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THE RESTRUCTURING OF THE
MOTOR VEHICLE MANUFACTURING INDUSTRY IN SOUTH AFRICA:
A CASE STUDY OF NISSAN SOUTH AFRICA

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Dissertation presented in partial fulfilment of the degree of Masters of Arts in the Department of Sociology, University of Cape Town
April 1999
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ABSTRACT

This dissertation is essentially an exploratory study of the role of the motor vehicle manufacturing sector in South Africa’s capitalist industrialization. A few research questions pertaining to global trends in the industry, trends amongst SA manufacturers, and the latter’s prospects in a context of their goal to become world class manufacturers complement the exploratory nature of the study. Data was gathered through unstructured interviews and documentary studies. The subsequent study is mainly largely qualitative and descriptive. Quantitative data is drawn from the publications of government departments and of non-governmental agencies. The motor vehicle manufacturing sector’s nurturing through more than two decades of protectionist policies in a Local Content Programme is outlined including some comments on the problems of these programmes. Pressures emanating from a re-entry into global markets and the inherent long-term constraints of a protectionist policy which retard the original national objectives behind the support for the industry are treated as reasons supporting the arguments in favour of the need for a neo-liberal oriented industrial restructuring strategy for the sector. Industrial strategy projects are guided by best practice models or new dominant paradigms of what to transplant into an economy experiencing “deindustrialization” - the decline of its manufacturing sector in favour of the primary goods sector. A limited amount of quantitative data aids in a comparison of achievements of the local content era and the infancy period of the Motor Industry Development Programme. For a sociological analysis of what may be treated as an economic phenomenon, some of the recent sociological theoretical developments, for instance, Regulation Theory, lean production, flexible specialisation, diversified quality production, and corporatism, are used in a complementary manner in this study. A case study of Nissan, a longstanding motor vehicle manufacturer in South Africa, is included in the study. It is argued that the Fordist paradigm of managerial and technological organisation of the workplace was never a dominant approach in the motor vehicle industry. Likewise, the Japanese innovations which are widely contrasted with Fordism are not uniformly found amongst Japanese vehicle manufacturers. Globally, hybrids of the Fordist and post-Fordist paradigms are developing and, with reference to these hybrids, there are differences within countries as well as within the global operations of motor vehicle manufacturing transnational corporations as to what route they are taking in their respective policies to restructure the industry. The dissertation concludes that South African firms will develop their own hybrids of a new growth model which is embedded in the
expectations and outcomes of the actions of individuals and larger social collectives like firms, business associations, shopfloor workers, labour organisations, and government departments. Industrial restructuring is a social construction of the latter social agents more than merely a profit maximizing strategy of firms which are generally viewed as rational economic actors which subsequently would be seen as the initiators of industrial restructuring.
CHAPTER ONE

INTRODUCTION

Economic development policies in developing countries generally target the manufacturing sector to supersede the contribution of earnings from the primary sector (Hewitt et al. 1992: 1-6). However, international economic recessions, shifts in production methods and the geographic location of the centres of production of certain manufactured commodities have spelt economic crisis. These factors have weakened the manufacturing sector of some developing countries causing a reversion to the predominant role of the primary sector, especially mining exports. This situation is termed 'forced back industrialisation' - the relative decline of the manufacturing sector to exports and Gross Domestic Product (Black 1991: 157).

South Africa's (SA) manufacturing sector is also faced with the difficulties of forced back industrialisation. SA's capitalist development during the twentieth century had the motor vehicle assembly and components production sector as a key stimulant of manufacturing industry. Approximately one-eighth of the country's economic activity has been linked to it - an obvious indicator of the significance of the sector as well as a veritable barometer of the economy's health (Black 1991: 163;
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Cokayne CTBR 5/12/1996; Oberhauser 1993: 195). The motor vehicle and components manufacturing industry stimulates a series of other spin-off industries; an original equipment and spare parts markets is created, it increases the demand for products from the iron, steel, aluminium, plastic, rubber, and glass industries, it creates a distribution and servicing network, and it also stimulates the growth of petrol stations and the oil industry (Jenkins 1987: 1; Deyo 1996 7-8). Obviously, the motor assembly industry has a healthy effect on employment levels in a country. There are obvious backward and forward linkages to other industries which gravitate around the motor vehicle making it a crucial contributor to the industrialization of developing countries. However, the industry is undergoing a global restructuring and this is generally led by best practice innovations in developed countries which in turn raises questions regarding the fortunes of the industry in a number of developing countries (Deyo 1996: 8).

Since the 1960s the ambitious industrialisation and development policies of several developing nations have attached significance to this sector envisaging the attainment of certain national objectives. These objectives include: a saving on foreign currency by reducing that part of the balance of payments related to motor vehicle imports; the provision of employment as well as
the development of skills when more sophisticated components are
produced; the consumption of a large variety of local raw
materials; the encouragement of the development of local
technology and multinational investments; independent production
of motor vehicles has strategic and security advantages; and the
possible exports earnings from a local motor industry (Swart
1974: 165). The formerly well established and dominant motor
vehicle production centres in North America, Europe, and Japan
have been challenged by new producing countries which emerged in
a capitalist world economy. Arguably, this was due to a global
or new international division of labour created by the motor
vehicle producing transnational corporations (Jones and Womack
5). SA has receded from the position it held in the 1960s as the
leading developing country producer of motor cars, but remains
a major developing country producer. In the current era, local
industry policy-makers cannot ignore significant industry trends.
Due to trade wars between the two major producers, the United
States of America (USA) and Japan, industries that are
established in other parts of the globe and which are
subsidiaries of especially Japanese transnationals, may have
their manufacturing operations reduced. In 1995 the USA
government imposed R12b sanctions on Japanese car imports.
Japanese parent companies are threatened with the loss of part of this market and, world-wide, parent companies are putting pressure on their subsidiaries to import (Rafferty M & G: 19-25/5/1995; Madikiza and West BD 27/2/1996). All the leading Japanese motor industry companies are involved in the SA economy. Pressures emanating from recent trends in the global economy and the surfacing of structural weaknesses in SA's postwar growth model identify the manufacturing sector and particularly the motor industry as being unable to compete successfully in global markets (Joffe et al 1994: 17; Monitor 1995: 22-3). SA's entry into global markets in the post-apartheid era is an additional prompt for an industrial strategy to meet these challenges (Ewert 1992: 2). That entry into international markets is likely to prove an arduous test when looking at the situation among European manufacturers where a situation of "ultra-competition" prevails due to the great improvements in quality and productivity on a continent which can produce twenty million vehicles a year but with a continental market which absorbs only 12.8 million a year (Lorenz SI 16/03/1997).

Industrial restructuring strategies aimed at improving competitive capacities can no longer gravitate around prices only, but also need to consider factors like product quality,
product variety and differentiation, as well as the speed of innovation (Joffe et al 1994: 17). This necessitates an overall transformation of production methods that characterised recent decades of industrial organisation in SA.

The notion of a paradigm has been extended to account for successive transformations in industrial organisation as well as the characterisation of technological and managerial developments (Jones and Womack 1985: 396; Dosi 1982; Piore & Sabel 1984: 43). Three paradigm shifts are argued to have taken place in the motor industry: first came the mass volume industry in the USA around 1910; second came the European combination of mass production with product innovation and differentiation from the late 1950's; and third came the Japanese innovations in the late 1960's where production organization gave lower cost product with enhanced manufacturing accuracy (Jones and Womack 1985: 397; Hill & Lee 1994: 295-7). Japanese innovations in technology, management, labour and supplier relations have captured the essence of what is known as best practice in the industry and producers elsewhere, in accompaniment with government policies, model their transformation and restructuring along these lines. In general, the Japanese transnational corporations in the motor vehicle and other industries are acknowledged to be playing a significant
role in shaping the world economy (Hill & Lee 1994: 289). However, attempts elsewhere to catch up with the Japanese through emulating only its manufacturing strategy which had been dubbed "lean" production generally failed to match its success (Morales 1994: 2). Later studies showed that the domestic structure of Japanese industry into financially linked companies known as keiretsus gave Japanese companies an "unfair" advantage. Furthermore, the total configuration of state policies, supportive relations between government entities and firms and society in the development, manufacture, and distribution of goods produced a competitive flexible production system, always geared towards innovation (Morales 1994: 3-6).

Economies which are unable to transform face the crisis of a decline of industrial output in favour of other sectors, or "deindustrialization" (Hirst 1989: 269). The revival of manufacturing matters for many reasons for both developing countries and major developed capitalist economies. It is an important source of employment in both types of economies; in an open international trading system its output is a key factor in balancing the value of trade entering the country and of exports leaving the country; poorly performing manufacturing restricts public spending and causes more borrowing for manufacturing
role in shaping the world economy (Hill & Lee 1994: 289). However, attempts elsewhere to catch up with the Japanese through emulating only its manufacturing strategy which had been dubbed "lean" production generally failed to match its success (Morales 1994: 2). Later studies showed that the domestic structure of Japanese industry into financially linked companies known as keiretsus gave Japanese companies an "unfair" advantage. Furthermore, the total configuration of state policies, supportive relations between government entities and firms and society in the development, manufacture, and distribution of goods produced a competitive flexible production system, always geared towards innovation (Morales 1994: 3-6).

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investment than do successful competitor countries.

Studies of development and industrialisation strategies and policies conceptualise these either as a structuralist approach wherein mostly protectionist strategies are used to shelter an emergent industry or as a neo-liberal approach wherein an economy is steered towards market-oriented policies (Hewitt 1992: 8, 136-51, 151-64). An overview of SA's motor vehicle industry in subsequent chapters demonstrates a transition from the former to the latter. Since its inception, the performance of the motor manufacturing sector had been shaped by two key aspects of what in recent decades has become a receding paradigm of economic development strategies - Fordist mass production organisation of production nurtured by protectionist state intervention. Motor vehicle production is a globalized activity dominated by transnational corporations with interdependent subsidiaries which influence various trends in the industry in sovereign countries around the world (Hewitt 1992: 22-4, 32, 36). Entry into global markets in the post-apartheid era demands industrial restructuring strategies to shift industrialisation policies, production organisation methods and trade policies towards patterns approximate to new best practice, namely: post-Fordist or flexible production organisation and neo-liberal market
oriented trade policies.

The aforementioned issues may appear to be purely matters of economic change and economic policy, however, in recent years, the sociological study of economic phenomena has been one of the most rapidly developing areas or research agendas in sociology (Granovetter 1990: 105-7; Swedberg et al 1990: 57). In the complex manner in which its field of inquiry is specified, the phenomenon known as industrial restructuring emerges as an area of study in economic sociology.

The dissertation explores recent theoretical developments pertinent to comprehending aspects of best-practice methods characteristic of the new paradigm in the industry and the likelihood that SA firms can restructure to survive the challenges imposed upon them. This dissertation includes a case study which examines the responses of one motor manufacturer to the trends in the industry. Chapter Two discusses methodological issues affecting the study and its research questions. Chapter Three reviews the dominant trends in the development of the world motor vehicle manufacturing industry and discusses theories or paradigms which characterise different eras and practices. Chapter Four outlines the development of the motor vehicle
manufacturing industry in SA throughout the era of protection through local content requirements and the shift away therefrom first by the reformist National Party government of PW Botha, then by the African National Congress government and its macro-economic policies. Chapter Five is a detailed study of production methods that are key features of the current new best practice in the motor vehicle manufacturing industry and the imperatives in terms of action that needs to be taken to restructure the industry in South Africa. Chapter Six examines one of the long-standing local motor vehicle manufacturers, Nissan SA looking at its relationship with the parent company, its fortunes on the SA market during the local content era and recent developments shortly before the transition to a Motor Industry Development Programme as well as during the first three years of the programme. Chapter Seven is the Conclusion which summarises the key points of each chapter and debates the question whether local firms can adopt successful restructuring practices.
CHAPTER TWO

METHODOLOGY

This study is essentially a combination of exploratory research along with a few main research questions which drive it through a plethora of information on the subject. These main research questions are: what is the significance of the South African motor vehicle manufacturing industry in the SA economy as well as globally? In global terms, what are the emerging best practice paradigms in the industry? Is there one particular paradigm most suited to SA? To what extent are SA based firms successful in approximating this paradigm? In the current context of a global restructuring of the industry, what are the prospects for SA's automotive industry? Is there a complementarity of attitudes and behaviour amongst the major social agents affecting the restructuring of the automotive industry, that is employees, labour, and the state? A range of theoretical approaches are drawn upon as well as a range of research methods are used in an attempt to answer these questions.

The literature on the world and South African motor vehicle
industries is an abundant field of knowledge. Current developments in the field concern industrial restructuring pressures to become internationally competitive. Industrial restructuring may be grasped as a topic for empirical study from an economic approach which assumes that the units of study are rational profit maximizers. Industrial restructuring strategies appear to reflect neo-classical micro-economic theory views of the actors or units of analysis (firms and households) as rational profit maximizers. The significance of economic sociology is that it attempts to move beyond this imperative view of actors in studies of industrial restructuring strategies, it reminds one of the need to be cognisant of the socially "embeddedness" of economic action and institutions and it asserts that industrial restructuring is also not simply a micro- or macro-economic question that sociologists should avoid. The embeddedness pertains to individuals and larger social collectives having expectations of their actions and their social construction of what should be done (Swedberg et al 1990: 61, Swedberg 1991: 21; Granovetter 1990: 95-6, 98; Haines 1997: 2). This social construction of economic events is also a reason behind the use of qualitative methods in the study (Neumann 1997: 328; Macun & Posel 1998: 118).
Of additional sociological significance is the fact that the motor industry, the focal point of the study, has generally been a pioneer in the introduction of new labour processes and forms of control (Jenkins 1987: 3). Studies of the latter have traditionally been the subject matter of industrial sociology whereas economic sociology embraces these in its wider scope of subject matter and their interconnections.

Industrial restructuring policies involve an industrial policy community, comprised of government, manufacturer's associations, individual companies, employer associations, trade unions, and industry development agencies which include academics, whose perspectives and behaviour impact the prospects of such policies (Wilks 1984: 4, 17-23). The contributions of these are intermittently integrated into this exploratory study which is essentially interpretive and ideographic in its attempt to understand relevant actors' experience of industrial restructuring in the motor vehicle industry (Bernard 1994: 109-110; Neuman 1997: 55).

Becoming internationally competitive is a well theorised topic with a myriad of new concepts and theories offered to capture the changes underway, for instance, from an economic sociology
approach, diversified quality production, just-in-time and lean production, Regulation Theory and corporatism are amongst the dominant approaches (Duncan 1997: 120). In this study, all these approaches are regarded as of complementary significance and are intermittently integrated into the subsequent chapters which examines what has been said in this regard and to sharpen the focus of a case study description of one motor vehicle manufacturer's response to industrial restructuring trends. The arguments held by these aforementioned theories and the questions they raise regarding their influences on developments elsewhere guide this exploratory examination of responses to productivity challenges and general developments in the SA motor vehicle industry.

The use of comparative case studies was contemplated in the original proposal but abandoned once it became apparent that this would entail more time and financial resources and has subsequently affected the choice of the research problem, the site of a case study, and the data gathering methods used (Bernard 1994: 106-7).

The motor vehicle manufacturing industry is highly competitive hence gaining access is not always certain and impedes data
collection. Entering the field of study was problematic (Bernard 1994: 142-3). An initial comparative study of three producers located around the same city, Pretoria, was also abandoned because two companies did not respond to letters seeking permission to study these firms; this was done after telephone enquiries as to whom to direct the covering letters to. Nevertheless, it appears that a micro-level case study focus can assist in making limited generalisations of trends in the industry and such findings can be applied when dealing with specific problems. Gaining access to informants in the Departments of Labour and Trade and Industry, and to the trade union, was less difficult; all these meetings were arranged over the telephone.

The data of the case study was collected erratically between February 1996 and March 1998. The chief forms of data collection were unstructured interviews, focus groups, observation, and the bulk of the evidence was gained from unobtrusive non-reactive data sources in published articles, newspapers and periodicals (Bernard 1994: 336). Most of the latter sources are available from the South African Labour and Development Research Unit (SALDRU) research library in Cape Town.
Unstructured interviews (Bernard 1994: 209) were used to acquire some of the data. These included interviews with respondents in two different government departments responsible for policy affecting the industry, the Labour Department and the Department of Trade and Industry (DTI); a pilot interview with Nissan SA's General Manager of Human Resources which provided a broad scope on the company's activities; an interview with a Nissan industrial relations officer which provided information on company industrial relations philosophy; and a trade union coordinator for this industrial sector. Tape recordings could not be made of all the interviews.

A focus group session was held with shopstewards and operators for approximately two hours. This method is not oriented towards acquiring statistical data but produces insights on how people feel on certain issues - in this instance, the developments at Nissan (Bernard 1994: 225). Gaining access to shopfloor workers or operators and shopstewards is problematic because of the tight work schedule and retrenchments that were taking place. The Human Resources General Manager was the most helpful source of access to shopfloor staff. He expressed the view that the retrenchment negotiations made for a slightly volatile atmosphere where the presence of a researcher was, in management's view, an
unnecessary prompt that could worsen the atmosphere: The Human Resources General Manager made possible a focused group session with a number of handpicked staff. Focused groups with a sample of handpicked informants also raises the question of the representivity of their views. However, the fact that all these informants were long-standing employees of Nissan made them competent informants of the culture of the company (Bernard 1994: 165, 168). Language was not an obstacle in any of the interviews. Workers were asked questions on changes in their job’s design, the effect of any new technological innovations, their experience of racial hierarchies in the workplace, their views on improvement in quality and output, their views on the companies’ education and training programme, and their approach to new workplace structures.

Observations in the main assembly and trim plants were possible only through unobtrusive guided tours accompanied in each instance by a senior management person who explained activities on the shopfloor as well as answered all further queries (Bernard 1994: 332). The time permitted too was problematic. In-depth observations of an elaborate organisation like a motor vehicle manufacturing plant can only occur in times longer than the average one hour spent in each plant. Consequently, the
observations are essentially qualitative descriptions of shopfloor activities and deficient in quantitative information.

The latter deficiency is compensated for through the use of and adaptation of quantitative data acquired from materials and publications mostly compiled by the Department of Trade and Industry (DTI), the Industrial Development Corporation (IDC), the Industrial Strategy Project (ISP), and the National Association of Automobile Manufacturers of South Africa (NAAMSA). All of this data tends to give a global picture of the industry.

Although the study does attempt to gain a broader insight into the motor vehicle industry, understandably, it may be fallacious to over-generalise the case study of Nissan as representative of SA vehicle manufacturers (Bernard 1994: 35-7). As a means of acquiring a broader insight, throughout the preceding chapters references are made to other vehicle manufacturing companies. Furthermore, the motor vehicle assembly industry is closely related to and influenced by trends in the components industry, hence there is significant reference to the latter sector too.
CHAPTER THREE

THE WORLD MOTOR VEHICLE INDUSTRY

3.1 Introduction

International developments in the motor vehicle industry have influenced the growth of the industry in South Africa. Developments in the industry should be seen not only in terms of its geographical growth but also in terms of transformations in the organisation of production processes in the industry. In order to understand trends in the world motor vehicle industry as well as to properly contextualize and theorise contemporary industrial restructuring in SA, recent theoretical developments pertinent to understanding transformations in the organisation of production are examined.

3.2 The international growth of the industry

The motor vehicle industry is widely accepted to have gone through three major phases of growth and expansion (Jones and Womack 1985: 397). The first phase began with the American innovations in the industry beginning with custom made vehicles...
and then becoming a mass-volume industry. The second phase beginning in the late 1950s was dominated by the European producers who combined mass production techniques with product innovation. The third phase began in the late 1960s with the emergence of Japanese innovations in product organization which had lower production costs as well as superior manufacturing accuracy. These were the developed countries groupings that dominated the motor vehicle industry in terms of location, product innovations, markets, etc. One of the notable new entrants as a developing country motor vehicle manufacturer and a leading supplier to the global market is South Korea. Its firms are observed to have copied the Japanese methods in the early stages of their development but, now that they are established as likely to be leading producers in the next millennium, they lean predominantly towards Taylorist and mass production methods (Hirschsohn 1997: 317).

Studies in the 1970s argued that the motor vehicle industry in the developed countries (the Organisation for Economic Cooperation and Development countries, or OECD) was prompted to relocate several of its activities to developing countries due to the saturation of markets and the attraction of lower wages in the developing countries (Jones and Womack 1985: 394-5).
Evidence was produced showing the growth or "take-off" of the industry in developing countries. But it constituted only 4.5% of world production in the 1980s. Four countries (Brazil, Argentina, South Korea, and India) achieved full production with local content of up to 90%. Motor industry development programmes facilitated the domestic production of up to 60% of local demand for motor vehicles (Womack & Jones 1985: 395-6). However, there was no significant rise in the exports of motor vehicles produced in developing countries to the OECD countries; most exports went to other developing countries.

Other than the geographic shifts in terms of which countries emerge as leading motor vehicle manufacturers another process is also affecting the industry on a global scale - the mergers of companies. For several decades since their birth, almost all vehicle manufacturing companies had been independent operations. However, in the past two decades several joint ventures have been entered into. These joint ventures entail agreements to produce different companies' products under one roof as well as to market their products through the same retailers. Due to poor sales and heavy debts, several companies have been weakened and were consequently prompted to sell to rich, often foreign, partners. In recent years the industry has witnessed the transcontinental
merger of Daimler and Chrysler, Ford's purchase of Volvo, and in its turn Volvo bought into Scania, its domestic rival. German manufacturers Volkswagen and BMW have recently successfully 'split' Rolls Royce and Bently each purchasing one of the formerly independent British companies. Five years ago BMW had already purchased another British car maker, the Rover Group of the United Kingdom. In recent years, Japanese manufacturers, once the confident world leaders in recent manufacturing innovations as well as in successful marketing strategies, have been hard hit by domestic economic recession and a sharp decline in car sales within Japan - an expected drop in sales of up to 500 000 units from 1997 to 1998 according to the president of Honda. This is compounded by a drop in demand in the Asian markets and a decline of exports to the USA. The eleven Japanese motor vehicle manufacturers are expected to be absorbed by either their domestic rivals or foreign competitors. The reality of a merger is admitted by Mitsubishi and Mazda which have both reported losses, while only Toyota and Honda continue to show success and stability in sales earnings (Simonian FT 3/9/1998, 1/3/1998; Abrahams FT 3/9/1998).

