comprehend major issues, make strategic decisions, and manage personnel, rather than specialised, technical knowledge - a point well illustrated by the fact that most Japanese and Korean economic bureaucrats were lawyers by training, that many of their Taiwanese counterparts were engineers (although many of them had a certain amount of economics training at some point).

However competent the individual staff members may be, the administrative capabilities of a ministry would not be high if the organisational structure is poor. In this context, first of all, it will be necessary to strengthen the "sectoral" bureaus of the DTI in order to enhance its ability to gain detailed knowledge of the sectoral issues, as this is most important for a successful industrial policy (we earlier emphasised that the essence of industrial policy is sectoral policy). Without the hands-on knowledge that only the sectoral bureaus can provide, the "functional" bureaus in charge of cross-cutting issues will not be able to design policies that are sufficiently focused and properly targeted. Needless to say, in return, these sectoral bureaus will have to be held in check by the functional bureaus, as, given their nature, they are liable to become too "attached" in their outlook to the sectoral needs, even if there is no outright corruption or "capture" by sectional interest groups.

It will be also very important to increase horizontal information sharing within the DTI through means such as job rotation, regularised joint meetings, formation of *ad hoc* inter-departmental task forces for major policy issues. While these measures should not be over-done (e.g., too frequent job rotations prevent the emergence of specialist knowledges; too many joint activities can blur focus for individual bureaus or sections), they are necessary for "institutionalising" continuous horizontal information flows, by forcing people to put themselves in others' shoes and gain broader perspectives than those offered by narrow specialisation.

All these governmental administrative capability building exercises will not be costless nor can they be achieved overnight. Therefore, it will be important to recognise the current levels of administrative capabilities that exist in the DTI and design industrial policy accordingly. However, it is important to note that administrative capabilities can be built relatively quickly, if there is a political will and if adequate organisational and personnel reforms are carried out. For example, the Korean economic bureaucracy was by the late 1970s hailed in many circles as one of the most capable bureaucracies in the developing world, but the country was sending its bureaucrats to Pakistan and the Philippines even until the late 1960s to get training in economic policy management. So while it is important to avoid policies that over-stretch the existing administrative capabilities, it is also important not to be unduly pessimistic about the possibility of enhancing such capabilities in the near future.

The above-mentioned measures that are to do with the DTI's internal structure should be supplemented by measures to improve the information flows between the DTI and the business sector. As the ISP also points out, strengthening business associations, which can act as a channel for continuous information exchange between corporations and the sectoral bureaus of the DTI, will be an important effort in this vein, as the success stories of industrial policy from East Asia tell us. In addition, asking the representatives of relevant business associations to participate in important policy coordination meetings of various levels, or even organising *ad hoc* meetings between the Vice President (or the Minister of the Economy) and the representatives of peak business associations when important issues arise may also improve the information flow between the government and business.

It is not just the information flow between the government and business that has to be increased for a successful industrial policy. An increased dialogue within the business sector is also vital for the success of industrial policy. Currently, in South Africa, there is hardly any systematic dialogue between related producers, and this means a lot of lost opportunities for mutually beneficial information exchanges. For example, the lack of information flows between the upstream and the downstream producers belonging to the same "cluster" means that user feedback from the downstream producers regarding upstream products may not be fully conveyed. For another example, firms which are in competitive relationships in general may benefit from exchange of information or even joint ventures for specific purposes, such as small firms running a marketing cooperative or large firms forming joint ventures in high-cost, risky research projects. While many people justly fear that these joint activities can turn into horizontal and vertical cartels, such possibilities can be reduced through the direct and indirect involvement of the DTI in such activities as a body which represents the public interest.

G. Dealing with the Large Firms

In the current industrial policy framework of South Africa, there is a great emphasis on the role of small, medium, and micro enterprises (SMMEs), in the belief that they are crucial, at least in certain industries, for objectives such as creating employment, empowering disadvantaged groups, and increasing productivity by enhancing flexibility. This, naturally, has led to a neglect of the issues pertaining to the large firms. This is an unfortunate situation, given the crucial importance of large firms in South Africa.

Moreover, as far as the large firms are discussed, it is in the context of strengthening competition policy. Given the high industrial concentration in the country, it is not surprising that a tougher anti-trust policy managed by an independent Monopoly Commission is strongly advocated in the current policy framework. However, is this the right way to deal with the large firms in the current South African context?

One problem with this policy stance is that the negative economic consequences of monopoly are relatively small (estimates normally put such costs at best at a couple of percentage of GDP), while the legal and administrative costs of limiting such consequences through anti-trust policy can be large. More importantly, a tougher competition policy may not be very effective in solving the central problem relating to large firms in the South African context, namely, their lack of dynamism, and their reluctance to invest in South Africa.

