

GOVERNMENT INTERVENTION AND THE RESULTANT SECTOR PERFORMANCE OF SOUTH AFRICA'S DIAMOND INDUSTRY

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I declare that this dissertation is my own, unaided work. It is being submitted for the Degree of Master of Science in Engineering in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.



17th day of May 1993

ABSTRACT

Since the discovery of diamonds in South Africa, Government has played an active role in the establishment of a local processing industry, aimed at the adding of value to locally mined rough diamonds.

This study evaluates the influence of Government support and regulation in the performance of South Africa's diamond industry.

Statistics were supplied mainly by the South African Diamond Board, the Minerals Bureau and the departments of Finance, and Trade and Industry. Discussions with prominent diamantaires were also undertaken to contrast statutory reporting with informally sourced facts.

South Africa's diamond industry underperforms, particularly the processing industry which benefits from State support at the expense of the other diamond sectors. Government's indirect support of the processing sector cannot be justified in view of its dismal performance.

The entire diamond industry should be deregulated, and State involvement in the processing sector (with special emphasis on the taxation structure) re-evaluated.

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ABBREVIATIONS

ALEXKOR	ALEXANDER BAY DEVELOPMENT CORPORATION (PTY) LTD
CA	CHARTERED ACCOUNTANT
CSO	CENTRAL SELLING ORGANISATION
DBSA	DIAMOND BOURSE OF SOUTH AFRICA
DE BEERS	DE BEERS CONSOLIDATED MINES (PTY) LTD
DEBID	DE BEERS INDUSTRIAL DIAMONDS (PTY) LTD (subsidiary of De Beers)
DEBIDD	DE BEERS INDUSTRIAL DIAMONDS DIVISION (PTY) LTD (subsidiary of De Beers)
DIAMDEL	DIAMOND DEVELOPMENT COMPANY (PTY) LTD (subsidiary of De Beers)
DICORP	DIAMOND CORPORATION (PTY) LTD (subsidiary of De Beers)
DPA	DIAMOND PRODUCERS ASSOCIATION
DTC	DIAMOND TRADING COMPANY (PTY) LTD (subsidiary of De Beers)
DWU	SOUTH AFRICAN DIAMOND WORKERS UNION
GEIS	GENERAL EXPORT INCENTIVE SCHEME
HOH	HARRY OPPENHEIMER HOUSE (De Beers' RSA CSO office in Kimberley)
IDB	ILLEGAL DIAMOND BUYING
MB	MINERALS BUREAU OF SOUTH AFRICA
OPEC	ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES
PROVAL	PROFESSIONAL DIAMOND VALUATIONS CC
PURTRA	DIAMOND PURCHASING AND TRADING COMPANY (PTY) LTD (subsidiary of De Beers)
RSA	REPUBLIC OF SOUTH AFRICA
SADB	THE SOUTH AFRICAN DIAMOND BOARD
SAP	SOUTH AFRICAN POLICE
SSV	CSO'S STANDARD SELLING VALUE
TRANS HEX	TRANS HEX GROUP LTD
car	carats
M	Million
R	RSA Rand
vs	very small inclusions
vvs	very, very small inclusions
\$	US dollar

CHAPTER 1

1 INTRODUCTION

1.1 Statement of the Problem

In South Africa, a near monopoly on rough diamond production exists in that De Beers Consolidated Mines controls approximately 95 per cent of local annual output. Considering the importance of diamonds for the country as a whole, Government became involved in the diamond industry in a supporting and regulatory manner. In particular, the State intervened in diamond beneficiation through the establishment of a diamond processing (cutting and polishing) industry in the 1920's.

Currently, the South African Diamond Board (SADB), a body provided for in the Diamonds Act (No 56 of 1986), regulates and monitors South Africa's diamond industry. Fundamentally, the law encourages rough diamond producers to first offer their output to the local industry before being allowed exemption of a 15 per cent export duty.

Since Government propagates free-market economic principles, this supporting and regulating role of the State has increasingly come under attack. The lack of industry performance, in particular that of the processing sector, is questioned in view of Government's continued involvement.