The trend towards mergers or consolidations has had a further impact on as well as parallel in the components manufacturing
sector. Mergers of components manufacturers are occurring amongst companies within one country, across countries, and across continents (Tait FT 1/3/1998). Much of the pressure to merge is due to those already merged vehicle manufacturers rationalising their component suppliers for the once independent manufacturing companies. Furthermore, the merged vehicle manufacturers are pressuring the components companies to cooperate in improving efficiency and cost savings particularly through increased volumes. In some instances of vehicle manufacturer mergers with a foreign vehicle manufacturing partner, domestic component suppliers are losing out as component purchases are made elsewhere. For instance, since BMW took over the Rover Group, the latter now spends £1b of its £4.5b on components outside of the United Kingdom (Griffiths FT 1/3/1998). Successful components manufacturers are gaining though since more vehicle manufacturers are ordering fully assembled front ends, that is, bumpers, headlights and other integrated components.

Womack and Jones' (1985: 396-7) approach to understanding the shifts is in terms of best practice paradigms comprising breakthroughs in technology and management. Consequently, they identify the three above-mentioned phases of growth and expansion. They argue that each phase corresponds with the
domination of a new region which took the initiative in organising the future of the industry. A more holistic approach to comprehend these geographic shifts in the capitalist organisation of the production process is Regulation Theory (RT). This approach analyses more societal features rather than only technology and management breakthroughs. RT analyses of the Fordism era, and of the post-Fordism and flexible specialisation debates facilitate a broader economic sociological examination of industrial restructuring. It may also subsume or overlap the focus of other pertinent theories of trends in the industry, for instance, lean production, diversified quality production (DQP), just-in-time (JIT), and corporatism. Concepts like regime of accumulation, growth model, mode of regulation, are some of the most important within RT and are frequently referred to below (Harvey 1989: 121-2; Gelb 1991: 10-11; Klerck 1996: 114). A regime of accumulation is a macro-economic reference to a stable period of production, consumption and accumulation, and the reproduction of wage earners. A myriad of social agents comprising capitalists, workers, state employees, financiers and various other political and economic agents make this stable regime possible through the interiorization of norms, habits, laws, regulating networks, rules and social processes regulating their behaviour, and this is referred to as the mode of
regulation. In essence, the contradictory nature of social relations in capitalist society are contained and limited through these norms and institutions. The concept mode of regulation is used to specify a variety of types of Fordism in different national, social and political contexts, for instance, racial Fordism in South Africa. The mode of societalisation is the influence of Fordism on other dimensions of social life - politics, culture, social cohesion, institutional integration, urbanisation, education, population growth, etc. A regime of accumulation, a mode of regulation, and a mode of societalisation all combine to form a model of development or a growth model. Regulation theorists accept that contradictions in capitalist social relations are only temporarily constrained and that occasional crises and business cycle downswings affect this apparent harmony.

Regulation theorists conceptualise three types of crises prompting the eventual transition to a new growth model; these are: micro crises, conjunctural or minor crises, and structural or major crises (Gelb 1991: 13). When individual units or sectors of the economy face pressures to adjust to changes in consumption patterns and/or to restructure the production process this is referred to as micro crises (Klerck 1996: 117). Cyclical
downturns in an economy produce conjunctural or minor crises which may be resolved through alterations to the productive and institutional framework of a society. A conjunctural crisis can be part of a broader structural crisis (Klerck 1996: 117). When the mode of regulation is not in harmony with the regime of accumulation, a structural or major crisis occurs. The essential resolution of these tensions is through the emergence of both a new regime of accumulation and a new mode of regulation (Klerck 1996: 117).

3.3 Fordism as a growth model

Manufacturing processes in the motor vehicle industry, particularly in North American and European plants, had long been characterised by Taylorist-Fordist forms of organisation as a growth model which was relatively stable over time. However, it appears that a successor to this dominant paradigm has not yet fully emerged and Taylorism-Fordism itself has not quite died (Stewart 1995: 144). In fact, there is no single best way that is replacing Taylorism-Fordism. Rather, it is being reduced or extended in combination with other mechanisms in different settings (Harvey 1989: 170-1).
The Fordist paradigm entailed a rationalization of old technologies and existing forms of detail division of labour as well as an incorporation of the insights of F W Taylor on the separation of management, conception, control, and execution (Harvey 1989: 125). These strategies when combined implied a hierarchical organisation of social relations in production and deskilling within the labour process.

Although it took some time to emerge as the dominant paradigm of production organisation or, in regulationist terms, to become a fully fledged regime of accumulation, it must be noted that it met with fierce resistance from craft workers and it later facilitated the organisation of assembly line workers (Harvey 1989: 126, 133; Webster 1985: 124). It also faced a series of political and economic crises which were resolved generally after 1945, thereby allowing Fordism to mature as a distinctive regime of accumulation until around 1973. Furthermore, Harvey argues that although Fordism was slow to develop outside of the USA before 1939, it saw a more global expansion after 1940 (Harvey 1989: 136).
3.4 The post-Fordism and flexible specialisation debate

In the mid-1960s, the Fordist model was already showing signs of serious problems. Several factors form the background to the decline of Fordism (Harvey 1989: 141-5). The recovery of the European and Japanese economies accompanied with the saturation of their domestic markets, and the growth of developing 'countries' economies through the introduction of Fordist growth models by multinational corporations challenged the US hegemony within Fordism. Governments, too, were under pressure to sustain their welfare programs and thereby their legitimacy. But the rigidities in the production system limited the fiscal base for state expenditures. Consequently, governments turned to monetarist policies, using their powers to print money and hopefully keep their economies stable. This contributed to a long period of inflation (Harvey 1989: 142). Long-term and large-scale fixed capital investments, labour market allocation and contracts contributed to rigidities that constrained flexible production design. The Organisation of Petroleum Exporting Countries' (OPEC) oil price increases had a diverse impact which included the deflation of currencies, and corporations were unable to use equipment to capacity. These factors along with many others contributed to the global disruption of the stability
of the Fordist regime. This prompted several experiments in industrial organisation, economic restructuring, and social and political readjustments. It is in this context that we can understand a global passage to a new regime of accumulation.

Generally, the trend is a move away from the rigidities associated with Fordism. Using Fordism as a benchmark, different analyses propose a range of terms to signify the emergence of a post-Fordist era: "flexible specialisation", "new production concepts", "disorganised capitalism", "post-Fordism", "lean production", and "diversified quality production", all of which were seen to amount to a better way of manufacturing products and which the rest of the world should emulate as soon as possible (Ewert 1992: 2; Streeck 1992: 4; Kochan et al 1997: 4). One important criticism though about this enthusiasm for the world to follow a single trajectory in the reorganisation of production is the misguided view that manufacturing and employment practices around the world are determined solely by technical and market forces (Kochan et al 1997: 7).

The emergent regime is characterised by flexible labour processes, labour markets, products, and patterns of consumption. New sectors of production, new financial services, new markets,
and intense commercial, technological, and organizational innovation have also emerged in this era of experimentation (Harvey 1989: 147). New patterns of employer control over labour processes, new forms of structural unemployment, rapid changes in skills, the diminishing of trade union power, the increased use of subcontracting, and a rise in small business opportunities have also emerged. Another dramatic turn-around from the Fordist model has been the change from economies of scale to economies of scope. Fordism was associated with a relatively stable aesthetic, while consumption patterns in the new era are generally ephemeral (Harvey 1989: 156). MacDuffie and Pil (1997: 10) summarise the Fordist in terms of four dimensions: a specialisation of resources, that is, people perform narrowly defined tasks and machines are dedicated to specific tasks, products are standardized and produced in large volumes which require large buffer stocks, a centralized hierarchy in the workplace is apparent, and, there is a separation of conception or the "thinking" aspect of work from the execution or "doing" aspect. In their view, lean or flexible production evinces the converse of all four dimensions characteristic of Fordism: resources are more general, that is, workers are multiskilled and machines are general purpose, a great variety of product designs are produced in small batches allowing quick response to market
fluctuations, there is a decentralization of authority in the workplace, and, the conception and execution of tasks is highly integrated.

The list of factors contributing to the decline of Fordism and the list of characteristics of the post-Fordist tendencies may be equally lengthy. The outcome of these changes are far from a decline of Fordism or a move away from capitalism. RT attempts to understand this trend towards flexible accumulation as a form of capitalism which deals in new ways with the basic and eternal contradictions of over-accumulation in a capitalist mode of production (Harvey 1989: 175-181). Fordism has run out of its options to deal with the over-accumulation crises and has given way to new forms of dealing with these contradictions of capitalism (Harvey 1989: 181-5). Capitalist exploitation persists through longer work days (absolute surplus value), especially in corporations which have relocated to the Third World, and through technological change and other innovations (relative surplus value), as well as in a new complementarity of the two forms of exploitation (Harvey 1989: 186-7).

Harvey (1989: 189-92; Hyman 1988) argues that the debate on
flexible specialisation has produced three main positions. The first position sees the new technologies reconstituting labour relations and production systems on a social, economic and geographic basis. In essence, industrial organisation was becoming more decentralised and democratically controlled. The second position opposes tendencies which celebrate the casualisation of labour and which view capitalist tendencies towards flexibility and locational advantage as something new. The political consequence of tendencies which promote flexibility is that working class movements become weaker rather than more powerful. The third position maintains that just as Fordism did not become hegemonic everywhere but was combined with other traditional systems, the same applies to flexible specialisation which is intertwined with Fordist production.

This latter position has significance since it has been observed that in attempts to transplant the Japanese model to North America, notably in the joint venture between Toyota and one of the USA's "big three" producers, General Motors (GM), a hybrid or "third culture" has emerged at the NUMMI plant in California (Florida & Kenney 1996: 52). The hybrid entails successful recreation of several elements of Toyota's lean production
innovations like the reduction of the number of job classifications, the use of work teams, and the rotation of teams, as well as kaizen or continuous improvement. However, these have been complemented with typically Fordist features of American management and organizational style. This is an interesting observation since part of the debate concerning the transition to a new model of production is the view that kaizen or worker initiative and the encouragement of workers' knowledge contradicts claims that the Japanese model is a mere extension of the Fordist mass production model. In opposition to the Taylorist influence on Fordism, the Japanese model is seen to draw in both the workers' intellectual and physical capabilities (Florida & Kenney 1996: 63).

A further observation and claim concerning the outcome of joint ventures with Japanese manufacturers is that the non-Japanese manufacturers are successfully making the transition to best-practice or high performance production organization and management as well as relations with component suppliers (Florida & Kenney 1996: 75). Although there may be hybrids emerging with pre-existing models, the Japanese model generally overwhelms the latter models.
3.5 New production methods affecting the motor vehicle industry

The benefits of the US mass-production model were lowered costs because of minimized product diversity and maximizing economies of scale. The production systems in Japan as models of the new dominant paradigm have been given a range of names: post-Fordism, lean production, flexible specialisation, just-in-time production (JIT), to name a few (Deyo 1996: 2). The subsequent discussion deals with elements of these characterisations.

The Japanese production system is mostly a system of high quality models in lower volumes, a close integration of all parts of the production process, fast product and process innovation, continuous effort to improve quality and productivity at all organizational levels (Deyo 1996: 2; Hill & Lee 1994: 296). However, not all Japanese plants are exclusively lean and lean production has been successfully implemented in some Western plants (Womack et al. 1990: 87-8). Japanese car manufacturer, Toyota, a leading innovator of the new production systems has developed a system of flexible specialisation, gathering supplier industries related to the production of a particular commodity in closer proximity to the assembly plant, JIT supply
relationships, more flexibility in its deployment of equipment and labour has improved, and the JIT has improved productivity through reducing inventories, waste, plant size, and energy costs (Hill & Lee 1994: 296).

While lean production is contrasted with the Fordist mass production ideal-type, it has some elements of craft and mass production (Papahristodoulou 1994: 458). Lean production is associated with multiskilling of the workforce, flexibility, JIT relationships with suppliers, kaizen or continuous improvement on the part of the workforce, and high quality (Desai 1997: 42). A smaller plant space is generally used as little space is needed to store large inventories. In motor vehicle production the available inventory is usually for a few hours or days (Womack et al. 1990: 79). Lean production is also a response to the pace of changing consumer demand. The system makes it easier to change production and model specifications as compared to the huge amounts and years that it takes a mass production producer to change. While still producing a large amount of each car model (an average of 125 000), Japanese manufacturers are making fewer than Western companies (an average of 500 000 of each). Japanese manufacturers have reduced the product life to four
years while Western companies have kept it at ten years. Consequently, Japanese companies offer a wider model range in the same period at smaller quantities (Womack et al. 1990: 65).

Quality control is the task of every worker. The notion of kaizen as practised here means that every worker must feel the responsibility to trace errors and recommend continuous incremental improvements (Womack et al. 1990: 56-7). As a consequence of this in successful experiments like the Toyota plant in Japan there are almost no rework areas and finished vehicles are driven straight out onto mass transit trucks and ships. Workers must not only detect defective parts but can stop the assembly line if problems are found. In mass production, only senior managers can stop the production line (Womack et al. 1990: 79). Central features of lean production are multi-skilling and teamwork, and an information system which allows everyone in a plant to respond quickly to problems in the plant (Womack et al. 1990: 99). In contrast to the Taylorist-Fordist system of several job classifications, sometimes up to 96, and which give workers the idea of a career ladder, the Japanese model uses fewer job classifications, sometimes up to five and with workers deployed into work teams, and being trained in as
well as rotated in multiple tasks (Florida & Kenney 1996: 57-60). The Japanese model also attempts to cut status hierarchies through symbolic gestures like middle level managers wearing the same overalls as shopfloor workers and not having separate parking lots, or separate eating areas and cafeterias.

The diversified quality production (DQP) contribution to the best practice trends in production systems emphasise the introduction of new micro-electronic technologies in production. The latter's benefits are high-volume production of customized quality competitive goods. Micro-electronic production technology is noted for its ease and speed and the greater product variety and enhanced quality that it facilitates (Streeck 1992: 4-7). One key area of difference between the flexible specialisation approach and the diversified quality production is that the latter approach emphasises the extraordinary potential of large firms (as seen in Germany) for customized, quality-competitive production. The flexible specialisation approach uses as its model the Italian experience of highly competitive, highly skilled and technologically sophisticated small firms (Streeck 1992: 8-9). In the motor vehicle manufacturing industry DQP is noted by the introduction of robotics in body-building, for
overhead handling, transferring, spotwelding, and in the paintshop (Duncan & Payne 1993: 16). Such is the impact of industrial robots in the motor vehicle manufacturing industry that one robot operating for two shifts can replace six workers, and it was expected from the trends observed in the early 1980s that industrial robots may soon be used widely in the final assembly of motor vehicles (Windolf 1985: 459). However, it has since appeared that plants in developing countries find it impossible to purchase and use all the latest new technology and these plants have been selective in choosing those robots which are able to pre-empt industrial action in those areas of a plant most vulnerable to industrial action (Duncan 1997: 122).

While studies of the measures of success in transplanting lean production outside of Japan are optimistic, there are the questions of the exceptional conditions of Japan which remain. That is questions as to whether it is only possible in the social-cultural context of Japan, or is it because of the successful supplanting of a once militant unionism with a participatory model and the promise of job security? (Dohse et al 1985: 117, 121-3, 131, 135). In the opinion of some management at Toyota SA in Durban there is a similar company
loyalty and cultural attitude amongst Zulu and Japanese workers which makes possible the introduction of new work methods (Duncan 1997: 123).

Although tracing geographic shifts and discerning prevailing best practice models may facilitate understanding developments in the world automotive industry, it must still be borne in mind that transnational corporations dominate the industry and adapt the operations in their respective subsidiaries around the globe. Consequently, there are simultaneous processes of convergence and divergence due to factors within different countries and also within different companies. MacDuffie and Pil.(1997: 41) adduce that the industry worldwide comprises four variations. First, there are the Japanese owned plants in Japan and in a few other countries which are successful in implementing lean production practices. Second, there are plants in Europe and South Korea which are making a rapid transition to lean production and are moving away from the mass production model. Third, there are the USA owned plants in the USA and Canada which experimented with some new practices during the 1980s but have since held onto the traditional practices. Fourthly, there are plants in some countries which are hybrids of the mass production and lean
production models.

3.6 Conclusion

Current developments on the global motor vehicle industry are conceptualised as transitions different to the one time dominant model - Taylorist-Fordism. These alternatives are termed diversified quality production, flexible specialisation, just-in-time production, and lean production, with Japanese companies being noted as the leading best practitioners of these methods. Complementary to the latter theories of changes in manufacturing methods are theories of corporatism which refer to the institutional arrangements between governments, labour movements and business that are argued to accompany these changes in the organisation of production systems. Regulation Theory attempts a more holistic approach at comprehending these transitions from one relatively stable era of production organisation to another. While these theories may present insular models of trends within the automotive industry, it is also evident that hybrids of the factors emphasised in the various models may also prevail. Chapter Five supplements this discussion of the historical overview of the trends in the global development of the industry.
by a closer examination of a range of factors regarded as the current best practices and which have pertinence to the restructuring of the industry in SA.
CHAPTER FOUR

THE SOUTH AFRICAN MOTOR VEHICLE INDUSTRY

4.1 Introduction

Government commitment to a systematic industrialisation policy dates back to the 1920s (Black and Stanwix 1987: 48; Abedien and Standish 1992: 2; Archer 1987: 32-3). In subsequent decades this industrialisation proceeded along with policies which created a legacy of disparities in income distribution, opportunities, training, education, skills, and geographic location, amongst others, all of which have a bearing on current economic policies.

The evolving industrialisation commitment made use of several supportive devices but the government was mostly reliant on tariff protection measures to encourage import-substitution. This protectionist policy was successful to the extent that, in the post-war years, manufactured imports had declined from 63% in 1946 to 42% in 1956 of total imports. Government intervention through the establishment of parastatal corporations also helped in the establishment of other industrial branches like the
chemical, base metal, and motor vehicle sectors.

The first motor vehicle production plants in SA were set up by Ford and General Motors in the 1920s. Production of motor vehicles started at 13,000 in 1924, 18,000 in 1933, and 48,000 around 1939 (Loxton 1995: 43; Swart 1974: 164). The size of the local market encouraged the establishment of more firms. By the late 1960s new arrivals included Leyland, Peugeot, Renault, Citroen, Chrysler and Daihatsu. In the 1970s there were 16 assemblers producing 53 model lines although at low volumes. Tariff protection has been an important factor in the proliferation of manufacturers (Black and Stanwix 1997: 50). Ancillary industries also grew; there were at least eight engine producers and more than 200 component firms in the 1960s. Production was targeted solely for the local market.

During the late 1950s it was apparent to the government that the motor vehicle industry was developing slowly and in subsequent years it would require protectionist strategies to nurture its growth. Protection of the motor vehicle industry has relied on three measures: a local content programme, protective duties on new car imports, and strict import controls on used cars (Archer
Government enforcement of a local content programme is commonly used as a strategy to develop a local motor vehicle industry. A local content policy protects an industry through its prescriptions of the percentage of inputs either in mass or value that must be domestically sourced (Dix 1995: 21). By the late 1950s local content was around 20% (Loxton 1995: 43; Duncan 1997: 25).

The introduction of a local content programme in the motor vehicle industry in the 1960s was prompted by the following concerns: too much emphasis was placed on the assembly of components rather than the manufacture of components by vehicle manufacturers, the stimulation of economic growth, and the stemming of capital flight that followed the Sharpeville shootings (Boxall 1989: 10). Subsequent to a 1960 report of the Board of Trade and Industry (BTI), a local content programme comprising various phases ensued from 1962.

Despite the expected benefits from a local content policy there are long-term problems which emerge: sustained protection of industries from competition may cause inefficiency and uncompetitiveness; the pool of skilled labour required by the
capital intensive motor vehicle industry is not always forthcoming; sometimes the targets which have been set force the local production of high-tech components and this may be technically unfeasible and cost inefficient; in the long-term the industry also requires a market to sustain it (Dix 1995: 22).

4.2 The Local Content Programme

The first five phases of the programme concentrated on mass as a measure of local content and this nurtured the development of a local component industry which focused mainly on the supply of components with relatively low mass value ratios (Boxall 1989: 39; Dix 1995: 27-8). The first two plans or phases also coincided with the "Great Boom" period of 1961-1970 in which economic growth averaged 5% per annum (Abedien and Standish 1992: 13).

4.2.1 Phase I: 1962-1964

Manufacturers of passenger vehicles had to increase local content from approximately 15% of mass to more than 40% of mass in two years (Boxall 1989: 11; Dix 1995: 27). State assistance for
manufacturers included: tariff protection for locally manufactured components, an excise rebate for certain specified mandatory items, and an import permit system to regulate the value of completely knocked down (CKD) packs imported by manufacturers. Boxall (1989: 11) argues that statistical data on the rapid increase of motor vehicle sales is evidence that these measures increased growth of plants, the motor industry, and the economy in that period.

4.2.2 Phase II: 1964-1970

The targets were 45% local content by mass in 1964 and 55% in 1969 (Boxall 1989:12; Dix 1995: 27; Swart 1974: 222-4). Vehicles with at least 45% local content were classified as manufactured and had to reach 55% in 42 months; all others were assembled passenger vehicles which were penalised under a sliding scale of excise duty (Duncan 1997: 26). State assistance was mostly through excise duty rebates and no penalties were imposed on manufacturers if they did not meet the requirements in instances where it was beyond their control. In 1970 the 55% target was fine-tuned through distinguishing between gross and net local content and the requirement of a minimum of 75% local content in
components. However, in January of 1971 this requirement was dropped and tyres and tubes which were around 2% of mass were now accepted as part of local content.

Tariff protection encouraged investment in the local components industry to grow from R15m in 1961 to R85m in 1967, thus increasing the number of components factories to 200 (Duncan 1997: 27).