What South Africa needs from the large firms, especially the large conglomerates, is nothing short of a major change in their business outlook and investment behaviour. It is well-known that being large is necessary for industrial success in many modern industries, but that it is hardly sufficient. This is well-illustrated by the fact that, while many large, dominant firms belonging to South African conglomerates are conservative and undynamic, their counterparts from Korea are extremely risk-taking and dynamic in their outlook and behaviour. Saving one more marginal competitor from the ravages of the dominant firm in an industry through competition policy is not going to do much to change the behaviour of the South African conglomerates. What is necessary is a more fundamental change.

Such change will require, first of all, a reform of the financial system which will subordinate the "financial" interests to the "industrial" interests, in the manner that is found in Germany, Japan, or Korea. This could be supplemented by ideological campaigns that emphasise the dangers of domination by financial interests, for example, by citing the relative failures of countries with Anglo-Saxon-style capital-market-based financial system (including South Africa), compared to countries with more bank-based financial system. Also, the large conglomerates should be encouraged to stop being merely financial holding companies and to become more active in group-level planning and coordination, again as seen in the Japanese or especially the Korean case. Moreover, there could be many more active attempts by the government to strike direct deals with the conglomerates regarding investment decisions in strategic industries. Formally and informally controlling their outward investments in accordance with the overall industrial strategy, as we mentioned earlier, may also be critical.

All these suggestions may sound either politically impossible (e.g., reform of the financial system), naive (e.g., ideological campaign against financial interests), or dangerous (e.g., direct deals between government and conglomerates), but without such attempts, there will be no fundamental changes in the behaviour of the conglomerates. And given their importance in the South African economy, without changes in the outlook and the behaviour of the conglomerates, the effectiveness of industrial policy will be severely limited.

Conclusion

The present paper concludes that the developments in the area of industrial policy in South Africa since the end of the Apartheid have some positive features. These include:

1. The realisation that South Africa cannot continue with the past pattern of industrialisation and its past industrial policy framework.
2. The acknowledgment that increasing international competitiveness is crucial in achieving a pattern of industrialisation sustainable in the long run.
3. The realisation that an active industrial policy is necessary for such industrial transformation.
4. The emphasis on augmenting the "supply side" factors such as human capital, which have hitherto been neglected, in industrial policy.
5. The emphasis on the importance of building institutional and administrative capacities for the success of industrial policy.

However, the paper has identified a number of areas where the existing policy urgently needs be strengthened, its direction reconsidered, and new policies adopted. What South Africa needs in the area of industrial policy are:

1. The need to realise that the real question is not whether to engage in targeting or not, but to accept its inevitability in a world of limited administrative and financial resources and to try to find the right kind and degree of targeting.
2. The need to formulate a clear vision for the future of the South African economy, in order to provide coherence between different targeting exercises, drawing on but not slavishly following earlier success stories.
3. The need *not* to neglect "demand side" policies, which in the end have to work together with the "supply side" policies in many, if not all, industries.
4. The need to substantially increase physical investments, not simply through fiscal incentives, but also through reconstituted policies regarding interest rates, taxation, and corporate governance and behaviour.
5. The need to establish more encompassing and permanent policy coordination institutions (including a pilot agency, regularised ministerial meetings, and regularised meetings between DGs and CDs of all relevant ministries) in order to increase the effectiveness of industrial policy.
6. The need to improve the administrative and institutional capabilities of the actors involved in industrial policy by improving personnel quality and organisational structure of the DTI, promoting close consultation between the DTI and the business sector, and creating and supporting the institutions for intra-business dialogue.
7. The need to give more attention to the role of the large firms in the economy, and to initiate institutional and ideological changes that are necessary to increase the dynamism of the large firms in a way that is not possible through strengthening anti-trust legislation.

At first sight, the policy and institutional changes that are proposed in the present paper may seem too formidable for a relatively inexperienced government with weak administrative capabilities, especially given the enormous economic and political constraints that we hear that it is facing in policy design and implementation. However, once the readers abandon some of the conventional wisdoms regarding things like industrial targeting, taxation, inflation, and corporate governance that currently dominate the South African policy-making scene, they will be able to see that many of these constraints are in fact partly self-imposed and therefore can be significantly relaxed, if not totally eliminated, if there is a political will. Moreover, when the readers cast away the conventional wisdom that the administrative capabilities of the government cannot be enhanced except over a very long period of time, they will realise that what looks like a formidable policy challenge now may well become a routine job in 5-10 years time, if there is the political will to achieve adequate organisational and personnel reforms. Parting with some of these conventional wisdoms may be the first step towards an improvement in South Africa's industrial policy.