4.2.3 Phase III: 1971-1977

The local content target aimed for at the end of this plan was 66% (Boxall 1989:13; Dix 1995: 27; Swart 1974: 224-232). All participating models had to start off with 50% local content and increase by two and a half percent each year for six years. The four categories in this plan were: (i) manufactured vehicles which comprised 52% net local content at the start of the plan and whose manufacturers were intent on attaining a net local content of 66% in 1976, (ii) semi-manufactured models which were not part of phase III but whose manufacturers had to maintain a net local content of 52% throughout phase III, (iii) assembled models which were passenger vehicles assembled from imported CKD
packs, and (iv) completely built-up models (CBUs) that were imported as fully assembled vehicles and with no local content. The BTI's definition of net local content was operationalised in the following way: where components are manufactured locally and from local materials, the use of imported unprocessed materials and imported unmachined castings and forgings (Boxall 1989: 13).

The state continued to use excise rebates and the reduction of import quotas for CBUs as additional measures to support the industry's growth. The plan also took into cognisance that the SA motor vehicle market has always been noted for the wide range of makes and models and attempted to reduce this variety through permitting new makes and models under exceptional circumstances. In addition, a system of penalties was used against manufacturers who did not achieve the local content requirements, or they could withdraw in order to avoid the penalty.

Evidence of the success of the programmes to this stage is clear: by 1973 twelve assemblers operated in South Africa and employed 34 000 people, employment in the components industry had grown to over 30 000 people by 1973, and Nissan and Toyota started up engine plants valued at R2.5m each (Duncan 1997: 8, 44).
4.2.4  Phase IV: 1978-1979

This was a standstill period which recognised the need for the industry to consolidate itself since the tough Phase III local content requirements necessitated considerable investment, expanded output and employment (Boxall 1989: 14).

The phase however had as its background a reconsideration by the government of its import substitution policy as well as a reconstitution of the BTI (Duncan 1997: 31). The government recognised that the declining contribution of the mining sector and the drop in the gold price were signals to steer the economy towards manufactured exports.

4.2.5  Phase V: 1980-1988

A target of 66% local content by mass was set. The state used rebates on excise duties as a stimulant along with severe penalties for not attaining the required minimum level, however, there were also export incentives (Boxall 1989: 15).

Studies undertaken by the National Association of Automobile
Manufacturers of South Africa (NAAMSA), the National Association of Automobile Components Assemblers (NAACAM), and by the BTI concurred that the plan had failed to reach its local content targets and the excise rebate system was apparently not a successful incentive. Shortcomings in the plan and socio-economic factors like economic upheaval, recession, labour unrest and political uncertainty contributed to its failure (Boxall 1989: 27-8; Duncan 1997: 9). The optimum economic level of local content manufacture during Phase V was between 40-50% local content by mass which was far below the 66% target. Costs associated with the plan were also examined in the studies and they concluded that it was cost inefficient (Boxall 1989: 29-31). The costs of incorporating sophisticated technological changes and the importation of tooling for both vehicle and component manufacturers to achieve the 66% target were not stimulated by the decline in vehicle sales between 1981 and 1986. The costs of the changes also prompted increases in vehicle prices. Problems in the industry were exacerbated by other factors like a fragmented market and a proliferation of manufacturers, models and makes making it impossible to reap the benefits associated with economies of scale in production. Consequently, newly installed capital was underutilised and contributed towards
raised unit costs and higher prices for the consumer.

Local component manufacturers preferred the production of low value, high mass components thereby forcing vehicle manufacturers to import relatively high, low mass components. The recognised failures of the plan prompted the state to revise the local content programme (Boxall 198: 32).

Dix (1995: 29) has identified some successes discernible in phases I to V of the local content programme. Firstly, employment creation had increased as follows: in 1957 it employed 9 539 people, in 1975 it employed 41 000, and in 1982 it employed 120 000. Between 1980 and 1986, employment dropped by 9.7% due to a stagnation of the economy and not because of the local content programme. The political unrest and stagnation was accompanied by withdrawals and mergers leaving only seven companies operating: BMW, Volkswagen, Mercedes-Benz, Toyota, SAMCOR, Nissan, and Delta. Vehicle sales had dropped to around 350 000 as opposed to the 1981 peak of 453 451 sales. Employment stood at 37 000 in the assembly plants and 73 000 in the components industry (Duncan 1997: 9). Secondly, the later phases of the programme contributed to skills development because of the
demand for local production of sophisticated components. The Minister of Trade and Industry claimed in 1996 that the motor industry employed 110 000 people (Hansard 27/3/1996). Thirdly, the fact that the motor vehicle and component sector increased its expenditure from R1 352m in 1978 to R3 023m in 1985 on intermediate goods and services is evident of its stimulation of related industries.

4.2.6 Phase VI: 1989-1995

The local content programme cannot be seen in isolation from other developments in the SA economy. In 1983 the Kleu Study Group proposed solutions to the prevailing economic crisis which entailed a shift away from the import-substitution industrial strategy to export-promotion strategies (Black and Stanwix 1987: 54). SA was not an export-oriented economy despite all the years of the programme. The motor vehicle industry illustrated this well - in 1987 motor vehicles represented only 1.9% of total manufacturing exports of R15 527.8m while motor vehicle imports were 14.1% of total manufactured imports of R23 269.3m (Abedien and Standish 1992: 6; Duncan 1997: 10). Expressed in Rands, it was R180m in vehicle exports in 1986 which jumped to R1 827m in
Phase VI concentrated on reducing foreign exchange in the production of motor vehicles and the import bill of the motor industry as well as promoting the export of motor vehicles and components (Boxall 1989: 32-3). The plan also included secondary objectives like investment and job creation, and the production of a small, fuel-efficient motor vehicle. Manufacturers unable to attain the local content target were liable for additional excise duties, while those attaining the target received export subsidies or export credits.

The plan commenced with a local content target of 55% of value. Manufacturers were to progressively attain 75% local content value by 1997. Some uncertainty remained because the plan's details were periodically amended. Estimates claimed that the new plan would create approximately 30,000 new jobs in the motor vehicle and components manufacturing industry (Boxall 1989: 43).

Estimates were that the motor vehicle and component manufacturers would have to invest R600m in plant and tooling machinery in order to meet the requirements of the new value based local
content programme (Boxall 1989: 40-1). Most of the investment would have had to come from component manufacturers so as to attain the increased demand for locally manufactured components due to the new plan's local content requirements. The BTI expected that the plan would decrease the import bill of the industry by 50% (or, viewed from a different angle, it would raise the local content value of vehicles by 50% by 1997). Although component manufacturers felt confident that they could meet the demands of the new programme, the vehicle manufacturers were not so sure that the former could cope (Boxall 1989: 41-2).

Discouraging shadows were hanging over it: political instability, sanctions and disinvestment threatened the transfer of technology; the low output volumes discouraged the investment in tooling and capital equipment; although many new jobs were created, the skilled manpower required by the new technology was not abundantly available.

Boxall (1989: 44) says the ambition to become an exporter of motor vehicles had to consider four factors:

(i) could the industry overcome the constraints exporters faced in previous phases,
(ii) the climate of the global motor industry and the extent to which exports from SA are likely to find receptive export markets,

(iii) the nature of the relationship between SA subsidiaries and their parent companies in so far as it affects exports, and

(iv) the performance of the Rand against other major currencies.

The problems of exporting motor vehicles experienced by manufacturers during previous plans were mostly to do with cost and quality. The quality of SA components matched that of Korean and Australian manufacturers but was inferior to Japanese, European and North American products. SA products were also generally more expensive even though the Rand was a weaker currency. The challenge to SA manufacturers was apparent - in order to succeed in export markets the price and quality of their products had to be more competitive (Boxall 1989: 45).

The ambitious export plan also had to contend with increased protectionism in the global motor vehicle industry (Boxall 1989: 46). Many developed country markets were virtually saturated and consequently the expected markets were the developing countries. However, there was an additional discouraging observation; many
transnational companies were shifting their production bases to developing countries with relatively cheap labour and their respective local content regulations limited the entry of SA exports. Relationships between local subsidiaries and parent companies also limited the destination and extent of exports of SA based manufacturers.

Fluctuations in the Rand have had an obvious disruptive effect for an export oriented plan. The practice of devaluing currency in order to reduce export prices has also left some uncertainty where the value of local content is measured in terms of the foreign exchange usage that is embodied in locally manufactured components (Boxall 1989: 47).

Certain structural changes in the industry were anticipated (Boxall 1989: 48-50). The size of the local market was clearly unsupportive of an industry comprising seven manufacturers whereas it seemed that about two manufacturers were adequate for the level of demand and investment. However, any expected rationalisation of the industry like mergers between manufacturers appeared unlikely. The plan also expected some cooperation amongst manufacturers as well as investment in shared
facilities. Standardisation and commonisation of components was also an anticipated byproduct of joint ventures and thereby allowing for the benefits of production in larger volumes or economies of scale. An additional rationalisation trend observed was the reduction of the frequency and scale of model ranges. Manufacturers planned to increase the four year frequency in the introduction of new foreign models to between eight and ten years. Other plans to upgrade current models estimated that the practice would cost about 10% of the costs of tooling for the production of latest international versions.

Boxall's (1989: 52-3) evaluation of the industry questions the success of government policies which actually produced distortions and inefficiencies. For instance, local content regulations compelled manufacturers to source components locally whereas importing them would have been much cheaper. Phase VI also necessitated great expenditure and investment. Consumer choices were limited besides having to pay increased prices due to higher costs in local production. The programme was also distorted due to the fact that manufacturer's price increases on vehicles were counted towards local content charges (Duncan 1997: 12).
Administrative or bureaucratic inefficiency problems also emerged. In 1996, when the revised phase VI was in place, the BTI made claims of R100m against five vehicle manufacturers because of fraudulent excess rebate claims (West ED 11/6/1996).

4.2.7 The revision of Phase VI - the Motor Industry Development Programme (MIDP): 1995-2002

A drop in the number of motor vehicle assemblers by 1986 to seven producers of 20 basic model variants, a drop in the number of assembly jobs from 50 000 in 1982 to 36 895 in 1991 and several retrenchments in 1991, were additional signs of a decline in the industry (Loxton 1995: 43). Economic recession and high interest rates prohibited consumers from exposing themselves to too high debt and consequently the market was not growing (Cokayne CTBR 15/1/1998). The decline of the industry can also be attributed to the absence of a broadly based mass market which was a result of the sharp income and wealth inequalities in the society; in 1990 the richest fifth (mostly white) of the South African population claimed 70% of income and by 1995 the margin was still large where they claimed 60% (Black and Stanwix 1987: 49; Economist 25/10/1997: 56). Race disparities in motor vehicle
ownership which appeared to increase over the years are likely to have persisted as long as black income levels remained relatively stagnant; in 1967 whites owned 84.6% of licensed new motor vehicles and by 1970 this increased to 85.9% (Swart 1974: 216). Available data also suggested a drop in productivity since the early 1980s due to the under-utilisation of machinery. A recession during the 1980s caused a drop in wages and the demand for motor vehicles. Democratisation and other political changes also spelt challenges to the industry. By the early 1990s it was apparent that the expected re-entry of a post-apartheid SA into international markets free of sanctions would necessitate the revision of phase VI. In October 1992 the Minister of Finance turned to another group rather than the BTI to recommend a policy for the industry (Duncan 1997: 33). The Motor Industry Task Group (MITG), comprising trade union officials, shopstewards, human resources and production managers from the vehicle assembly and component industry as well as representatives from the Industrial Development Corporation and the Board of Trade and Tariffs, reported that the SA motor industry needed restructuring to face the challenge of international competition as well as the General Agreement on Trade and Tariffs (GATT) requirements (MITG March 1995: 2). An additional interesting observation of the
factors underlying the restructuring of the SA automotive industry was the enthusiasm of organised labour, through the National Union of Metalworkers of South Africa (NUMSA), to restructure the industry due to the ideas it learned from European and Australian union movements (Hirschsohn 1997: 232, 235). It was NUMSA which initiated the eventual agreements on work reorganisation, training and multiskilling - all of which are pertinent to the overall restructuring of the automotive industry. One of NUMSA's main concerns though was job security while the industry restructured to become world class.

The MITG expected greater international competitiveness to derive from the long term restructuring of the industry through its proposals captured in the 1995 revision of the sixth phase, the Motor Industry Development Plan, or MIDP(MOTI, 12 June 1995: 1). The MITG proposals grew from an earlier report on studies of the process of changes in industrial relations and work organisation in plants in Australia, United Kingdom and Germany and which identified areas where SA lagged behind (MITG 1995: 4):

"The overseas plants lead South Africa in a number of respects:

- Productivity is significantly higher."
- Training levels, skills and capabilities of workers and management are higher.
- Reflecting these skill levels, the work organisation systems used are more sophisticated.
- Industrial relations are less conflictual and disputes more rapidly resolved.
- Levels of investment and automation are considerably higher.
- Plant production volumes are much higher and model variety lower. No plant visited produced more than two model platforms.
- Wages and working conditions are superior. Taking benefits and working hours into account, South African wages are approximately one seventh of the German level.
- Institutional capacity of the industry in terms of training, governmental institutional support and trade union and industry federation capacities are much more developed, especially in Australia and Germany.
- Low absenteeism and relatively high investment levels indicate better morale and confidence than in
Based on their analysis of the similarities in experience of the now thriving Australian motor vehicle industry, the MITG maintains that the SA industry can be turned around. However, Jim Miller, SAMCOR managing director, contends that appropriating the whole Australian model is misguided since local officials did not give adequate attention to the differences in the respective markets and labour skills (Emslie 1997: 26). Other warnings of the Australian restructuring experience point out that labour unrest followed due to job cuts and the depressing of wages and salaries relative to the rest of the manufacturing sector, the automotive deficit increased due to imports (Sikhakhane SIBR 10/1/1997).

The Ministry of Trade and Industry subsequently released in June 1995 its proposals for the MIDP which has as long term aims:

* improving the international competitiveness of the automotive manufacturing and associated industries
* reduced tariffs to improve international competitiveness and vehicle affordability
* stimulating the growth of the vehicle market and of the
component industry especially through increased exports
* the growth in the vehicle assembly and component
manufacturing industries and concomitant profitability
* employment creation/stabilisation in the industry with
concomitant job enrichment
* a value trade balance between increased local content and
exports of CBU's and components versus imports of original
equipment, aftermarket components and CBU's, and
* to achieve a better balance between the industry's foreign
exchange usage and foreign exchange earnings (MOTI 1995: 2-
3; NAAMSA 1997: 8; DTI 1997 September: 2).

To understand the broader context of the MIDP one must be mindful
of global trends towards neo-liberal market policies and the fact
that the MIDP presaged the African National Congress (ANC)
government's leaning towards neo-liberal policies when it
unveiled the Growth, Equity and Redistribution or GEAR document
nine months later (Hewitt, Johnson and Wield 1992: 134, 151-164;
M & G July 19 to 25 1996). GEAR's ambitious goals include 6%
economic growth through dropping tariffs, stimulating
competitiveness and exports, and creating 400 000 jobs annually.
Economic growth has, however, not produced jobs (Ryan STBT
16/11/1997). Despite its non-delivery, certain ANC factions sternly defend GEAR, while the socialist oriented Congress of South African Trade Unions (COSATU) opposes it (NN October 1997: 7). On the other hand, the Labour Ministry pushes forward labour-friendly policies (Hartley STBT 16/11/1997). The Ministry's Basic Conditions of Employment Bill seeks to address work hours and wages while the Employment Equity Bill is set to undo racial hierarchies in the workplace. The unions are pressuring for job creation through public works programmes, but government spending is held back by the conservative monetary policies of the independently acting Reserve Bank. Lünsche (STBT 16/11/1997) argues that by not reducing bank rates the Reserve Bank slows the pace of growth despite the reduction in the inflation rate.

Stimulating international competitiveness amongst local producers entailed policies to reduce steadily the old protectionist barriers like the import duty on built up vehicles from 65% in 1995 to 40% in 2002 as well as to reduce the duties on components. Progressively, SA based firms are to be exposed to international competition and they would be coaxed into adopting measures that made them world class manufacturers. The minimum
local content requirements for vehicles was completely dropped but kept for components whereby not less than 25% of value whether labour or materials comes from the Southern African Customs Union (SACU) countries (MOTI 1995: 5, 10; Loxton 1995: 43-4). This would reduce the price of completed vehicles. The package also included duty-free allowances of up to 27% for motor vehicle manufacturers and export incentives. A small vehicle incentive (SVI) would also be part of the programme. Companies were to be encouraged to produce higher volumes and to achieve greater degrees of specialisation as model proliferation was recognised as a problem. Generally, manufacturers were reported to be enthusiastic about the overall package.

The seven year plan to reduce tariffs or customs duties on completely built up vehicles and components entailed the following:
TABLE 1: Annual reduction on import duties on vehicles and components

<table>
<thead>
<tr>
<th>Year</th>
<th>Import duty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>built up vehicles</td>
</tr>
<tr>
<td>1995</td>
<td>65%</td>
</tr>
<tr>
<td>1996</td>
<td>61%</td>
</tr>
<tr>
<td>1997</td>
<td>57.5%</td>
</tr>
<tr>
<td>1998</td>
<td>54%</td>
</tr>
<tr>
<td>1999</td>
<td>50.5%</td>
</tr>
<tr>
<td>2000</td>
<td>47%</td>
</tr>
<tr>
<td>2001</td>
<td>43.5%</td>
</tr>
<tr>
<td>2002</td>
<td>40%</td>
</tr>
</tbody>
</table>

(MOTI 1995: 5; DTI July 1997: 5, 19)

Labour is a key player in the industry and cannot be ignored. The successes of the local content phases cannot be seen in isolation from the labour repressive policies of the 1960s and early 1970s (Black and Stanwix 1987: 48). The apartheid era's job reservation policies had created a racial hierarchy in the workplace with white foremen and supervisors having considerable powers, protected jobs and skill grades despite education levels, and higher remuneration compared to Black employees (Desai 1995: 65).
A philosophy of "maintaining satisfactory labour conditions" while industrialisation proceeded and the apartheid policies regulating labour supplies had produced a specific variant of Fordism - "racial fordism" which has been noted for its vast disparities in black and white wages, skill and grades in the workplace (Archer 1987: 32 and von Holdt 1995b: 33; Klerck 1996: 114, 127). In recent years, labour's participation has become indispensable to any industrial restructuring plans. It is perhaps in this context that we see the import of examining theories of corporatism and codetermination. Reportedly, NUMSA, the leading labour union in the industry, supported the proposals of the initial MIDP report while assemblers did not fully support it (Duncan 1997: 33).

For the past ten years' labour's major representative in the automotive industry has been the National Union of Metalworkers of South Africa (NUMSA), an affiliate of COSATU. NUMSA was drawn into the revised restructuring plan through a three year agreement signed in 1995 (von Holdt 1995b: 33). The agreement covered wages and grades, skill and training and plant level productivity and work organisation. NUMSA's bargaining strategy includes employers developing training and career paths for all
workers and that employers recognise skills learnt on the job, and to develop a new grading system based on skills not tasks which was the basis of the apartheid wage gap (NUMSA 1996: 11). Besides enthusiasm for the three year agreement, NUMSA is also supportive of the 1995 Labour Relations Act (LRA) which it sees as entrenching worker rights (NN June 1997: 5; Interview: Tony Kgobe). From one perspective, the Labour Department has pushed a line in favour of labour interests and is in contrast with the consequences that DTI’s policies have for labour (Hartley STBT 16/11/1997). The Labour Department has sponsored legislation to undo unfair workplace conditions in the Basic Conditions of Employment Act, the Employment Equity Bill is targeted at the racial hierarchy in the workplace, and the Skills Development Bill seeks to clarify for employers a grading and training framework (NN December 1997: 3).

NUMSA has sought to close the differentials between grades and wages. The 1995 agreement has taken measures to achieve these goals. The lack of the type of skills necessary to achieve international competitiveness characterised most of the industry's workforce. In order to develop skills, the Automobile Manufacturing Industry Education and Training Board (AMIETB), set
up in 1993, was given a 12 month deadline to get a training system up and running. Despite these training programmes as part of the MIDP's human resource development objective, many retrenchments have still taken place (West BD 6/11/96). NUMSA's auto sector coordinator, Tony Kgobe, has pointed out the ridiculous situation of abuse of the training agreement by employers permitting workers to be trained but they are subsequently downgraded. Because of the lack of clarity on how workers can move to higher grades, disputes have been taken to arbitration (NN March 1997: 4). A new dimension of plant level negotiation was opened up in the agreement - negotiations are to take place on productivity and teamwork. One of the several other important aspects of the agreement is that unions have been granted more resources to enhance their organisational capacity and expertise, viz., full-time shop stewards, shop steward training, general meetings and the financing of national shop steward meetings (von Holdt 1995b: 37).

Manufacturers do not envisage significant job creation as the sector restructures and labour sources have also called for the MIDP to be slowed down as job losses are their main concern (Madikiza and West BD 27/2/1996). Alec Erwin, Minister of Trade
and Industry, once a stalwart figure in the trade union movement, was adamant that job losses could not be blamed on tariff reduction. For him, the industry was simply not adequately competitive and overprotected (Dludlu BD 1/7/1996). NUMSA analysts are severely critical of the lack of coordination of safety nets and job losses which stem from GEAR's neo-liberal tariff reduction policies (NN September 1996: 11). Three years into the MIDP the extent of job losses amongst motor vehicle manufacturers can be discerned from the following employment statistics compiled by NAAMSA (NAAMSA 1997: 26; DTI 1998 December: 20). Evidently, since the programme's inception, 6 483 jobs were shed.

TABLE 2: Annual employment in the vehicle assembly sector

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30 998</td>
<td>37 434</td>
<td>38 612</td>
<td>38 607</td>
<td>37 082</td>
<td>32 129</td>
</tr>
</tbody>
</table>

(* the 1998 statistic is reported in the fourth quarter Review of NAAMSA 2/3/1999: 2)

The 1995 agreement included a historic three year agreement on wage policies and wage rates. The agreement had estimated certain parameters for the consumer price index (CPI) or the
inflation rate by which wages would be set, a key factor in minimizing industrial conflict (Desai 1997: 47; Interview: Kgobe 23/2/1998). However, in 1996 the CPI was below what was predicted and unions subsequently demanded increases higher than the CPI. There are obvious externalities which cannot be envisaged by any agreement that is set for a number of years. The 1997 May-to-May wage negotiations for the 20 000 hourly paid workers went smoothly; besides the other agreed upon increases going through, NUMSA was pleased with a wage increase of 11.5% which was 2% above the inflation rate and was most beneficial for 7 000 workers with regard to closing the wage gap (Cokayne CTBR 7/8/1996, 14/8/1996, 21/8/1996 and 4/7/1997; Nxumalo CTBR 8/8/1997).

The successful transition to lean production in Japan was, in part, dependent upon workers accepting a system of plant-level bargaining (Dohse et al. 1985: 135-41). NUMSA, however, rejects this in favour of centralised bargaining (Desai 1997: 46), and at first opposed lean production but later strategically accepted some of its elements of work reorganisation and plant-level productivity awards.
The view that industrial relations were moving towards corporatism or codeterminism has been undermined by incidents like the Toyota strike in 1996. The 1995 agreement anticipated a three year period of peace yet NUMSA has warned that the fundamental conflicts between workers and management remains as well as the problem of workplace racism which had prompted the Toyota strike (Grawitzky BD 26/3/1996). The Toyota strike highlighted that certain institutional features which enable corporatist arrangements were not accepted - workers rejected the workplace forums which were provided for in the Labour Relations Act of 1995. The objective was to stimulate productivity by having all employees except senior management deliberate on workplace efficiency in the fora (Automobil 1996 February: 49; Automobil 1996 October: 33). The fact that a strike had taken place indicated the need for improving the capacity of unions. Workers at Nissan SA also prefer not to be involved right now in workplace forums and favour agency shops. Apparently, COSATU favours the latter because it gives a single dominant union sole bargaining rights (Interviews: Nissan shopstewards and operators and Industrial Relations Officer 9/3/1998).

In conjunction with the agreement affecting the motor vehicle
sector has been the LRA which, in the view of the Labour Ministry, has revolutionised dispute resolution and hopefully would mean more disputes would be resolved through mediation or arbitration in the Commission for Conciliation Mediation and Arbitration (CCMA), thereby averting disputes leading to strikes and lockouts and interruptions to production (Cokayne CTBR 7/11/1996). The CCMA has proved itself when, during the September 1998 strike over wages, it got the disputing parties in the automotive industry to agree to a proposal it made, thereby ending what turned out to be a six-day strike - a quick resolution given the history of drawn out strikes in SA (Tshwete STBT 23/8/1998).

The MIDP has steadily produced signs of problems. Businesses have accused the Department of Trade and Industry (DTI) of reducing tariffs below what was offered at the Uruguay round of the GATT talks (Dludlu BD 1/7/1996). Two years after the implementation of the plan, Heinrich Holtman, managing director of Volkswagen SA, urged the government to alter the MIDP and to offer incentives to car makers (Robertson STBT 16/11/1997). After the reduction of import duties on fully built-up cars from 115% to 57.5%, figures on new car sales showed that the
proportion of imports rose from 20% to 25%. Holtman also pointed out that the market was too small to support the five largest local manufacturers. He proposed stimulating the small market size through the introduction of roadworthy testing every two or three years. One problem which has affected particular manufacturers has been the decline in sales since the reduction in tariffs. Automakers, the controlling group for Nissan SA, at the end of the first year of the MIDP, made profits of R127.8m which was R29m less than what it had predicted in October 1995 at the onset of the new phase of the MIDP (Sikhakhane CTBR 11/9/1996). John Newbury, the chief executive of Automakers, complained that the local markets were opened too suddenly given the small size of the market which had steadily grown through the years of protection to an annual figure of 300 000 vehicles sales, that is, the total of motor cars, light and medium commercial vehicles, and trucks, sold per year. NAAMSA statistics indicate that phenomenal sales had been experienced during 1981 though that did not signal a continued upward trend because the years since the inception of the MIDP actually show a decline in sales for both passenger cars and commercial vehicles.
TABLE 3: Retail sales of vehicles

<table>
<thead>
<tr>
<th>Year</th>
<th>cars (x10)</th>
<th>commercials (x10)</th>
<th>total (x10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>36 758</td>
<td>7 676</td>
<td>44 434</td>
</tr>
<tr>
<td>1955</td>
<td>50 989</td>
<td>21 301</td>
<td>72 290</td>
</tr>
<tr>
<td>1960</td>
<td>98 779</td>
<td>20 385</td>
<td>119 164</td>
</tr>
<tr>
<td>1965</td>
<td>127 898</td>
<td>47 093</td>
<td>174 991</td>
</tr>
<tr>
<td>1970</td>
<td>201 854</td>
<td>95 719</td>
<td>297 573</td>
</tr>
<tr>
<td>1975</td>
<td>229 031</td>
<td>115 151</td>
<td>363 605</td>
</tr>
<tr>
<td>1980</td>
<td>277 058</td>
<td>127 708</td>
<td>404 766</td>
</tr>
<tr>
<td>1981</td>
<td>301 528</td>
<td>152 013</td>
<td>453 541</td>
</tr>
<tr>
<td>1985</td>
<td>204 322</td>
<td>101 005</td>
<td>305 327</td>
</tr>
<tr>
<td>1990</td>
<td>209 636</td>
<td>125 143</td>
<td>334 779</td>
</tr>
<tr>
<td>1995</td>
<td>236 584</td>
<td>140 200</td>
<td>376 784</td>
</tr>
<tr>
<td>1996</td>
<td>249 838</td>
<td>143 142</td>
<td>392 980</td>
</tr>
<tr>
<td>1997</td>
<td>239 762</td>
<td>127 113</td>
<td>366 875</td>
</tr>
<tr>
<td>1998</td>
<td>203 817</td>
<td>110 589</td>
<td>314 406</td>
</tr>
</tbody>
</table>


The expected rationalisation of models has not materialised. It was expected that incentives for model rationalisation would produce higher volumes of fewer lines; in 1994 18 passenger vehicle models were manufactured, and in 1995 and 1996 the number
stood at 21, but edged up to 22 models in 1997. Compared to markets elsewhere, in a small market of 300,000 vehicle sales per year, on average, 7,500 of each model is produced annually and most models sell below 20,000 annually while only one model sells above 30,000 (DTI 1998 December: 18). In the USA and Europe 195,000 of each model is produced annually while Japan produces 100,000 of each annually (Black 1995). Instead, the number of models increased from 270 at the beginning of the program to 369 one year later, of which 140 were imported models (Robertson STBT 12/1/1997; West BD 4/12/1996).

Despite some discouraging effects of the MIDP seen in 1998 figures, like a decrease of about 7.5% in the physical volume of manufacturing by the vehicle and components sectors as well as a 7.1% decrease in all manufacturing exports, there are promising indicators in the NAAMSA figures which show that 5,123 units were exported in the first quarter of 1997 which was 125% more than the 2,277 units for the same period in 1996 (Cokayne CTBR 6/6/97; IDC 1997: 10, 13). With regard to the MIDP objective of becoming an internationally competitive exporter some strides forward have been made, for instance the deals between Volkswagen South Africa to sell to China and the United Kingdom. The figures on retail
sales in Table 3 do not include the export of South African produced built up vehicles where a steady total increase of up to 10 000 vehicles exported since the inception of the MIDP is shown. The decrease in 1996 is largely due to Volkswagen SA's cessation of its exports to China (IDC 1998: 24.7).

**TABLE 4: Exports of SA produced vehicles**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cars</th>
<th>Commercials</th>
<th>Total exports</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>8 451</td>
<td>6 188</td>
<td>14 639</td>
<td>R695m</td>
</tr>
<tr>
<td>1995</td>
<td>8 976</td>
<td>6 788</td>
<td>15 764</td>
<td>R900m</td>
</tr>
<tr>
<td>1996</td>
<td>3 743</td>
<td>7 810</td>
<td>11 553</td>
<td>R750m</td>
</tr>
<tr>
<td>1997</td>
<td>10 458</td>
<td>9 111</td>
<td>19 569</td>
<td>*R1,500m</td>
</tr>
<tr>
<td>1998</td>
<td>18 342</td>
<td>7 556</td>
<td>25 569</td>
<td>-----</td>
</tr>
<tr>
<td>1999*</td>
<td>90 000</td>
<td>9 000</td>
<td>-----</td>
<td>-----</td>
</tr>
</tbody>
</table>

(NAAMSA 1997: 2, 4; NAAMSA 2/3/1999: 4; * = NAAMSA estimate).

The problem of a decline in the physical volume of manufacturing is evident in the underutilisation of capacity by the various vehicle manufacturers. Although there is a trend toward an increase upon 1994 figures, three years into the MIDP there are signs of a decline in average capacity utilisation for all lines of vehicles. The phenomenon must, however, not be separated from
actual market demand.

TABLE 5: Percentage capacity utilisation

<table>
<thead>
<tr>
<th>Year</th>
<th>Cars</th>
<th>Commercials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>light</td>
<td>medium</td>
</tr>
<tr>
<td>1994</td>
<td>69.7</td>
<td>69.1</td>
</tr>
<tr>
<td>1995</td>
<td>84.3</td>
<td>81.7</td>
</tr>
<tr>
<td>1996</td>
<td>78.9</td>
<td>75.9</td>
</tr>
<tr>
<td>1997</td>
<td>77.3</td>
<td>70.6</td>
</tr>
<tr>
<td>1998</td>
<td>64.3</td>
<td>59.1</td>
</tr>
</tbody>
</table>

(DTI 1998 December: 14; NAAMSA 2/3/1999: 3)

About R150m car sales were made from the government’s boosting of the Small Vehicle Incentive (SVI). The SVI scheme cut import duties on components for cars with wholesale prices of R40 000 and below. In the first half of 1996, 25 548 small units were sold, or 21.5% of the new car sales; a sharp improvement on the 16.5% for the same period in the previous year (West BD 29/7/1996).

Other government policies also impact car sales. The tax regime on company vehicles is prohibitive of company car schemes when
employers supplying such vehicles are taxed for having supplied goods and services (Pirikisi 8/8/1997). Apparently, the introduction of unleaded fuel assisted the effort to export to developed countries which are well into the unleaded era as technology leaders. Thus SA is no longer left to target only the lesser developed country markets which still use unleaded fuel (FM 23/02/1996). Petrol price hikes, the devaluation of the Rand, and insurance premium increases are additional factors affecting motor vehicle sales volumes (West ED 5/8/1996). One positive aspect of the devaluation of the Rand is that it has halted a possible flood of South Korean cars into the market since the latter's currency has also been rapidly devalued in recent years. The South Korean currency devalued by almost half in two months and there were fears that Daewoo, Hyundai, and SsangYong could slash their prices by 10% (Robertson STBT 18/1/1998). The devaluation of the Rand through 1998 also had positive implications in terms of the MIDP objective to rationalise the number of assemblers - Daewoo scrapped plans to build an assembly plant in SA (FM 25/8/1998: 50). A negative consequence of the devaluation of the rand through 1998 is that component prices would go up and eventually car prices too.
Meeting the technological requirements to counter the competition of imports will require a capital investment of R1.6b to improve productivity, quality, and efficiency (Robertson STBT 17/3/1996). Much of this investment will require that SA companies integrate themselves into the parent companies international supply networks and greater equity being transferred to parent companies as this also expedites technology transfer (Cokayne CTBR 7/11/1996; FM 23/2/1996; Robertson STBT 17/3/1996). Since 1995 all the SA based assemblers have announced multi-million investments, for instance, in 1998 Mercedes-Benz SA announced an investment of R900m in a new paintshop and other infrastructure (Cokayne CTBR 26/11/1998). A case study of Nissan in a later chapter also shows similar hefty investment. The aggregate capital investment in the industry on plants, machinery, and production facilities, amongst other items, has grown from R294.9m in 1997, to R409.13m in 1998, and it is projected to grow to R835.21m in 1999 (NAAMSA 2/3/1999: 3). What is interesting about this is that these investments have not meant job stability or increases.

Bureaucratic structures affecting the MIDP also need attention. In 1996 the DTI announced the formation of a directorate to
monitor the implementation of the MIDP (West BD 24/1/1996). This did not prevent bureaucratic inefficiencies and key associations in the industry have commented that the government did not go far enough: the directorate did not involve all players, it did not consider the developments in the retail market, and there was an urgent need for it to begin operations immediately (West BD 24/1/1996). An additional indicator of bureaucratic inefficiency was the delay in imposing the import duties in 1996 and government's unilateral resolution to make the paying of the lower tariff retrospective (West BD 10/3/1997). Over R100m was to be collected. Nissan SA, the subject of a case study in a later chapter, faced claims of R30m but responded with a R12.7m counter claim in court for money still owed to it by the programme (West BD 11/6/1996; West BD 29/2/1996). Despite some problem areas, the bureaucracy appears vigilant in detecting fraudulent claims for tax rebates. In 1996 customs and excise officials claimed R480m from five manufacturers because of fraudulent claims (BD 4/3/1996). Claims were made that the government bureaucracy was ineffective in stopping illegal imports. The Minister of Trade and Industry has been challenged in parliament too on the effectiveness of controls over illegal car and component imports (RSA, Hansard 27/3/1996: 465-6).
As will be seen in the subsequent chapter's discussion of current best practices and the role of strong, coordinated clusters, the impact of the MIDP on the components sector deserves a brief examination. The MIDP appears to have effectively removed protection for component manufacturers. There are predictions that almost half of the components manufacturers would have to shut their businesses because of the tariff reductions and imports. Specific predictions are that the present number of component manufacturers will fall from 161 to 30 (West 18/6/1996). This is an ambiguity of the MIDP as there is optimism that the components sector would do the most in reducing the motor industry's trade deficit because of the abundant raw materials, infrastructure, expertise and labour which could make South Africa's components cheaper than overseas manufacturers (CTBR 1/2/1996). The drop in the number of component manufacturers will be due to vehicle manufacturers favouring certain component manufacturers for sub-assemblies, a worldwide labour savings trend. Despite gloomy forecasts for the components sector, many are reported to be embarking on major investment drives (Gebhardt M & G 17-23/1/1997). The expected shift in the balance of trade and declining use of foreign exchange as the industry becomes competitive appears far from an
immediate reality - by 1996 component exports made a dramatic leap to R4b but imports were R16b (FM 30/8/1996; West BD 6/11/1996; West BD 4/12/1996).

The components sector is not all round enthusiastic about the MIDP. In the view of one component manufacturer, it would be too costly to let the sector decline as he predicted the motor vehicle sector's R10b trade deficit would increase by R2b per year. The increase would be due to the decline of the motor vehicle sector and its exports. It appears that the sector still favours some protection as there are successful exporters and an advantage in raw materials, infrastructure, expertise and labour to make quality components cheaper than overseas manufacturers (CTBR 1/2/1996).

Although several components entrepreneurs may have concerns about their prospects in the future, jobs in this sector appears more stable than in the assembly industry. In the table below, we can see that the total number of jobs in the two major components sectors increased during the first two years of the MIDP then began to decrease but have remained above the levels of the last few local content years.
Components manufacturers should also be optimistic considering that the percentage of exports to developed country markets has been increasing whereas there had been much pessimism that these markets would be difficult for South African components manufacturers to penetrate. There are also promising signs when looking at exports to its backdoor market, the Southern African Development Community (SADC) countries, but much needs to be achieved in terms of reaching the broader African market. However, when these figures are contrasted with actual total balance of trade for the automotive industry as discussed in regard to the figures in Table 8 in section 4.2.8, it is apparent that local industries still have an arduous task to improve the total value of exports against imports.
TABLE 7: Destination of components exports

<table>
<thead>
<tr>
<th>country/region</th>
<th>1995</th>
<th>1996</th>
<th>1997 (all percentages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>45.0</td>
<td>47.1</td>
<td>48.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6.4</td>
<td>8.0</td>
<td>9.5</td>
</tr>
<tr>
<td>United States</td>
<td>4.2</td>
<td>5.0</td>
<td>6.4</td>
</tr>
<tr>
<td>Belgium</td>
<td>8.0</td>
<td>6.2</td>
<td>4.6 (decrease)</td>
</tr>
<tr>
<td>Australia</td>
<td>0.7</td>
<td>1.3</td>
<td>2.3</td>
</tr>
<tr>
<td>France</td>
<td>0.6</td>
<td>0.7</td>
<td>2.1</td>
</tr>
<tr>
<td>European Union</td>
<td>67.7</td>
<td>69.7</td>
<td>70.7</td>
</tr>
<tr>
<td>Africa (non SADC)</td>
<td>3.0</td>
<td>1.1</td>
<td>1.2 (decrease)</td>
</tr>
<tr>
<td>SADC</td>
<td>10.2</td>
<td>13.5</td>
<td>12.7</td>
</tr>
</tbody>
</table>

(DTI December 1998: 12)

The global trend is towards a decline in the number of component suppliers and standardisation of cars in transnational subsidiaries on all continents. Vehicle manufacturers out-source more sub-assemblies to component manufacturers as this reduces costs because wages in the components sector are much lower than those in car plants. Component manufacturers also bear the costs of research and development. Consequently, a wave of mergers and takeovers is taking place in the industry (Simonian BD 31/10/1996).
The perception of a corporatist relation existing between the state and motor vehicle manufacturers needs to be cognizant of countervailing tendencies. While corporatist-like structures like the Motor Industry Development Council, the Motor Industry Task Group, the National Economic Development and Labour Affairs Council are in place and involve stakeholders as a policy-making community, countervailing tendencies can be discerned on the part of the state. With regard to the pace at which tariffs are reduced the DTI favours a rate that manufacturers argue is too fast and companies like Volkswagen SA are most vociferous in stating that they are not in favour of reductions (Interview: Cloete 25/11/97). From DTI's viewpoint the tariffs are still far too high when compared with many other developing countries with motor vehicle manufacturing industries. It is clear that the state is taking a leading role on this aspect of industrial and trade policy. The DTI also applies an across-the-board approach - no concessions are granted to individual companies.

One area where support from the state seems possible is in reskilling programmes as a safety net for retrenchments which are a consequence of macro-economic policy. Another area is in the introduction of new technology and equipment. The DTI is
cognizant of the archaic equipment in South African firms and supports new investments by writing off or giving companies a three year tax break for new investments (Interview: Cloete 25/11/1997). But the introduction and possible job loss consequences have to be negotiated in terms of the LRA; this is an area where state involvement in reskilling is important to companies.

The proliferation of models has been a prominent factor in the restructuring challenge facing the sector. However, despite the MIDP's goal of dealing with this indirectly, the DTI regards it as a free market choice the number of models a firm manufactures and it does not directly intervene in such instances (Interview: Cloete 25/11/97).

The local efforts at restructuring the industry also need to take into cognisance the major manufacturer's plans to reorganise their production on a global scale and the factors they consider in their global reorganisation and investment plans. While South Africa may have attractive features like abundant natural resources, proximity to growing African markets, well-developed transport infrastructure, etc., it also has drawbacks like costly
raw materials, it is a long way off from the European, North American, and Asian markets, its labour costs are relatively higher than in other developing countries. It is also claimed that, despite a new democratic government, South Africa still finds it difficult to attract foreign investment (Duncan 1997: 48, 50).

4.2.8 The mid-term Review Proposals for the Motor Industry Development Programme: 2002-2007

Three years into the MIDP, the fact that the industry has a long way to develop is apparent in several of the statistics in the previous section. As a whole the South African market is small, in 1996 the domestic market purchased less than one percent (0.73%) of all the vehicles sold worldwide (NAAMSA 1997: 27). Manufacture of vehicles in comparison is small too; in 1996 South Africa produced less than one percent (0.75%) of all vehicles produced worldwide (NAAMSA 1997: 27).

With the decrease of tariffs on imported vehicles and components the subsequent increase of these goods offset the increase in exported vehicles and components such that the overall automotive
industry's balance of trade worsened and the use of foreign exchange increased. Table 8 below reports the remarkable increase in the value of exports since 1995 in comparison to the local content years, but the value of imports leaped even further ahead. From the five years before the MIDP (1990) up to its inception, imports steadily increased by R10.1b; two years into the MIDP, imports increased by R0.8b. On the other hand, from the five years before the MIDP (1990) up to its inception, exports steadily increased to R3.4b; two years into the MIDP, exports increased by R2.4b (DTI December 1998: 13).

TABLE 8: Trade balance for the automotive industry

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>imports (Rb)</td>
<td>6.2</td>
<td>7.4</td>
<td>6.3</td>
<td>6.3</td>
<td>6.6</td>
<td>9.1</td>
<td>12.0</td>
<td>16.4</td>
<td>19.2</td>
<td>17.2</td>
</tr>
<tr>
<td>exports (Rb)</td>
<td>0.3</td>
<td>0.5</td>
<td>0.8</td>
<td>1.1</td>
<td>1.5</td>
<td>2.3</td>
<td>2.8</td>
<td>4.2</td>
<td>5.1</td>
<td>6.6</td>
</tr>
<tr>
<td>forex usage</td>
<td>5.9</td>
<td>6.9</td>
<td>5.5</td>
<td>5.2</td>
<td>5.1</td>
<td>6.8</td>
<td>9.2</td>
<td>12.2</td>
<td>14.1</td>
<td>10.6</td>
</tr>
</tbody>
</table>

(DTI December 1998: 13)

Although promised for release in September 1998, the mid-term review proposals of the MIDP eventually appeared in the Government Gazette of 19 March 1999. From informal discussions with persons at the DTI and IDC, I learned that the delay was
mostly due to disagreement between component manufacturers and vehicle assemblers, and not, as I had suspected, because of organised labour's concern about the shedding of jobs.

The mid-term revision maintains the initial tariff phase down for light motor vehicles and original equipment components up till the year 2002. To maintain long term policy stability, the mid-term review proposes that from 2002 till 2007 the customs duty on completely built up light motor vehicles be phased down by 2% per annum, that is from 40% in 2002 to 30% in 2007. In the case of original equipment the proposed phase down is 1% per annum, that is, from 30% in 2002 to 25% in 2007 (RSA 19/3/1999: 54-5). The proposals maintain there is still far too much protection for the assembly industry and this is an obstacle to the rationalisation of the number of models as well as to the growth of an export oriented components industry.

One of the important goals of the MIDP - the trimming down of model proliferation has shown little signs of being realised. This compounds the problem of a components industry that is not producing in large scales and which needs to attract export oriented investment. The proposed revisions include a duty free
allowance (DFA) based volume incentive. However, the definition of a "model" remains open to clarification. The idea though is that from 2001 models which fall into the volume target are given the full DFA. Models which are below the threshold in 2001 get a 23% DFA and in 2002 they will get a 20% DFA. If a motor vehicle manufacturer has at least one model above the threshold by 2003 one other model below the threshold will be given a 20% DFA (RSA 19/3/1999: 55-6).

The revision proposals concede that part of the problem of the recent increase in model proliferation has been the MIDP goal of making vehicles lower priced which include mechanisms like the Small Vehicle Incentive (SVI). Consequently, with due consideration to the investments that manufacturers have already made into this line of vehicles, the MIDP revision proposes a phasing out of the SVI by 2003. The phasing out is suggested by annual increases of the cut off point at a percentage equal to the previous year's increase in the Producer Price Index, for instance, the 1999 increase is proposed to be a 4% increase on R40 000 raising it to R41 600 (RSA 13/3/1999: 57).

The proposed revisions recognise that there has been a rapid
increase in exports which is generally a result of production in higher volumes and specialisation. The latter in turn also contribute to international competitiveness. Consequently, the MIDP revisions recommend that the initial import rebate credits be maintained until 2002 although specifying small adjustments and that they be phased down after 2002. The revisions propose that tooling exports still be considered as MIDP exports since a local tool manufacturing base is an important complement to the manufacture and export of components (RSA 19/3/1999:58).

4.3 Conclusion

The earnest intention of successive governments to industrialise the economy have targeted, amongst other branches, the motor vehicle industry. While the industry flourished with little state involvement in its first three decades of its existence, subsequent decades have seen more systematic programmes to develop the industry. As is common with the development of the industry in most countries emphasis was put on local content as a protectionist strategy. This strategy evolved from an emphasis on local content by mass to local content by value. Other local conditions like market size and labour policies have also been
significant factors in shaping the industry's development. In the early decades the market size actually encouraged an abundance of manufacturers, makes and models. However, in later decades, the overall disparities in wealth and income have emerged as one of the elements in the crisis facing the industry. There has been a shift from being an industry oriented towards supplying a local market to being an exporter and finding a niche in international markets. The ambition to be an international producer cannot be realised without considering the demands in quality and productivity placed on local manufacturers and the need to drop the baggage from the past which includes labour repression, poor training, skills that did not match latest technology, and dissatisfaction with grades and wages. These are some of the elements of the best practice challenge facing an industry exposed to international trends.
5.1 Introduction

The current challenges facing the SA motor vehicle industry must be located within the context of the challenges facing the overall economy which stem from the decline of, what may be referred to in Regulation Theory terms as, the old regime of accumulation. The emergence of a new regime of accumulation or growth model is bound to follow trends in economic organisation seen in other successfully competitive nations. Elements of a model of the road to successful global competitiveness and its implications for the current state of the motor vehicle industry are examined.

5.2 The decline of the racial Fordism growth model in South Africa

The concern with industrial restructuring in the 1990s seeks to
CHAPTER FIVE
CURRENT BEST PRACTICES IN THE MOTOR VEHICLE INDUSTRY
AND THE CHALLENGE TO THE SOUTH AFRICAN MOTOR VEHICLE INDUSTRY

5.1 Introduction

The current challenges facing the SA motor vehicle industry must be located within the context of the challenges facing the overall economy which stem from the decline of, what may be referred to in Regulation Theory terms as, the old regime of accumulation. The emergence of a new regime of accumulation or growth model is bound to follow trends in economic organisation seen in other successfully competitive nations. Elements of a model of the road to successful global competitiveness and its implications for the current state of the motor vehicle industry are examined.

5.2 The decline of the racial Fordism growth model in South Africa

The concern with industrial restructuring in the 1990s seeks to
address the breaking up of the racial-Fordism regime and the symptoms of its various crises which have prevailed for the past two decades. Through the 1980s the National Party regime attempted to restructure racial-Fordism, but, it is apparent that the political changes of the 1990s may successfully usher in a new growth model since the old model was undergoing a structural crisis which required widespread changes (Gelb 1991: 3, 28).

The racial-Fordism model was based on import-substitution industrialisation through the mass production of consumer goods mainly for the white consumer market. Racial domination in SA shaped the structure of economic institutions; the white working class had higher income positions reserved for them and they had recourse to similar industrial relations institutions as in western economies. Over time, differentiation occurred between urban/rural, skilled/unskilled black workers and the relevant social, economic and political institutions that regulated their incorporation into the economy.

South Africa's economy has also been affected by external factors like the oil price rises of 1973 and 1979, and the gold price drop since 1981. These contributed to a rise in the inflation
rate and a slow down in Gross National Product (GNP). South Africa's Fordist model also detracted from the norm: consumption was racially skewed, it was dependent on capital imports, and its goods were not internationally competitive. A bias towards capital intensive production methods did not favour the incorporation of large numbers of rural people into the economy and exacerbated unemployment trends. Early in 1971 racial policies were recognised as having contributed to the shortage of skills (Gelb 1991:19-20). The dependence on capital imports also contributed to the crises since the increasing cost of capital did not affect a decline in demand and consequently this affected investment and inflation. International currencies were also affected by the oil price increases and for South Africa it meant instability of its export earnings. Besides the above list of internal and externally induced factors which contributed to a lingering crisis, there was also the emergence of the Black trade union movement which challenged the institutional features of racial-Fordism. Between the 1970s and 1980s the National Party led government attempted several strategies to resolve these crises symptomatic of racial-Fordism. It appears, however, that a resolution of the crises could not succeed without a fundamental change of the political regime.
It is in the light of the abovementioned factors that we can understand the scope of the macro-economic restructuring project of the present government and local industries. The ANCs' recent economic policy frameworks, the Reconstruction and Development Programme (RDP) and the Growth, Employment, and Redistribution (GEAR) can be understood as the springboard for a transition to what Regulation Theory would refer to as a new growth model. While the RDP has elements of a redistributionist orientation, GEAR is, however, the basis of policy prompting the challenge towards a competitive orientation.

GEAR is an adaption of a global trend towards neo-liberal economic policies. These policies include liberalizing domestic trade and investment regimes, privatizing state-owned enterprises. Central to this approach is to remove price distortions towards "efficiency prices" which emerge when market forces are allowed to operate without obstacles like protectionist tariffs. The long run expectation is to promote exports (Biersteker 1995: 174, 178, 191; Hewitt et al 1992: 153, 163). South Korea is widely pointed to as a "late" industrializing country that has successfully followed this orientation and consequently experienced an industrialization
take-off during the 1960s. Today, South Korea is acknowledged as a major developing country motor vehicle exporter. From one perspective, transnational corporations, international banking institutions, and the General Agreement on Trade and Tariffs (GATT) are the chief institutions coercing the economic policies in this direction and this is a constraint of the international economy in which the ANC government has formulated its own policy. However, the ANC has exceeded the GATT requirement to lower tariffs in twelve years by promising to do so in a much shorter time. The idea has been sold to an adversarial labour movement in the language of the exigencies of "competitiveness", "export-led growth", "tight fiscal policy", and "flexible labour markets". Already there are ominous outcomes like the loss of jobs in the automotive sector as well as in the clothing and leather sectors where jobs have been lost as a consequence of the lowering of tariffs (Lehulere 1996: 46; 1997: 73, 75; NIEP 1996: 1).

5.3 Restructuring challenges to the South African economy

Transforming the institutional networks towards a new growth model has been the concern of several recent studies. At the
centre of these studies and their proposal is the goal of becoming industrially competitive. Currently, the most influential approaches and contributions informing the transformation of the regime of accumulation and industrial restructuring in SA are the Industrial Strategy Projects (Joffe & Lewis 1992) and the Global Advantage approach (Porter 1990; Monitor 1995).

Most of the economic crises are attributed to factors in the manufacturing sector and the restructuring of this sector is fundamental to reviving economic growth (Joffe & Lewis 1992: 25-6). The failures of the manufacturing sector include its inability to create jobs although it is the largest contributor to output and employment; it is not attracting investment adequately because of the low productivity of investment; it is notoriously unable to produce machinery and other capital goods and hence it is dependent on imports, consequently, the expansion of the sector is very dependent on foreign exchange. SA also performs poorly as an exporter of higher value-added goods, and, because it remains dependent on the export of gold and other primary commodities, it is not keeping up with trends in the world economy. Joffe and Lewis (1992: 26) argue for the
restructuring of the manufacturing sector in terms of its relationship to the domestic market by moving away from its past pattern of producing luxury commodities for a small, high income, mostly white, elite. In relation to the international market, the manufacturing sector has to be restructured such that it increases its capacity to produce capital goods and to export manufactured goods.

Restructuring will have a significant impact on workers on the shopfloor and for the trade union movement. Trade unions could face a decline in membership, a disruption of their organisational capacity, workers face competition due to liberalisation of trade policies, retrenchments and new technologies which may affect worker unity (Joffe & Lewis 1992: 30). Consequently, a new type of relationship and concomitant institutional framework between capital and labour will have to be part of the overall industrial restructuring project. In Barchiesi's (1988b: 49) view there is much speculation that the 1995 Labour Relations Act is moving towards the German co-determination (mitbestimmung) model. The optimistic content of these speculations is that South Africa can put in place a labour relations regime that is stable, can manage the challenges of
competitiveness, and achieve redistributive growth (Klerck 1998: 87). This co-determination model requires that workers accept rapid technological growth, that there be flexible work organization and high internal mobility. Consequently, a firm's competitive edge is secured and employment is guaranteed (Barchiesi 1998b: 69). The overarching enabling structure here is the 1995 Labour Relations Act which urges that, in order for the economy to adapt to the competitive pressures of the international economy, there must be more "flexibility" in the labour market, and a move away from the "rigidities" which are argued to be the gains of the past (Klerck 1998: 94).

While the broad goals of an industrial restructuring project may be identified, it can only be realised through experimentation with concrete changes in norms and behaviour, institutional changes in society, the economy and in the political sphere, and reorganisation of production patterns within industries and firms. The Competitive Advantage of Nations or Global Advantage approach (Monitor 1995) is more informative on these reorganisational guidelines.
The competitive advantage of nations model tries to discern the patterns of success in attaining competitive advantage. It emphasises firms as competitors, not nations. Four national attributes play a determining role in a nation's firms' ability to compete. Porter, the architect of the theory, refers to these attributes as the Diamond of national advantage. Two elements of the diamond, factor conditions and related and supporting industries (the cluster) provide the support for innovation and upgrading. The remaining two elements, firm strategy, structure and rivalry, and demand conditions provide the incentives. Government also has a role in influencing the diamond.

**5.3.1.1 Factor conditions**

Labour, arable land, natural resources, infrastructure and capital are the basic inputs for competition in an industry. In Porters' approach, it is important to distinguish between two types of inputs (Monitor 1995: 9). Firstly, basic factors are inherited by a nation and have incurred little investment or are created by unskilled or semi-skilled labour. Secondly, advanced
factors have incurred greater and sophisticated investment in both human and physical capital. The latter created factors are, most important to modern industrial competition. Creating and upgrading these is facilitated by a nation's educational and research institutions.

5.3.1.2 Related and supporting industries (the Cluster)

Attaining competitive advantage is dependent on the presence of domestic suppliers and related industries whose products, components, machines, or services are specialised and/or integral to the process of innovation in the industry. Competitive, domestic suppliers procure advantages for the downstream industries. Their proximity can provide cost-effective inputs in an efficient, early, and sometimes preferential manner. The proximity of suppliers and end-users facilitates short lines of communication, a quick and constant flow of information and an ongoing exchange of ideas and innovations. Related industries also play a role in innovations in techniques and abilities.
5.3.1.3 Demand Conditions

The diversity of home demand rather than size stimulates innovation and competitive success. Demand conditions can prompt firms to respond to tough challenges. Competitive advantage is gained when home buyers pressurise local firms to innovate faster and to produce better quality goods.

5.3.1.4 Strategy, structure and rivalry

The extent of rivalry amongst domestic firms is a stimulus to innovation and upgrading in an industry. Too much state protectionism and subsidising can stifle rivalry. Rivalry forces firms to invest and take risks. This domestic rivalry is more important than foreign competition. Domestic firms are speedily informed of other firms' advances while all are exposed to the same basic factor conditions and need to deal with how to gain on these. Domestically competitive firms are more likely to be internationally competitive.
5.3.1.5 The role of Government

Governments cannot adopt either a laissez-faire or a strongly interventionist policy towards the economy, but, according to this theory, governments must ensure that all the determinant conditions are met. All levels of government need to play a productive role in improving the quality of inputs, the competitive environment and procedures for promoting upgrading and innovation. Governments can determine the pressures, incentives and capabilities of a nation's firms.

5.4 The restructuring challenge to the SA motor vehicle and components sector

5.4.1 Problems facing motor vehicle manufacturers

Compared to international standards the industry performs poorly. There are high relative costs and products are of a low quality in terms of international benchmarks.

Using a United States assembler of a 1.6 litre engine sedan as an index of 100, we see that it costs a German assembler only 1%
more to produce the same vehicle, while for the SA assembler it cost 43% more (Monitor 1995: 22). Similarly, the assembly costs for a 2 litre engine sedan for the German assembler are 19% more than the American assembler, but for the SA assembler it is 72% more than the American assembler. SA vehicles are well above world market prices. However, while local manufacturers of completely built up units (CBUs) are highly protected they are limited in their international competitiveness.

Materials comprise between 70-80% of the full manufacturing cost of a vehicle. One manufacturer estimates that on average locally produced components are 30% higher than world market prices (Black 1994: 70). The deleterious effect of the components industry is exacerbated by the quality of local raw materials and the government-owned steel producer, Iscor, being unable to meet its contracts, hence the spill-over effect on the assemblers (Duncan 1997: 168). As a consequence of decades of protection, the components in the manufacture of four of the markets top sellers, Toyota Conquest, Ford Laser/ Mazda Midge, and VW Citi Golf, are regarded as three generations behind latest developments in the global components industry (Barnes 1998: 7).
Undoubtedly, one surprising and promising aspect of the industry, which the Industrial Strategy Project noticed prior to advocating the 1995 MIDP, is the comparatively low hourly labour costs when compared to other leading manufacturing nations. By using the United States as an index one can conclude that the high relative costs are unlikely to be due to labour costs.

### TABLE 9: Hourly compensation costs for production workers

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<tbody>
<tr>
<td>United States</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Japan</td>
<td>37</td>
<td>45</td>
<td>41</td>
<td>75</td>
</tr>
<tr>
<td>Germany</td>
<td>83</td>
<td>78</td>
<td>61</td>
<td>115</td>
</tr>
<tr>
<td>South Africa</td>
<td>−</td>
<td>16</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Korea</td>
<td>5</td>
<td>8</td>
<td>9</td>
<td>26</td>
</tr>
</tbody>
</table>

(Black 1994: 121)

SA plants are noted for their low productivity due to the interplay of factors like outdated technology, poor skills and poor work organisation (the latter referring to SA plants not having caught up with contemporary trends in the industry, for instance, teamwork, JIT, and total quality management, or TQM). Consequently, the comparative labour hours per car are far too
uncompetitive.

TABLE 10: Labour hours per car

<table>
<thead>
<tr>
<th></th>
<th>US plant</th>
<th>Mexico</th>
<th>South Africa</th>
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<tbody>
<tr>
<td></td>
<td>18.56</td>
<td>24.3</td>
<td>63.5</td>
</tr>
</tbody>
</table>

(Monitor 1995: 54)

Generally, the manufacturing industries perform poorly in terms of quality. Nevertheless, there are signs of possible quality level improvements. A very illustrative anecdote is the building of the 'Madibamobile', a top of the line 500 series Mercedes Benz assembled by highly motivated workers in the course of an unpaid overtime agreement with management. It turned out to be the best quality car ever made at the plant. Generally, the cars came off the production line with an average of 90 faults - the 'Madibamobile' had only 9 (Kopke 1990: 39). Even German assemblers did not attain this low fault level. The car itself took a record four days to assemble as opposed to the usual fourteen.

The local industry remains very dependent in terms of foreign

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product and process technology. Locally assembled cars are produced either by foreign firms or under licence and local design content generally entails minor adaptations of locally specified components (Black 1994: 67). Components firms are also dependent on foreign licences and the import of technology. Attempts to export are also constrained by the licensing agreements. Local manufacturers are also unable to spend much on R & D as do the leading multinational corporations. (In terms of Porter's Diamond of competitive advantage strategy, the role for government in such instances would be the supervision of licensing agreements and to help diminish limiting clauses in such agreements.)

Assemblers' abilities to achieve economies of scale are also limited by production strategies involving a range of different models. In 1991 198,000 passenger vehicles were produced but, because of the large range of models, on average only 6,000 of each model was produced (Black 1994: 71). This strategy has an impact on assembly as well as on component production costs. The fragmentation or proliferation of models represents costly retooling for the components suppliers and short runs (Duncan 1997: 169, 178). From the following data we can see just how
small the runs per model are in SA when compared to manufacturers located in plants in countries which remain dominant in the global production of vehicles.

TABLE 11: Average annual production per model (1990)

<table>
<thead>
<tr>
<th></th>
<th>United States</th>
<th>Europe</th>
<th>Japan</th>
<th>South Africa</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>190,000</td>
<td>185,000</td>
<td>120,000</td>
<td>6,000</td>
</tr>
</tbody>
</table>

(Black 1994: 71)

Manufacturing costs are boosted by the low capacity utilisation in plants. The problem of low capacity utilisation is deep-seated going all the way back to the local content protection era. For instance, in 1972 BMW produced 75 cars per day - far below its capacity of 125 vehicles per day.

Contemporary international benchmarks in competitiveness in the industry revolve around the practice of lean production methods. Adopting these can enhance greatly SA's competitive advantage. This would entail reorganising production in the following areas: quality control, adopting 'just-in-time' inventory levels,
automation of certain aspects like welding and painting. Local assemblers have also not been able to catch up with international developments in production organisation, training and job classification. Managerial initiatives to introduce productivity enhancement schemes like teamwork and flexibility have been resisted by unions.

Introducing Just-in-Time production in South Africa also needs to overcome several obstacles like the dependence on large numbers of suppliers, the distances between vehicle manufacturers where they are sometimes respectively located in different cities, the need to relocate suppliers closer to manufacturers (Duncan 1997: 121). Toyota South Africa made some strides in this direction and other companies have attempted to approximate JIT methods and relations with suppliers.

Rationalisation and the production of small batches, a characteristic of the flexible specialisation made possible by the introduction of micro-computing, are essential in South Africa where there is a small market. But this is dependent on the introduction of expensive technology (Duncan 1997: 122). The small size of the local market - 300 000 cars per year, and its
fluctuation by as much as 30% from one year to the next, is also a prohibiting factor in this direction.

On the other hand manufacturers in developing countries are finding it cheaper to provide a wider range of vehicles in a shorter space of time, just when South African producers are being pressured to rationalise (Duncan 1997: 139, 146). Models not manufactured in South Africa but entering the market in a wide range include: Volvo, Peugeot, Alfa Romeos, Daewoo, Renault, and Hyundai (Duncan 1997: 143). The first year of the MIDP saw an increase in the units imported from certain countries but the depreciation of the Rand from the middle of 1998, has raised some optimism that it would mean protection for the local assembly industry.
TABLE 12: Light vehicle imports into South Africa

<table>
<thead>
<tr>
<th></th>
<th>1995 units</th>
<th>value (Rm)</th>
<th>1996 units</th>
<th>value (Rm)</th>
<th>1997 units</th>
<th>value (Rm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>13 378</td>
<td>385</td>
<td>22 530*</td>
<td>673*</td>
<td>30 000*</td>
<td>819*</td>
</tr>
<tr>
<td>Germany</td>
<td>921</td>
<td>117</td>
<td>4 707*</td>
<td>856*</td>
<td>4 555</td>
<td>589</td>
</tr>
<tr>
<td>Japan</td>
<td>2 151</td>
<td>235</td>
<td>1 876</td>
<td>97</td>
<td>3 782*</td>
<td>281*</td>
</tr>
<tr>
<td>Sweden</td>
<td>2 252</td>
<td>102</td>
<td>1 210</td>
<td>106</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>429</td>
<td>24</td>
<td>796*</td>
<td>63*</td>
<td>4 637*</td>
<td>368*</td>
</tr>
</tbody>
</table>


Globally, the increasing involvement of the workforce in work practices is an additional restructuring challenge and is crucial to quality improvement. In a comparative study of Japanese, American, Canadian, European, Korean, Australian and South African motor vehicle manufacturers, SA shows the lowest index of worker involvement in a variety of practices (MacDuffie & Pil 1997: 16-17.) The Toyota plant in Durban has acknowledged how unsuccessful it is with introducing participation schemes. Much of its lack of success is due to the poor race relations which exist between management and labour (Hirschsohn 1997: 240-2). These figures also indicate the extent to which human resources policies still need to be developed in SA.
### TABLE 13: Levels of involvement in work practices

<table>
<thead>
<tr>
<th></th>
<th>US*</th>
<th>Jpn*</th>
<th>Eur</th>
<th>Kor</th>
<th>Aus</th>
<th>SA'</th>
</tr>
</thead>
<tbody>
<tr>
<td>overall index of involvement**</td>
<td>32.9</td>
<td>78.4</td>
<td>56.7</td>
<td>71.3</td>
<td>54.0</td>
<td>31.1</td>
</tr>
<tr>
<td>percentage of work-force in teams</td>
<td>23</td>
<td>70</td>
<td>80</td>
<td>46</td>
<td>49</td>
<td>46</td>
</tr>
<tr>
<td>percentage of work-force in quality circles</td>
<td>33</td>
<td>81</td>
<td>32</td>
<td>92</td>
<td>51</td>
<td>29</td>
</tr>
<tr>
<td>suggestions per employee</td>
<td>0.3</td>
<td>23.2</td>
<td>1.1</td>
<td>37.2</td>
<td>1.2</td>
<td>0.1</td>
</tr>
<tr>
<td>percentage of suggestions implemented</td>
<td>42</td>
<td>84</td>
<td>43</td>
<td>44</td>
<td>23</td>
<td>15</td>
</tr>
</tbody>
</table>

(MacDuffie & Pil 1997: 17) NB:* = these are studies of Japanese owned plants in Japan, US owned plants in the USA, and European owned plants in Europe; **100%=high, 0=low.

### 5.4.2 Problems facing the components sector

The MIDP provisions for the reduction of import tariffs on components to 30% by 2002. Components manufacturers fear that this generous allowance to the vehicle assemblers will mean more imported components and increased job losses in the components
sector (Duncan 1997: 175). Probably most threatened are the small owner-managed companies that will not be able to keep up with the demands for technological sophistication while at the same time there is greater globalised coordination of the activities of assemblers and international components manufacturers (Barnes October 1997: 6).

The onset of the MIDP has seen a sharp decrease in net profits before tax. In 1992 seventeen components producers reported a total of net profits before tax of R111.2m, in 1995 twenty companies reported a total of R243.8m profits, but in 1996 twenty-one companies reported a total of R65.3m. This has been 'due to rising costs and output price increases which were below the inflation rate (DTI 1997: 10).

International trends indicate that SA lags behind with regard to cooperation between suppliers and assemblers, for instance, in R & D. Little cooperation exists between the assemblers' federation (NAAMSA) and the components producers' federation (NAACAM). Of the 300 components producers in SA, only 150 are members of NAACAM.
Local production of components is very expensive and internationally uncompetitive. Overall, the sector requires considerable restructuring. The era of the local content program had an effect of stimulating the production of heavier mass components. Given the small size of the market, local producers were forced to produce a wide variety of components but with sub-optimal runs. The wide range of motor vehicle models produced has also affected components producers' ability to attain economies of scale. The biggest problem facing components producers is obtaining licences from foreign licensors. Tougher problems are experienced by firms producing components that are technologically more sophisticated and requiring more R & D. One of the trends is the preference of assemblers to purchase from the subsidiaries of international component suppliers rather than from locally controlled firms (Barnes & Kaplinsky 1998: 15). In Table 14 below we see that on a range of expected performance in certain criteria, the assemblers/customers view the locally owned component suppliers as outdone by international component suppliers. Firms that cannot compete successfully in terms of world class manufacturing standards will undoubtedly lose their business to foreign component manufacturers. A study by Barnes (October 1997: 13) of component suppliers in the KwaZulu Natal
area concludes that most producers in the province are under threat.

**TABLE 14: Performance of KwaZulu Natal components suppliers**

<table>
<thead>
<tr>
<th></th>
<th>foreign supplier</th>
<th>domestic supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 quality</td>
<td>better</td>
<td>----</td>
</tr>
<tr>
<td>2 financial stability</td>
<td>better</td>
<td>----</td>
</tr>
<tr>
<td>3 innovation</td>
<td>exceeds expectations</td>
<td>matches expect.</td>
</tr>
<tr>
<td>4 flexibility</td>
<td>----</td>
<td>better</td>
</tr>
<tr>
<td>5 packaging</td>
<td>exceeds expectations</td>
<td>little above expectations</td>
</tr>
<tr>
<td>6 conformance to specifications</td>
<td>better</td>
<td>very close to foreign supplier</td>
</tr>
<tr>
<td>7 delivery reliability</td>
<td>----</td>
<td>better</td>
</tr>
<tr>
<td>8 price</td>
<td>better</td>
<td>----</td>
</tr>
</tbody>
</table>

(Barnes & Kaplinsky 1998: 17)

The reasons for the poor performance of the KwaZulu Natal components producers is due to their not incorporating current best practice methods. Lean production methods entailing small inventories are not practised, the operations are inflexible
because they do not use the kanban system to schedule supplies, production costs are high because firms do not use their fixed capital optimally, there is no incorporation of total quality management concepts like kaizen rather there is the dependence on non-value adding workers to act as quality controllers, too little is spent on human resource development and developing multi-skilling and multi-tasking approaches, and consequently there is a high defect rate, and there is little coordination to incorporate suppliers and customers (or Supply Chain Management) into improvement plans (Barnes October 1997: 16-28).

Despite the gloomy outlook, a few success stories stand out. Delta, in a joint venture with Delphi Interior and Lighting Systems, signed a R500m contract to export leather seats to Opel (Duncan 1997: 175). Another optimistic sign is the increase in domestic and foreign investment in the sector which is mostly aimed at increasing production for the export market. Total investment for twenty-six companies increased from R237.1m in 1995 to R314.3m in 1996 (DTI 1997: 11).

Furthermore, despite identifiable problems with regard to adopting competitive strategies, another picture is given when
the trend in the value of component exports is examined. From a comparison of twenty types of components, the Department of Trade and Industry shows this positive trend - a steady annual increase in the units exported for several components as well as the revenues earned therefore. In Table 15 below we see a few examples of this trend.

### TABLE 15: Some major component exports in Rm

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>seat parts</td>
<td>464</td>
<td>1,019</td>
<td>1,259</td>
<td>1,408</td>
</tr>
<tr>
<td>catalytic converters</td>
<td>197</td>
<td>388</td>
<td>485</td>
<td>835</td>
</tr>
<tr>
<td>engines</td>
<td>11</td>
<td>10</td>
<td>86</td>
<td>111</td>
</tr>
<tr>
<td>shock absorbers</td>
<td>18</td>
<td>38</td>
<td>53</td>
<td>56</td>
</tr>
</tbody>
</table>

(DTI September 1997: 7; DTI December 1998: 11)

The export of components have increased as opposed to the levels during the local content era where they were at R139m in 1988, R287m in 1990, and R1 550m in 1994. Although the total component exports increased over the years depicted in the table above by R2 091bn (1994), R3 318bn (1995), R4 051bn (1996), and R5 115 (1997) respectively, it has been offset by an increase in imports which contributed to the overall increase of the trade deficit.
for the automotive sector as a whole as discussed in section 4.2.8 above Table 8 (DTI September 1997: 7-8).

5.4.3 Cost of raw materials

South Africa produces some of the important raw materials involved in the production of motor vehicles yet the price of these exceed the price of imported raw materials.

TABLE 16: Comparative Prices for Raw Materials (R/ton)

<table>
<thead>
<tr>
<th></th>
<th>SA price</th>
<th>Import price (excl duty)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheet metal</td>
<td>2,800</td>
<td>1,980</td>
</tr>
<tr>
<td>Aluminium</td>
<td>5,300</td>
<td>3,491</td>
</tr>
<tr>
<td>Rubber</td>
<td>4,750</td>
<td>3,030</td>
</tr>
</tbody>
</table>

(Black 1994: 81)

The high price of steel along with the costly average between R150m to R200m in technology involved in tooling for a new model is quite prohibitive of the success of the stamping industry. If the stamping industry does not transform, SA may be without a stamping industry which employs about 5 000 people. The devaluation of the Rand has caused a disparity in prices for
locally used steel and that for export. Local manufacturers can obtain steel at a reduced price only if they manufacture secondary exports (Rosenthall CTBR 13/9/1996). However, the production runs are not set for export quantities. On average production is set for about 1 200 stampings whereas the US and European average is about 5 000.

5.5 Identifying Imperatives in terms of the Global Competitiveness Model

With more specific reference to Porter's Global Competitiveness Diamond and given some recent developments in SA's motor vehicle industry, the latter can be argued to be in the second of four stages of National Competitive Development - the investment driven stage (Monitor, Appendix 1995: 11). In this stage a nation and its firms actively invest in factor upgrading and in modern efficient plants and methods, although, generally, this is still dependent on foreign technology. The Diamond functions as a system with each part having an impact on the others. By identifying disadvantages, constraints or lags in different parts we can set industrial strategy policy imperatives for improving competitive advantage. SA needs policies to move into the
innovation driven or third stage where all four determinants are in place and harmoniously procure continuous upgrading and innovation in economic sectors.

5.5.1 Create strong, coordinated clusters

SA's clusters lack sophisticated suppliers of machinery, R & D, training and consulting services. The metal products cluster, a potentially important ancillary to the motor vehicle industry, lacks international competitiveness in downstream activities (Monitor 1995: 32-3). Spraying and painting equipment, hand held tools, bolt making machinery, and machine tooling equipment are all rated uncompetitive. Assemblers and suppliers are not involved in joint ventures.

Important cluster associations like NAACAM are mostly concerned with lobbying Government as opposed to promoting competitiveness and upgrading the industry.

5.5.2 Create a world class strategic capability

The global trend in component supplies is towards fewer suppliers
and an increase in design and R & D required by original equipment manufacturers (Monitor 1995: 49). The protectionist program did not facilitate SA firms to seize this opportunity. Global strategic capability can be improved by recruiting foreign advisors as do other developing nations. Managerial strategies have not yet caught up with international trends, for instance, teamwork and low inventories.

5.5.3 A need for strong, and integrated, skills, technology and work organisation

Using poorly skilled workers and outdated technology has an effect on expected output and the labour costs per unit of product. SA vehicle assemblers are using outdated machinery combined with poor skills and poor work organisation (Duncan 1997: 121). This makes it imperative that the adult basic education and training (ABET) programmes which the unions and employers agreed to in 1991, and which are expected to improve technical, analytical, logical, and organizational skills, succeed (Hirschsohn 1997: 236-8).

While the incorporation of the latest technology may facilitate
the competitive edge of companies in other countries, it is not always an option in SA based companies. Toyota SA opts for labour intensive mass production since it can depend on low labour costs and avoid the high cost of imported capital equipment. It considers the use of robots only for health and safety reasons. Volkswagen SA also considers robots as economically unjustifiable and opts for these only where the production of complex parts encounters difficulties when labour intensive methods are used (Hirschsohn 1997: 243-5).

On the other hand, heavy investment in robotics or latest technology is not always a guarantee of achieving a high position on the market. SAMCOR is reputed to be the most automated plant in SA, yet, in 1998 it attained only 12.5% of the passenger car market. This was third place after Toyota and Volkswagen - the two companies referred to above as comparatively less eager to speedily incorporate latest technology (DTI December 1998: 5).

5.5.4 A need for high interfirm rivalry

The retail sector has been characterised as not adequately rivalrous. Generally, the mark-up on vehicles is 17% and there
is limited competition on prices. Subsequent to the 1995 tariff reductions it has emerged that there is adequate rivalry amongst the seven established vehicle producers, as will be seen in the later discussion of how Nissan fared in a price war which raged during 1996. The situation amongst the components producers is not adequately rivalrous. Components producers were protected by an excise based subsidy and they have not shifted to a 'just-in-time' or competitive quality stage of organisation as the comparative study of KwaZulu Natal components manufacturers has shown.

5.5.5 A need for a capable bureaucracy

Bureaucracies which have little understanding of how to create competitiveness may sometimes produce policies which ultimately impede competitiveness. The protectionist policies of Phase VI of the Motor Vehicle Program operated, on the one hand, as an incentive to produce a broad line, but, on the other hand, operated as a disincentive to invest (Monitor 1995: 60). The consequences of a disincentive to invest meant low labour productivity, low capital productivity, and low management productivity.
5.6 Conclusion

Racial Fordism encountered its own internal contradictions and the recent political changes mean that it can no longer be reformed but that it must be replaced by a new regime of accumulation. Racial Fordism's crises are rooted in the manufacturing sector's lack of international competitiveness. Consequently, industrial restructuring in SA seeks behavioural and institutional changes that will advance competitiveness in local firms especially in the manufacturing sector. The motor vehicle manufacturers and their closest sectoral linkage, the vehicle components industry, will have to undergo significant restructuring as the government steadily drops the old protectionist barriers. The restructuring successes and failings of these sectors can be measured against the elements of Porter's model of a globally competitive economy.
CHAPTER SIX

RESTRUCTURING IN THE SOUTH AFRICAN MOTOR VEHICLE INDUSTRY:
A CASE STUDY OF NISSAN SA

6.1 Introduction

The crises of the economy are the product of a dated growth model. Individual firms too have experienced their own microcrises and are challenged with industrial restructuring. Nissan SA is one of the long-standing local motor vehicle manufacturers which has endured its own microcrises and responses thereto. The company's emergence, growth, the challenges facing it, its organisation of motor vehicle production, and some perceptions of a small part of its workforce are the focus of this chapter.

6.2 NISSAN SA's growth and challenges

Nissan SA is a subsidiary of a global motor manufacturing company which started in Japan in 1933. After Toyota, Nissan claims to be Japan's second largest producer of motor vehicles.
Internationally, both were insignificant companies during the 1950s, but by the 1980s ranked as second and third largest internationally. Recently, Nissan has been ranked as the fifth largest internationally (Hill & Lee 1994: 297).

While much can be said and generalised about a so-called "Japanese model", it must be noted that Nissan Company of Japan had for many years appeared to be a carbon copy of the US model Fordist companies which emphasised automation and economies of scale (MacDuffie & Pil 1997: 33; Morales 1994: 99). Its emulation of Toyota’s lean production model came in fairly recent years and it was a difficult task to get its own Japanese workforce involved in kaizen production activities. However, it achieved more success with kaizen practices amongst the workforce employed in its subsidiaries in the USA and Europe. In the early 1990s Nissan built a new plant on Kyushu island where it showed off its new assembly automation and conveyance systems. The plant, however, ran under capacity and had difficulty with its automation, consequently it closed down and thereby making Nissan the first Japanese company to close an assembly plant in the post-war period.
A global trend towards mergers or consolidations of motor vehicle manufacturers has not escaped Nissan Motor Company in Japan. The recent downturn in the Asian economy and markets has affected Nissan amongst other vehicle manufacturers based in Japan (Simonian FT 3/9/1998, 1/3/1999; Abrahams FT 3/9/1999). Nissan's keiretsu, the Fuyo business group is reportedly weakened by the debts of Nissan. Between 1997 and 1998 Nissan Company of Japan reported a loss of revenue of up to 7.7% or a drop from ¥1776.7b to ¥1638.5b (FTS 1/3/1999). Nissan's business in North America has suffered losses due to excessive discounting and poor residual values on leased vehicles (Abrahams FT 3/9/1998). The President of Nissan, Yoshikaza Hanawa, has publicly declared that the company welcomes a partnership with a rich foreign company. Three of the likely partners appear to be Ford, Renault, and Daimler-Chrysler. The latter has already engaged in talks with Nissan to buy 40% of its truck maker, Nissan Diesel. All the concomitant restructuring of the corporation through mergers is expected to have an impact on its subsidiaries around the globe.

The subsidiary started in 1959 under the name Datsun Motor Vehicle Distributors and the name was changed to Nissan South Africa in 1983 (van der Walt 1989: 208). Assembly was started
in Durban from CKD units. Between 1976-78 Datsun was the leading motor vehicle seller in SA. A comparison of its recent passenger car sales show that it has dropped to sixth position for this line of vehicles. Its partner, which has significance for the small vehicle market, Fiat, may perhaps have ranked as eleventh with 0.48% of the market, but this is uncertain, in light of the fact that 14.73% of the market was captured by non-members of NAAMSA who competed with Fiat in the small vehicle market (DTI December 1998: 5).

**TABLE 17: Top ten passenger car sellers (year ending October 1998)**

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Percent of Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota</td>
<td>20.4</td>
</tr>
<tr>
<td>Volkswagen</td>
<td>18.42</td>
</tr>
<tr>
<td>SAMCOR</td>
<td>12.5</td>
</tr>
<tr>
<td>Delta</td>
<td>8.4</td>
</tr>
<tr>
<td>Mercedes-Benz</td>
<td>7.81</td>
</tr>
<tr>
<td>Nissan</td>
<td>6.45</td>
</tr>
<tr>
<td>BMW</td>
<td>5.57</td>
</tr>
<tr>
<td>Daewoo</td>
<td>3.0</td>
</tr>
<tr>
<td>Landrover</td>
<td>1.49</td>
</tr>
<tr>
<td>Chrysler</td>
<td>0.75 (DTI December 1998: 5)</td>
</tr>
</tbody>
</table>
From 1984 SANLAM corporation was the largest controlling group of Nissan SA but placed direct control of the company under its investment body, SANCORP. Nissan SA has another two companies, Motorware and Truckmakers. In 1990 Nissan SA made a licencing deal with Fiat to assemble the Uno. This marked Fiat's return to South Africa after it had withdrawn from the country in 1980. The Fiat partnership is to expand with a R200m investment in assembly facilities for the production of the Palio and Siena models at Rosslyn. The latter two models, although adding to the problem of model proliferation, are expected to compete with Delta and Samcor and regain market share in the lower-range or entry level market (Mutikani BD 16/1/1998). Furthermore, the new Fiat investment promises continued employment for 800 people already at Automakers and will create less than 100 new jobs (FM 30/1/1998). One of Nissan's great marketing successes is the Automobile Association's use of its light commercial vehicle range (Duncan 1997: 143). Nissan also owns Trimplant, its own trim plant, and Steelmobile Engineering, a large sheet metal pressings firm (Duncan 1997: 172).

Despite its shift in position in terms of domestic market sales, the company has grown. In 1985 its turnover was R570m and it
captured 9% of the market; in 1995 its turnover was R3,5b and it captured 18% of the market (African Business July 1995: 82-3). These were signs of confidence in itself and the likelihood of earning more investments if it listed itself on the Johannesburg Stock Exchange (JSE), a move which its chief competitor, Toyota, had long since made. Nissan had been listed on the JSE once before when controlled by Messina but when SANCORP acquired Nissan in 1984 the company was making large losses (FM 24/01/1997: 86). The move to list on the JSE was once again contemplated as phase VI of the Local Content Programme was nearing completion.

The move was also contemplated at a time when the company announced in 1995 that it was in the middle of a capital expenditure programme totalling R170m in order to increase production as well as the quality of its vehicles and assembly line productivity. In addition to this another R400m would be spent between 1995 and 1998.

The company listed under the Automakers name on the Johannesburg Stock Exchange (JSE) in October 1995. The record of subsequent months shows that Nissan had a dismal performance. Its shares
started out at 565 cents, they reached a peak of 650 cents in January 1996, but sank to a record low of 204 cents in January 1997 (Suggot M & G 10/10/1996; Robertson STBT 26/1/1997). Share prices improved once rumours spread of Fiat of Italy and Nissan of Japan purchasing shares. It appears that external factors could raise costs like, for instance, the drop in the Rand's value which pushed up import costs by 19%, and increased competition were the cause of the drop in shares value (Robertson STBR 12/1/1997). Chief Executive of Automakers, John Newbury, gave one example of the tough competition it faced. In the entry-level sector the Fiat Uno was outdone by Toyota which had cut 30% off the Conquest Tazz. Nissan lost much when it responded and cut its prices between 10% and 18.5% (Mnyanda BD 11/6/1996). Nissan reported a loss of R91.2m for the period July 1996 to December 1996 due to its decline of market share and its losses for 1997 were estimated at R200m (West BD 17/3/1997; Vermeulen BD 7/9/1998). Such losses prompted Nissan to borrow up to R1b to finance its operations, that is, for the increased price of components and fully imported models from Japan and Italy (Robertson STBT 16/3/1997). The declining situation of the company has also been highlighted by the statements of Attie du Plessis, a director of Sanlam and chairperson of Automakers. Du
Plessis said that Sanlam no longer regarded Automakers as a long-term strategic investment and would terminate future capital contributions to the company, hence the need for Automakers to seek capital from the Japanese parent. The parent company is itself undergoing financial problems; it reported a loss of ¥14bn for 1997 and needed to restructure its global activities to restore some benefits (Vermeulen BD 7/9/1998).

One positive feature of the MIDP has been the price war which surfaced in 1996 resulting in greater affordability of vehicles and putting a brake on the pace at which vehicle prices had been increasing since 1990 (DTI 1997: 12). Prior to 1995, the rate of increase in vehicle prices was well above that of consumer prices, but, as a wave of imported vehicles came into the market from 1995, the rate of increase in vehicle prices fell below the rate of increase in consumer prices after 1995. In 1996 the rate of increase in vehicle prices was approximately 3% while the rate of increase in consumer prices was approximately 7.5% (DTI December 1998: 17). The price war in 1996 where dealers used price decreases, or price freezes, and product discounting, showed some of the complexities of the industry but were simultaneously healthy signs of the interfirm rivalry that were
necessary for SA firms to become globally competitive. The Rand had weakened considerably against the major international currencies and tariffs had been dropped on imported components. Rand-Yen fluctuations hit Nissan worse than Rand-Lira fluctuations. Nissan finance director, Theo O'Neill, says that for Nissan to be competitive it must drop its assembly costs by 7% per year but, for each drop in the Rand's value to the Yen, its import costs go up by 4 to 5% (FM 18/8/1995: 33-4). To some extent tariff reductions on components reduced manufacturing costs (Cokayne CTBR 11/6/1996). Manufacturers cut the prices of some of their models, but increased the prices of other models to a range of 3 to 3.5%. Nissan's highest cut was 16.3% on the Sentra range. The price war raged in a climate where the consumers are supreme and ever demanding new models in a relatively small market of 300 000 sales per year (Argus correspondent 27/2/1996). Regardless, of the range of consumer tastes Nissan had to reduce its range—it cut out eight Uno models, 18 Sentra derivatives, and 27 light delivery vehicles; a move that was obviously in line with the aims of the MIDP to rationalise the range of motor vehicles assembled in South Africa (Cokayne CTBR 12/6/1996; DTI 1997: 12). The reduction of the production of vehicles approximating the R40 000 range or the
Small vehicle Incentive raised speculation of the success of some of the MIDP policy mechanisms. The Small Vehicle Incentive of encouraging the production of motor vehicles is significant for the life of the industry especially because of the context where there is a need to address the legacy of race based income asymmetries and which are part of the problem of a small market (Barnes 1988: 6; Duncan 1997: 184). None of the Rosslyn plant's vehicles which fall under the Nissan badge fall into the ambit of the SVI's R40 000 ceiling. The lowest priced Nissan passenger vehicle is the Sentra 140i at R64 550 while in the light commercial vehicle range the lowest priced is a 1400cc pickup which retails at R47 650 (The Star Motoring 22/4/1999). However, the plant manufactures for its partner, Fiat, three passenger models of the Uno which retail at below R40 000, namely two models of the Mia at R34 035 and R37 340, the Tempo at R34 035, as well as a light commercial pickup vehicle, the Espresso, at R41 200 which is still well within the 1999 revision of the SVI to R41 600.

Despite the wise reductions in some of its models, in the midst of the price war, Automakers announced its deal to import seven models of Alfa Romeos at a rate of 4 000 to 5 000 units a year.

The price war had affected the overall industry. In 1992 light motor vehicle manufacturers reported net profit of approximately R328m and which steadily increased to a peak of R2 032m for 1995. However, at the end of 1996, net profits dropped to R520m. The subsequent year was even worse, the whole industry experienced a loss of R547m in 1997 (DTI December 1998: 15). Automakers was affected by the price war. Already, in February of 1996, there were signs of a decline in unit sales and a loss of market share from 16.9% to 14.9%, consequently, Automakers reduced its expected forecast of R155m full year earnings to the same as the previous year's figures of R125.7m (West BD 26/2/1996). The effects of the price war were still felt in 1997 as demand for the Uno declined and new entrants, Opel Corsa and Ford Fiesta gained market share. Production of Unos was shut down for eight weeks since there was an eight week stock available (Robertson STBT 27/7/1997). Congruent with its objectives, the consumer has
been an immediate beneficiary of the MIDP through its reduced tariffs, the Small Vehicle Incentive, as well as the reduction of the entry level to below R40 000, and the price war it set off in 1996 (Cokayne CTBR 5/12/1996). Car sales in 1996 increased by 4.5% to 393 026 units (Gebhardt M & G 17-23/1/1997). Nissan is confident that it can retain a healthy share of the market which is predicted to grow to about 500 000 vehicles early in the next century (Automobil March 1997: 21). But the local market may be an uncertain phenomenon; NAAMSA predicted that 1997 sales would drop to 388 000 units. Some analysts say that the buying splurge of 1996 was due to the arrival of several new models and such a factor would in future years not contribute to increased sales (Gebhardt M & G 17-23/1/1997). Despite manufacturers' wariness about the relatively small size of the market, it is important to note that the diversity of consumer demand is consistent with the range of factors that prompt an industry to become globally competitive.

The price war also highlighted the shortcomings of the consumer financing institutions. The marketing director of Toyota pleaded with banks to be more creative with vehicle packages (Madikiza and West BD 27/2/1996). Nissan's response and attempts to gain
customer loyalty was through the Nissan card and the Flexible Affordability Package (FAP). The FAP offers purchasers of Nissan vehicles different deposit rates, financing periods and residual values, and options which exclude a deposit or residual value (West BD 14/3/1996). The Nissan card was introduced early in 1995 and was linked to Unibank serving as a general usage creditcard that gained the user credits towards the deposit on a new Nissan or Uno vehicle (Rumney M & G 1995 19-25/5/1995).

In October 1996 Nissan announced the more aggressive Triple Zero financing plan. It offered zero interest, zero six months payment, and zero additional maintenance costs over three years on various specific options (Automobil October 1996: 87).

Nissan's partnership with Uno and Alfa Romeo also shows a new survival strategy - joint ventures. Competitors in the SA market have set up joint ventures in manufacturing or marketing of fully built units. Volvo has teamed up with the Hyundai plant in Botswana and truck maker ERF SA has been joined with Indian truck maker, Tata (Robertson STBT 25/1/1998). Despite the price wars amongst locally based assemblers, there is a legacy of cooperation, like the 1991 participation between Nissan and Samcor to export to Taiwan, and one can speculate on the
possibilities of future such cooperation (Duncan 1997: 174). In a tour of the Nissan Trimplant, discussed in another section below, there was evidence of collaboration through the manufacture of seats for competitors.

Through these recent difficult years, there were hopes that if Nissan Japan was offered a financial stake and if it acquired ownership, the situation would improve. The optimism is partly due to the observation that foreign shareholders of local motor companies support their subsidiaries through favourable trade deals and subsidisation of retail prices. Automakers and SANCORP director, Attie du Plessis, acknowledged that Automakers delisted because it was apparent that they were in a very competitive industry where regaining market share required changes that were difficult to implement in a listed group (FM 24/1/1997: 86).

The capital expenditure to develop the plant included a new phosphate and E-Coat anti-corrosion facility costing R81m, a R26m auto spray facility in the paintshop as well as R10m extensions to the paintshop, R8m on door presses for the Sentra and Sabre, a new R7 million automated welding jig, R400m was to be spent on new models and facilities, R995 000 on a wetland and dam project.
which it claims will prevent pollution and beautify the area around the Rosslyn plant (Cokayne CTBR 7/4/1995). Subsequent to Nissan Japan announcing it plans to investment R360m in SA through the acquisition of a 50% share of Nissan SA, there have been further announcements of investments; by 2000 R990m is to be spent on a new model programme (Mutikani BD 19/1/98).

Despite plans for such tremendous investment, jobs have not been secure and at Nissan the situation is the converse of the job increase that the DTI reports for the sector (DTI 1997: 14). In 1996 Nissan announced that it planned to retrench 900 of its employees: 600 hourly paid workers and 300 salaried staff (Grawitzky BD 1/10/1996). This move was opposed by NUMSA which argued that this was a cost cutting move aimed at making the company competitive and which had not given workers adequate notice, it had not considered alternatives, and there was no consultation on the retrenchment packages. NUMSA was angered by the fact that the first retrenchments occurred at the same time that Nissan bought, for an undisclosed price, two luxury bushveld retreats for its executives and clients (Suggot M & G 10/10/1996). Later in 1998, Nissan along with Toyota and Samcor, announced further retrenchments amounting to a total of 1 600 of
Nissan planned to shed 450 workers through a voluntary retrenchment package and appeared less sanguine than the other companies that opted for both voluntary and forced retrenchment packages.

Although Nissan has not attained the number one car seller position in the SA market, it is the leading exporter with almost 25% of total exports. Second place as exporter is held by its rival in the domestic market, Toyota (Cokayne CTBR 12/2/1997). The overall export of vehicles and components has improved from R2,2b in 1994 to R5b in 1997 (Robertson STBT 12/1/1997). Nissan’s predictions of the 1997 car sales (227 000) and light commercial trucks (125 659) were comparatively more cautious than that of other manufacturer’s while its predictions of medium commercial vehicles (6 000) and heavy trucks and buses (8 350) were close to predictions made by three other manufacturers. Its exports are concentrated on left hand drive countries and will be boosted when it makes an agreement with Nissan Motor Company of Japan, its new controllers, as to which countries it may export to. The Uno line have also been a successful export product; a contract to export R50m worth of Unos to Singapore was signed in 1986 and negotiations were underway to export to Sri Lanka and Bangladesh.

Eventually, Nissan Motor Corporation bought 50% of Automakers for
R360.75m, and it signalled some optimism for the company; a
Japanese Chief Executive, Toshio Tanaka, replaced John Newbury
who held the position since 1983 (Cokayne CTBR 10/3/1997;
Robertson STBT 9/3/1997; FM 30/1/1998). It was expected that the
deal would signal the introduction of new Nissan lines, and the
Fiat partners were also enthusiastic indicating the introduction
of a new line as well, the Palio, at a R200m investment (West BD
17/3/1997). Nissan Motor Corporation saw their role in
resuscitating the SA subsidiary as an important step towards
expanding its Africa market, where South Africa accounted for
more than 60% of total demand in Africa and they predicted an
increased demand of up to 500,000 units in the next decade. It
is expected that the direct investment of Japanese shareholdings
will make possible the export of South African components to
Japan (Duncan 1997: 57). The management change at Nissan also
signals the drawing in of the South African subsidiary into the
global operations of its transnational parent company, in line
with a new phase in the global organisation of transnational

The Japanese acquisition also entailed the provision of Japanese
line management so as to transfer expertise and technology (FM
large numbers of Japanese appointees were to be sent to SA to claim senior positions in Nissan Manufacturing SA as well as representation on the Automakers board (Cokayne CTBR 30/4/1997 and 8/5/1997; Furlonger 1997: 9). The ubiquitous presence of these Japanese appointees was evident during a single day's observation at the Rosslyn plant; it is reported elsewhere that there are twenty-nine Japanese officials deployed on a full-time basis in technical and production areas (FM 30/1/1998). This corporate reliance on the managerial expertise of employees of transnational corporations who are readily deployed to subsidiaries around the world is part of a significant trend in the global restructuring of transnational corporations and may be an important element in the continued success of Nissan in South Africa (Hoogvelt 1997: 58-9). Consequently, this expertise prompts local production to become organised in terms of global trends in standards, price, and efficiency (Hoogvelt 1997: 123).

Nissan has also successfully challenged the inefficiencies of the bureaucracy dealing with the motor vehicle industry. It appealed to the Supreme Court of Appeal for a reduction of taxable income on a general export incentive scheme which was part of Phase VI
of the motor industry programme. The judgement awarded Nissan a R116.9m reduction in its taxable income, while the industry as a whole, if it were to follow Nissan's example, and were to make a late appeal, stood to receive an estimated total of R1.5b from the government for taxes paid in place of export benefits that should have been tax free (Cokayne CTBR 25/9/1998; Cronje BD 11/10/98).

6.3 The Rosslyn Plant

Nissan SA is currently based in Rosslyn, approximately twenty kilometres north of Pretoria, after moving here between 1963-5. It is situated close to the townships of Mabopane, Soshanguve and Ga Rankuwa. During the 1950's the government attempted to get a more even distribution of industrial development; it encouraged and offered incentives to firms that set up in "border areas" like Rosslyn. Relocation incentives included exclusion from the apartheid restrictions on black and "coloured" workers (Duncan 1997: 48).

The plant occupies a total of 163 hectares or the equivalent of 326 rugby fields. It has a production capacity of 350 passenger
and light commercial vehicles per day. In 1994 the company employed 4,712 workers in manufacturing activities. This included 3,445 hourly paid workers and 1,267 salaried staff. In addition to employees in marketing, corporate activities and its Motoware exporter of components and vehicles, its employees totalled 5,597 people.

Five plants make up the overall manufacturing activities. There is a stamping plant that manufactures body parts to supply to the main assembly plant, a trim plant which supplies seats and other interior upholstery items, an engine plant, a main assembly plant and the Nissan Diesel truck plant. As early as 1966 Nissan had tooled-up for the full range of body pressings expecting that it would supply the whole industry (Duncan 1997: 167).

The Nissan range produced at Rosslyn includes the Patrol, Sabre, One Tonner, Sentra, and the Maxima. While on the guided tour of the main assembly, I was informed that production of a new line, the Primera, was to start soon. The Fiat Uno is also produced under licence. The Infiniti and Alfa Romeo lines are fully imported lines which are prepared for distribution to dealers.
The Rosslyn plant's achievement record boasts the complete approval of Nissan Motor Company of Japan for the extensive local engineering of one of its earlier range, the Skyline. However, its dependence on imported technology remained - 90% of the assembly jigs and fixtures for the Skyline were manufactured by and imported from the Japanese plant (van der Walt 1989: 213).

Nissan SA has adapted the Japanese just-in-time practice of special delivery relationships with suppliers through the establishment of in-house component firms (Duncan & Payne 1993: 15-6). Hence, it has set up Trimplant to manufacture seats and seat foam, and Steelmobile to produce steel body parts. Both plants are located near to the main truck, motorcar and light commercial vehicle assembly-plants. Electronic connections exist between the plants and orders and deliveries run throughout the day. In the view of Nissan Purchases staff, the geographic spread of component suppliers throughout SA makes it impossible to approximate the rapid supply relations that the Japanese manufacturers have with their suppliers (Interview: Redhead 26/2/1996).

While strategies may be in place to emulate a just-in-time system
for the delivery of components, Nissan is nevertheless affected by other uncertainties in the industry as a whole. This was apparent during the wages-related strike in the components industry during August and September 1998 which resulted in component shortages which consequently halted production at Nissan, as well as at Volkswagen, Delta, and Samcor and in the first week of the strike costed manufacturers R650m in lost production (Grawitzky BD 11/9/1998; Hlangani Sowetan 6/8/1998; Robertson STBR 16/8/1998).

6.4 The organisation of motor vehicle production

The morning starts off with a quality meeting which is attended by all levels - from operators to managers. The meeting focuses on records of defects which have occurred in the past and the data on these that has been collected over time. Another meeting, called Quick Response to Quality Control (QRC), is held at 11:00am where defects are selected and the relevant personnel are informed of their performance in this regard on a problem check sheet (PCS). Checking on these faults occurs daily to ensure they are eliminated. Once the problem is eliminated only random audits are done on a formerly listed fault (Nissan
The production process in motor car manufacturing is widely misunderstood (Jenkins 1987: 65). Observations in the main assembly area and the trim plant at Nissan support this claim of Jenkins. Conveyor belts and routines, monotonous work and pacing by machines can be observed to some extent at Nissan, in other words, the familiar features of a Taylorist-Fordist organisation of the workplace. But the plant has its unique hybrid of these features as well as some of the lean production features characteristic of leading Japanese plants. While it may be that the relatively small volumes required by the SA market may prompt flexible specialisation in vehicle assembly and component manufacture, Nissan SA has apparently invested just as heavily in robotics as its competitor, SAMCOR (Duncan & Payne 1993: 16; Streeck 1993: 4-7).

Body stamping does occur at the Rosslyn plant. However, parts like the boot (trunk) lid are still imported for the sedans manufactured here. Jenkins (1987: 65) concurs with information obtained in my tour of the plant that very costly stamping machines are required for making the boot which has an almost
ninety degree bend in a single sheet of metal. Consequently, the boots are the only body part imported from Japan. Jenkins (1987: 67) contends that approximately 10% of the labour force may be employed in the stamping plant.

Jenkins (1987: 67) estimates that approximately thirty percent of labour can be employed in the body shop of a vehicle manufacturing plant. In the bodyshop at the Rosslyn plant, one of the Japanese productivity and quality innovations is visible in various parts of the workshop - the demarcation of green areas or genba kanri. The green area has benches, a table for eating at during breaks, notices stuck on its drywalling, and television monitors for broadcasting company news as well as entertainment to attract workers to this neutral area with, for instance, televised soccer matches. Workers and supervisors meet in these areas for ten minutes at seven o'clock every morning to discuss the day's targets (Nissan Driveline December 1996: 4). Duncan (1997: 123) maintains that through getting the workforce involved in production decisions in the green areas, it effectively controls the workforce through the use of visual absenteeism displays, production quota performance and inter-green area competitions. An additional consequence is that NUMSA is weakest
at Nissan when compared with other plants in the Transvaal.

An assembly line system is used to weld together steel panels and stampings. The workshop has separate conveyor belts for the simultaneous assembly of batches of different vehicles, namely, the Nissan 1400 light commercial vehicles (bakkies), the Nissan double cab, an additional pick-up vehicle, the Nissan Sentra, and the Uno. A sealed-off area in the same workshop was also visible where I discovered the line is being readied for the production of a new sedan range, the Primera. Another assembly-line stood unused.

Suspended from steel rafters above the assembly-lines are welding jigs. The Rosslyn plant still uses manually operated jigs. Several jigs are hung above a moving assembly-line. The welding jigs use a cantilever balancer system which allows the operator to pull the front end to the areas where he needs to weld while the machine retracts to the steel rafters from which it is suspended. Operators are trained in spotwelding and CO2 welding. Each operator has a visible work area of about two metres in length painted alongside the moving conveyor belt. The operator has to weld his allocated points on each vehicle unit while
slowly walking along with the moving conveyor belt. The operators could not always cope with the line pace. Several operators were observed overstepping their respective marked off areas to complete their tasks on one body shell in the area of another operator on the line. Thereafter, they hurriedly stepped back to begin welding on the next unit to come into their space.

Operators in this area are multi-tasked as opposed to multi-skilled. In this system, an operator who performs specific tasks on one assembly-line can be taken from that assembly-line and perform similar tasks on another assembly-line where the shells of a different type of vehicle are being assembled.

All the sub-assembled body shell units converge and are fed into a single space where they are selectively hoisted and placed onto an elevated track and directed towards the paint shop. The selection is synchronised in such a manner that it factors in the time taken to spray each model, the range of colours to be used on a particular day, the number of units in each colour, the day's target for each finished model, and the subsequent order in which the units are to be sent through to the spray shop. The sprayshop is an off-limits area to observers. From the
information made available it was learned that the interiors of the units are manually spray coated while the exteriors are painted by a robotic computer operated machine which is set for the contours of each unit and the order in which they pass through. The spray shop is registered with SABS ISO9002. The coated shells are temporarily stored. Not all the latest new technology can be purchased and fitted in plants but the use of robots in the paint shop is argued to be a wise managerial decision to pre-empt industrial action in an area where a few militant spray painters can close down a plant (Duncan 1997: 122).

A hoist brings the painted units down from an elevated track and feeds them onto separate lines for the remaining trimmings - engines and other mechanical parts, tyres, lights, dashboards, seats and upholstery.

The assembly of the engines, tyres, and other mechanical parts takes place along a moving assembly-line with the body shells elevated to prevent workers from bending. It is a piecework operation where all tasks are to be done in areas demarcated with lines painted alongside the assembly-line.
Next, the seats, carpets and other interior fittings are added. Although Nissan SA developed locally the seats for the Skyline range (van der Walt 1989: 213) it remains that another area where local expertise is lacking is the manufacture of front seats. This is a very expensive investment, I was informed. Rear seats have almost no adjustable levers or runners and the frames are relatively simple welded metal bars or tubes and springs. Hence rear seat frames are locally manufactured while front seat frames are imported.

The whole trim area is ergonomically designed to expedite assembly activities. A large number of components - seats, carpets, springs, rings, rubbers, hoses, tubes, amongst others, are attached. The Japanese kanban innovation had been experimented with but has since been replaced with a bar coding system for all the components packaged into special boxes by the various suppliers. The boxes fit into racks alongside the assembly line and slope towards the operator so the contents slide downward as the box empties and are easy to reach for. On the outer side there is an area wide enough for a mini-tractor pulling a trailer to drive through and deliver new boxes. The components are calculated in such a way that the central supplies
office has information of the rate at which various vehicles are being assembled and when a particular box needs to be replenished. The idea of the mini-tractor is to ease the burden of employees actually carrying a heavy box from a far-off part of the plant.

Near the trim area and vehicle inspection point, a large electronic noticeboard hangs from the ceiling displaying the time of day, the day's target for finished units to be produced, the actual number of units produced at that point of the day, and an indication of how far behind the target production was. At 1:45pm the sign indicated that the plant was behind the target by 24 units. And, as my tour guide informed me, this target would not be caught up with before the end of the day's shift. At this point an additional Japanese innovation occurred - a bell rang to signal the stopping of the line. Unlike the Japanese practice though, only foremen can stop the line. Unfortunately, we could not stay to discover the reason for the stopping of the line.

A vehicle inspection area is located near a wide exit. A meticulous vehicle evaluation system (VES) ensures fault
reduction and improved quality output. One sample of each finally assembled model is parked into the area. An inspection team marks off with a black erasable pen faults detected on each vehicle. Faults are weighted. The highest weight is given to faults that would be visible to a customer in a retail showroom. Lower weights are given to faults detectable by the trained inspectors. Such is the impressive quality that all of the fault markings I observed were faults I would have overlooked as a prospective purchaser of the vehicles.

Besides the automobile and light commercial vehicle production observed for this study, production of trucks takes place at another plant approximately one kilometre away. Truck plant director, Errol Todd, claims that the truck plant can peak at up to 40 trucks produced per day but was currently running at a low of between 5 and 20. This was due to orders and whichever range the plant was working on (FM 18/8/95: 30).

The trimplant is situated on a separate plot approximately three kilometres from the main assembly plant. It also has several demarcated green areas. Management in this section boasted that for the past eight years they have approximated the features of
lean production and just-in-time production. The production manager claimed there is reasonably swift delivery of raw materials used in the manufacture of seat covers, door panels, and roof panels. Some delays or errors in consignments are experienced in the receipt of imported front seats, but it is a rare occurrence. However, any crisis is averted since a small stock of imported items is always kept and, due to an electronic link-up with suppliers, the plant would know up to three weeks in advance if a delivery problem is to be expected. An electronic broadcasting system connects the trimplant with the main assembly plant. Barcode stickers are placed on every finished item. In the main assembly plant, once a finished item is fitted into a vehicle, it is read by a scanner. Through the electronic broadcasting link, the trimplant is constantly informed of the pace of use and demand for items in the main assembly plant. New seats are delivered to the main plant on an hourly basis.

For the last three years the trimplant has been using a computer aided cutting machine to cut the various shapes of leather and vinyl panels. One layer of cloth that is placed on the cutting surface is cut in ten minutes. Four persons are employed in the
cutting area. The previous system of doing this manually used a tracing stencil and employed sixteen people. Apparently, the shift away from this labour intensive method did not mean the loss of jobs - employees were redeployed elsewhere in the Rosslyn plant.

The sewing of the seatcovers is done in cells. The previous cell system had cells producing the whole covered seat. Now, a progressive assembly system uses cells which each sews one or more different parts of the seat cover. These cells are expected to be synchronised to produce the same amount at the same time. Apparently, this has been successful. Four different models of seats are simultaneously produced. No inspectors are used in progressive stages, rather, there is a quality unit operator to inspect the final product.

Pulling the seatcover over the metal frame is done manually. Apparently, this would require a huge investment if available machinery designed for this purpose was purchased. An inspection area is set aside to evaluate the quality of randomly selected seats.
At the end of the workday, the foremen of the various areas meet for a half hour to discuss performance in their areas. Performance reports stuck on walls in the meeting area are divided into four areas: people, quality, delivery, and cost. Meetings are conducted swiftly since attention is given only to the redmarked criteria of the four areas.

Although there may not be any export business for the trimplant (FM 18/8/95: 30), a source informed me that the Nissan Trimplant manufactures seats for two of its rivals - BMW and Landrover.

Kaizen is a further Japanese innovation to continuously improve quality. It operates fairly successfully at the Rosslyn plant too. Periodically, awards are given out in various sections of the plant for suggestions on how to improve quality. These suggestions can range from suggestions for a new system to test the emergency lights in the paintshop without having to start the emergency generators, to suggestions to change the process to eliminate overspray and to prevent runs on the clearcoat. They also include suggestions for fitting the intake to the cylinder head to avoid damaging the gasket, for introducing a tool to correctly position tappets, for introducing a cover to prevent
bolts dropping into the engine. Suggestions for the improved assembly of panels by fitting alignment pins on the workbench, introducing a barrier to protect painted parts in the Receiving area, and suggestions for reducing the noise levels, are amongst an ongoing series of incremental improvements that eventually enhance quality (Nissan Driveline October 1997: 8).

Pretoria based competitor, SAMCOR, was the first manufacturing plant to achieve the ISO9002 quality manufacturing award (Automobil February 1996: 10). Nissan responded to the quality challenge and started its quality campaign with Team Drive 95. It was a continuous improvement programme which measured targets in four areas: upliftment of employees, improved quality, lower costs and reliable delivery (FM 18/8/95: 25). Charts in the genba kanri areas plot progress on these four concerns. Morning quality meetings with employees from operators to managing directors discussed defects and what to do to ensure that they did not recur (Nissan Driveline December 1996: 6). Nissan claims that the audited quality of its vehicles is almost the same as those from Japan. The company brought down its faults to single figures and set targets of 7.5% and 5% by 1997. Vehicle assembly operations and engine plant director, Peter Riley, expressed his
confidence in the following manner: "We are close to achieving First-World manufacturing with non-First-World facilities" (FM 18/8/95: 27-8). Automakers' concern for quality was crowned with the awarding of the ISO9002 Quality Certification in November 1995 for internationally recognised quality standards in all phases of manufacture in all its plants, an obvious important boost to its export drive (Mafata 1/2/1996; Nissan Driveline May 1997: 3).

While Nissan may have control over production of some components it does experience problems with the delivery of specialised steel to the stamping plant (FM 18/8/1995: 30). Just-in-time deliveries locally and from overseas are problematic. Returning the steel to the local supplier costs production time, money to rework the steel, and overtime is necessary. The supplier is investing in new equipment but such an operation takes a number of years. While its supplier drags out the process, Nissan may lose out to other international competitors - its stamping plant has important export contracts. A further problem with accessing other markets is the fact that SA steel is expensive. One positive aspect of the steel used is that most comes from Iscor which then supplies it to Baldwin's Steel to cut and press into
6.5 Working for Nissan

Attempting to blur the distinctions between management and blue collar workers is part of the Japanese model and its goal to get the workforce to identify with the objectives of the company (Florida & Kenney 1996: 61). Nissan SA has introduced the practice whereby management wear uniforms similar to those of shopfloor workers. This was stressed and demonstrated in both my meetings with the Human Resources Manager. The practice of blurring distinctions extends to a common parking lot for management as well as workers (Interview: Best February 1996).

Although the objectives of the MIDP include the "stabilising of employment levels" (Barnes 1998: 5), Nissan countered this soon after with the announced retrenchment of 900 workers at the beginning of 1996 (and the retrenchment of a further 450 in October 1998). Despite the negotiations which followed the first retrenchments announcement, there was the appearance of calm and productivity at the plant during my period of observation at the
It is argued that the introduction of green areas (genba kanri) effectively reorganises worker/management relations since no union matters may be discussed here but grievances can be dealt with to circumvent union involvement. Duncan and Payne (1993: 17) see this practice as a key element in controlling the workforce and focusing them on management's production objectives. For a long time, NUMSA had not been recognised at Nissan SA. From a shopsteward respondent I learned that NUMSA was recognised in 1987 (Interview: Nissan shopstewards and operators 9/3/98). Prior to this, management engaged in unilateral decision-making but now this was jointly done in the National Bargaining Forum. Nissan's legacy had been one of recruiting semi-rural workers and using headmen to reinforce discipline. The Fordist management style gave foremen absolute power over line workers (Duncan 1997: 75). Contrary to the view that, with the decline of the Fordist model, management appears to be "on the defensive against the power of the proletariat" (Duncan 1997: 76), industrial relations management at Nissan, after a bosberaad with the trade unions appeared to have achieved a measure of peaceful cooperative collaboration in restructuring
the plant towards world class manufacturing status (Interview: Hussman 9/3/1998). This relatively peaceful work environment management feels is also due to the training scheme it offers which will allow workers to move up to higher levels and earn higher wages. Management also envisages little job losses to occur due to the introduction of new technology, as "lack of money" holds back the introduction of new technology (Interview: Hussman 9/3/1998). With regard to the legacy of racial Fordism, in management's view, it has pre-empted the Employment Equity Bill as it claims that the majority of its supervisors are from previously disadvantaged backgrounds.

Nissan management are optimistic of the 1995 three year motor industry pact and is cognizant of its past conflictual relations with unions and the workforce and has attempted to coopt its two major unions NUMSA and Yster en Staal through separate and joint bosberaad meetings to deal with the issue of cooperation. Their assessment of employees response to cooperation is ambiguous: not all employees have heard the message but some awareness of the need to be constructive prevails.

Nissan claims that it is committed to an education and training
programme to raise employees' numeracy and literacy to standard seven level. It also claims commitment to an affirmative action policy with clear targets for each division but is not optimistic about its workers' patience (FM 18/8/1995: 32). In the view of the workers I interviewed there was still no clear criteria for advancement to supervisory positions. Only some of the workers enrol for the Adult Basic Education and Training (ABET) classes. One complaint though is that, because these are held in the late afternoon, few show an interest. If management agrees to the classes being in the morning up until 9:00am, as the shopstewards informed me which is what they wanted, more workers may enroll. Workers also expressed a disinterest in some aspects of the syllabus - they regarded the History classes as "useless" (Interview: Nissan shopstewards and operators 9/3/1998). This apparent lack of enthusiasm for Nissan's ABET programme is contrary to NUMSA's strategy of providing a general education for workers and not only improving workplace skills (Hirschsohn 1997: 236-8).

However, workers were sceptical of the gains of the education and training programme as they claimed favouritism and in some cases racial preferences were clear in instances when there were
vacancies. Their perception was that there are no promotion opportunities in the company.

On the issue of racial hierarchies in the company and authority relations, workers perceived there to be more Black supervisors than white, but these Black supervisors had no discretion or control on how to work with operators. In the view of another observer of the plant, Nissan may remain for a long time another company where management is predominantly white and whose management style is predominantly the North American Fordist paradigm (Duncan 1997: 63, 70). Of additional concern will be the evolution of relationships between the Black workforce and the expatriate Japanese advisers brought in and who may be more accustomed to a Japanese workforce that is more enthusiastic about kaizen methods than a Black South African workforce (Duncan 1997: 68).

The worker's perceptions of the retrenchments taking place at Nissan don't appear to be that of fear. One respondent reported that he was retrenched in the stamping plant but retrained as a quality controller. Their understanding of the impact of technological changes on their jobs also revealed little concern
as they reported that generally they would be retrained and redeployed to another part of the company's operations. A shopsteward respondent articulated the view that the retrenchments were due to a decline in the market. However, the first retrenchments were voluntary and most of the elderly workers took the offer. It appears that the retrenchments also discourage and prevent some of the workers from completing the education and training courses that they had enrolled for. In terms of the LRA management has to negotiate with workers and shopstewards when new technology is employed. When a new stamping machine was introduced there was, however, no need for Nissan management and the unions to negotiate this since it did not threaten jobs. However, there has been a need to negotiate outsourcing. Some outsourcing has occurred in tooling manufacture.

Workers' impressions are that the quality of the company's products has improved and also the pace of their output or productivity. The women sewing machine operators claimed to be making 150 seats per day whereas, without specifying a time, they said that "in the past" they made 70 seats per day. In their view their attitudes towards quality have changed along with
their enthusiasm for certificates and trophies as part of the kaizen system. The view of one of the shopsteward respondents was more militant than that of the shopfloor workers; for him, kaizen was bad because it "reduces people", it is done along with time studies, and consequently people lose their jobs. Workers agreed that there were some job losses at the trimplant.

Certain aspects of the co-determination model, which it is argued is key to successful industrial restructuring, appear to be prevalent at the Nissan plant. There has been almost no worker resistance to the technological changes, and there is evidence of flexibility in work organization and internal mobility of the workforce (Barchiesi 1998: 69).

6.6 Conclusion

Nissan SA is one of the long-standing motor vehicle producers in SA. Its parent company, Nissan Company of Japan did not immediately follow the trend towards lean production in the manner that it was set by its rival Toyota (hence the references in some sources to lean production as "Toyotism"). It is interesting to note reports that when the parent company did move
towards lean production, its Japanese workforce was resistant, yet its workforce in subsidiaries outside of Japan were compliant with a range of lean production features. This brings us to the observation that within countries there are differences amongst firms and the extent to which they have approximated the new best practice paradigm. Furthermore, within transnational firms and their subsidiaries around the globe, there are differences in their success with their restructuring towards lean production. In conclusion, lean production is not a uniform tendency in the firms within a country, and it is also not a uniform tendency within transnational corporations and their subsidiaries. Although Nissan Company of Japan has been a comparatively recent convert to this apparent new best practice, it had to shut down a newly-built plant in Kyushu that was modelled along the lines of the new paradigm. Japanese vehicle manufacturers are not by any means invulnerable to the vacillations of a global economy; a number of its companies, including Nissan are reporting profit losses and increasing debt. Consequently, vehicle manufacturing transnational corporations are forced into mergers, a trend Nissan has not escaped. These are some of the challenging phenomena in a context where all the motor vehicle transnational companies are restructuring their operations on a global scale.
The growth of the SA based subsidiary was nurtured through various local content programmes and it succeeded in rising to the position as number one on the market during 1976-8, but it has faced some challenges as the Fordist growth model developed problems in the 1980s both in the era of a switch to neo-liberal policies during the National Party Reform period as well as under the ANC government's dropping of trade barriers. Nissan SA has sought closer ties with its Japanese based parent company and its global production strategy as well as joint ventures with other manufacturers, namely, Fiat and Uno. The relationship with Fiat is significant especially in terms of capturing a part of the low-price vehicle market and the gains of the Small Vehicle Incentive.

It has successfully conquered a niche of the relatively small domestic market and is a successful exporter too. However, the MIDP objective of making cars lower priced and affordable to a bigger market has diminished the companies' profit levels as a consequence of a price war. While Nissan may show signs of competence in interfirm rivalry, a necessary factor to make local firms internationally competitive, it will, for the short term, have to endure with profit margins which are lower than during
the era of tariff and local content protection. Regardless of the gloomy outlook that some signals project, the company's confidence in the growth of its local and international sales is evident in the multi-million Rand investments it continues to make and that it attracts from the parent company which, as a survival strategy, now has majority control of the subsidiary.

Just like the Fordist model of production organisation never became the dominant paradigm, so too we see that the organisation of production at Nissan SA is not wholly Fordist nor is it wholly one of the post-Fordist variants. It has shown success in developing its own hybrid of assembly-line production, a small level use of robotics, incorporated aspects of lean production and just-in-time, and as a consequence of this combination has the ability to produce small batches of high-quality vehicles. Whether it is a stable hybrid or if it is in transition to a full-scale lean production model can only be seen well in the future and in conjunction with the overall impact of the MIDP on the automotive industry.

Its relations with its workforce are not overtly conflictual; workers are supportive of its quality and productivity drive; it
has not undermined the presence and role of the union; however, there are some areas of the company’s restructuring which still do not appease the workforce. While there is much investment in new capital and new vehicle lines it has not meant the creation of an abundance of new jobs. Contrarily, more jobs have been lost and the introduction of a new Fiat line created only 100 new jobs. Skills development is an important complement to the MIDP and to the success of SA firms as global competitors. While there are structures in place at Nissan SA to improve the learning background and skills of the workforce, there also appears to be a notable measure of disinterest in these by the workforce. Much of this disinterest is tied to a perception that the old racial-Fordism practice of a race hierarchy in the workplace is not being addressed adequately. New institutional arrangements which are regarded as important codetermination or corporatist structures, like workplace fora to discuss productivity, are still not accepted amongst the workers. Despite this it is argued that sufficient compliance and control of the workforce has been achieved through their compliance with the genba kanri and kaizen practices. This worker compliance along with other managerial practices and initiatives as well as some measure of investment in latest technology have improved the
products and their volume at Nissan SA making it a potentially well established world class manufacturer.
Along with the political transformations in South Africa, the economy is undergoing transformation too. From a growth model characterised by Fordist organisation of the workplace, mass consumption patterns, race inequalities and labour repressive policies, and protection of local industries, the SA economy is navigating a path towards a new growth model. Navigating that path is informed by a range of models of the destination it should reach.

The industrialisation and economic development policies of the SA state in the early period of the country's capitalist industrialisation had targeted the motor vehicle and component manufacturing sector. It was anticipated that various economic objectives, for instance, skills development and reduction of foreign currency would result from the success of this particular sector of the economy. The protectionist strategies developed inherent longterm problems - industries were not driven to be competitive, skills were poor in comparison to many economies.
with open markets, and technology lagged behind latest innovations. Subsequently, the problem of "deindustrialization" emerged - the manufacturing sector's contribution was reduced in favour of primary products exports. Current developments in the SA motor vehicle, especially when looking at the recent decline in the physical volume of production suggest that the problem of deindustrialization will still be around for a long time. On the other hand, there is are optimistic achievements; statistics for the first three years of the MIDP show that there has been a tremendous increase in motor vehicle exports compared to the local content era. An additional optimistic achievement is that the percentage of SA manufactured vehicles that are entering developed country markets is increasing. This is contrary to the pessimistic forecast that these markets would be difficult to penetrate. SA no longer needs to depend upon the less developed African countries in its backyard as markets although they still remain important.

Models of the new successful paradigm include a relaxation of protectionism in favour of neo-liberal free trade policies, and a reorganisation of a country's production system as part of an industrial restructuring drive to become a competitive producer
and exporter of motor vehicles.

Aspects of these economic transformations are grasped in several sociological theorisations of features of the new paradigm. These theorisations vary in the scope of the phenomena that they incorporate in their examinations of an economy that is on its way towards a new growth model. Regulation Theory tends to be more holistic in the range of social and economic phenomena that it grasps in its account of a transformation. Theories like lean production and 'just-in-time' production are middle range in focusing on the organisation of production within plants and the relationships between firms within a sector. Theories of corporatism focus on the facilitating institutional arrangements between the main economic actors - state, capital and labour, may also be associated with the middle range. Diversified quality production and flexible specialisation theories focus on the micro-level on technological innovations within firms and their contribution towards the competitive drive for lower prices and improved quality. This exploratory dissertation into the transformations underway in the economy has attempted to draw from the insights of these theories in a complementary fashion.
The case study of Nissan and the transformation patterns and potentials of SA firms have several models offering criteria to evaluate their progress. The Motor Industry Development Plan also has criteria by which in its mid-term review it evaluates the status of the plan. It's not only models like Porter's Global Advantage approach which are of use in assessing the MIDP's impact, but, the aforementioned sociological theorisations have significance in comprehending factors influencing the transplanting of elements of a new paradigm into SA.

At an empirical level we can assess whether objectives like skills development, job creation, model rationalisation, increased imports, declining use of foreign exchange, improved quality of products and production in volume, are being achieved. The advantage of the sociological insights is their account of why these objectives may or may not be realised. What the empirical information has informed us is that the concern about skills development has put in place structures that facilitate it but the quality of the schemes must be such that they ensure the interest of the workforce. Job losses in many industries have been prominent since GEAR and tariff reductions were installed. The job losses in the motor vehicle and components
sectors have also made their contribution to the growing problem in the economy. An irony of this in the motor vehicle industry is the commitment of several hundreds of millions of Rands in new capital investment by just about all the manufacturers but they also announce retrenchment plans in the same breath. It may be too early to judge whether SA manufacturers will trim down on the number of models they assemble and steer towards volume production. However, what we have seen during the first three years of the MIDP is a small increase in the number of models manufactured but also a small increase in the volume of some models. The objectives then of reducing model proliferation and achieving greater volumes will be influenced by the trends in international demand for SA manufactured vehicles as well as the value of the SA currency in relation to its global markets as well as the currencies of other vehicle manufacturing countries. The increases in vehicle and component exports have certainly meant greater earnings in foreign exchange. But this has been undermined by the effect of reduced tariffs causing an even greater rise in imported vehicles and components. Consequently, the balance of trade during the MIDP years has worsened by an greater margin than in the local content years. As long as the government remains committed to
a continuity of its policy as the mid-term review states, and as long as component producers do not produce in greater volumes for global markets at competitive prices, the situation will worsen. In fact, many component producers are likely to be put out of business. Survival strategies for some will include mergers with other firms in the sector.

In the case of Nissan SA it is clear that a dependent relationship exists on transnational parent companies for financial investment, technology transfer, and skills development. These transnational companies will continue to have a role to play in local companies' efforts to enter global markets through a close incorporation of local companies into their global strategies. So, regardless of the coherency of any government's industrial restructuring strategies for the motor vehicle sector in a country, the choices made by transnational corporations in their global restructuring plans will also determine whether particular firms will have a future contributory role in a country's economy. In a sense, governments and the success of their policies are subject to these global actors, and it cannot always be the other way round. We can learn from theories of corporatism how the relations
between organised labour and the state and subsequent policies may constrain the attaining of latest standards of technology and diversified quality production. The constraints arise out of labour's about the job loss consequences of, for instance, robotics in the motor vehicle manufacturing industry. One should also bear in mind the overall job loss implications of GEAR's competitive drive and the Industrial Strategy Projects' encouragement of investment in technological innovations. Through these insights we learn that constraints on technological upgrading has more to do than with the costly nature of that technology rather than organised labour's fears about new technology and their subsequent opposition thereto.

An account of the move to a new regime of accumulation and the accompanying norms, behaviour etc. in its mode of regulation must take into consideration the insights of studies of the implementation of lean production and what theories of corporatism have to say of emerging institutional arrangements. Nissan has it measures of success with implementing lean production. Not all the components come from outside manufacturers, Nissan has its own in-house components suppliers. Furthermore, given the geographic distances between vehicle
manufacturers and components suppliers it makes it impossible to switch to the regular and on-time supplies which characterise lean production. Throughout all the SA based firms there may be several hybrids which can only approximate a limited number of features of the new best practice paradigm. Labour and motor vehicle manufacturing companies relate to the state differently and whatever corporatist outcomes may result differ for the respective parties.

While there may exist models of the new paradigm that ought to be transplanted, an empirical study demonstrates that firms can, through adaptations of those models and a hybrid fused with aspects of a receding paradigm, still emerge as successful companies. Nissan SA combines a characteristically Fordist labour intensive assembly line production with latest technology robotics and some measure of worker participation strategies, and an adaptation of just-in-time suitable to its scale of operations in terms of the volume of different models that it produces and the nature of the component supplier sector in SA.

Implanting the Japanese model in Japan was successful only under conditions of stamping out labour militancy and putting into
place participatory structures and job security promises. Cultural factors were a minor factor in the rise of the Japanese paradigm. Furthermore, it was not a dominant paradigm to be encountered in just about all motor vehicle companies in Japan as the case of the Nissan parent company proves. Relations between the unions and the state are different in SA. Corporatist theories are insightful into the influence that unions have on policy-making and the gains they make from policies. The Labour Department sponsors policies in favour of significant worker rights. On the other hand, the productivity concerns of firms favour certain participatory structures like the workplace fora to gain worker consent to company restructuring plans. While workers affiliated to COSATU and NUMSA may not be in support of participating in these structures, it does not mean that worker consent to strategies that enhance efficiency, quality and productivity is not forthcoming. The acceptance of genba kanri and kaizen is evident at Nissan. Thus it is that some aspects of institutions and behaviour can be transplanted and with profitable outcomes for the company.

Corporatist theories attempt to explain business influence on state policy. Business accepts the need to become globally
competitive and the measures that facilitate this, but it does not go along with the pace that DTI dictates through its tariff decrease structure. In fact, even after a mid-term evaluation of its policy which revealed some short term gains as well as setbacks, government remains committed to its continuation of a tariff reduction schedule which is above that required by GATT.

While borrowing from dominant paradigms, SA firms then will develop their own successful restructuring patterns. The social construction of the new growth model that SA assumes is no clear break away from Fordism and is embedded in the expectations and outcomes of the actions of individuals and larger collectives like firms of what things should be done. The socially embeddedness of the nature of an economic phenomenon like industrial restructuring in SA is characterised by an acknowledgement by labour that skills need to be improved and industries need internal restructuring hence the initiatives that they had taken in this regard. Industrial restructuring has not been the sole prerogative of firms and their management taking economically rational profit and maximizing decisions and subsequent measures. It is also prompted by a new government and its concerns with job creation, improving its revenues and the
pressures to decrease foreign exchange usage through changes in the balance of trade, while at the same time legislating to undermine the legacy of apartheid created inequities. The phenomenon is still in its short-term or infancy and perhaps a more fair judgement on the prospects of the configuration of positions held by different social agents and the paths they take should be held for study a few more years from today.
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<td>BD</td>
<td>Business Day</td>
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<td>CTBR</td>
<td>Cape Times Business Report</td>
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<td>DTI</td>
<td>Department of Trade and Industry</td>
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<td>GEAR</td>
<td>Growth Equity and Redistribution</td>
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<td>IDC</td>
<td>Industrial Development Corporation of South Africa Limited</td>
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<td>ISP</td>
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<td>FM</td>
<td>Financial Mail</td>
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<td>M &amp; G</td>
<td>Mail &amp; Guardian</td>
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<td>MOTI</td>
<td>Ministry of Trade and Industry</td>
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<td>NEDLAC</td>
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<td>RDP</td>
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