1.2 Purpose of the Study

This study evaluates the influence of Government support and regulation in the performance of South Africa's diamond industry.

This examination is intended to establish objectively the relative importance of the diamond mining, trading and processing sectors for the country as a whole, but more importantly, advise Government in its effort to create an environment wherein South Africa's diamond resources could be optimally utilised.

1.3 Justification of the Project

Of the approximately 60 major mineral commodities mined presently in South Africa, diamonds ranked fourth largest in terms of total sales value in 1991. Owing to this, the foreign exchange generated through rough diamond exports and beneficiation, i.e. the adding of value through processing, is of utmost importance.

Also, since the inception of the SADB in October 1986, Government has sought to examine its role to establish whether South Africa's diamond resources are optimally utilised. Through the new Minerals Act (No 50 of 1991), the State purposes to assist the local mining industry by allowing easier access to resources, and also, to minimise Government involvement through a process of deregulation. This study endeavours to direct Government's future role in the diamond industry.

Several Commissions of Enquiry have been directed at South Africa's processing industry since its establishment. Key issues addressed were the lack of profitability in this sector and its contribution to the South African economy.

1.4 Limitations of the Project

The statistics of the processing industry presented in the dissertation are applicable to a short time-period, viz., three years (1988-1990).

In addition, limited data is available on rough and polished diamonds processed, and value added figures are suspect. A severe problem has been the compiling and verification of confidential statistics.

Most importantly, confidential diamond statistics (particularly of individual companies) had to be replaced with general data, in order that the dissertation be allowed publication.

1.5 Preview of the Organisation of the Remainder of the Dissertation

Chapter 2 commences by historically reviewing State involvement in the diamond industry. Chapter 3 provides an overview of economic theories on government intervention in an economy as well as the CSO's policy of single channel marketing of rough diamonds. In chapter 4, local rough diamond supply is addressed followed by an examination of the diamond trading structure (Chapter 5) in South Africa. Diamond processing is examined in chapter 6, and the performance role of the entire industry in chapter 7. Government

support and regulation follows in chapter 8 and conclusions and recommendations in chapter 9.

1.6 Resumé

No detailed and analytical studies of South Africa's rough diamond mining, trading and processing industries have been published, principally because of the confidentiality of statistics. However, Government launched several Commissions of Enquiry into, in particular, the diamond processing industry. Noteworthy were the enquiry by the Browne Committee (Komitee van Onderzoek na Deviesebeheer- en Belastingwanpraktyke in die Diamantbedryf, 31 Julie 1980) which stressed that the processing industry underperformed in terms of foreign exchange and income tax revenues.

A 'Departementele Komitee van Onderzoek na Sekere Aspekte Rakende die Diamantbedryf, 27 September 1984', and the 'Verslag van die Kommissie van Onderzoek insake die Diamantbedryf van die Republiek van Suid-Afrika en die Gebied Suidwes-Afrika, 16 November 1970', have also been undertaken. Where deemed applicable, information from these enquiries has been used in this study.

1.7 Sources of Data

Principally, data was sourced from the SADB and the Minerals Bureau of South Africa. In addition, statistics were supplied by the Diamond Bourse of South Africa, the departments of Finance, and Trade and Industry. Interviews were conducted with several prominent producers, dealers and cutters.

Also, statistics and comments furnished by prominent and respected diamond analysts of local broker firms were used to fill the gap of non-indexable confidential data.

CHAPTER 2

2 HISTORICAL OVERVIEW OF MAJOR DEVELOPMENTS IN THE DIAMOND INDUSTRY AND GOVERNMENT'S INVOLVEMENT

This chapter highlights Government's involvement in South Africa's diamond industry, principally through supporting and regulating measures.

2.1 Industry Development and Government's Involvement

In 1866, the first discovery of diamonds in South Africa occurred. Shortly thereafter, from 1869 to 1871, alluvial and kimberlite deposits were found in the Kimberley area. These discoveries coincided with the opening of the Jagersfontein and Koffiefontein diamond mines.

In 1888, amalgamation of the individual producers by De Beers Consolidated Mines Ltd took place. Two years later, the Wesselton Mine commenced production. The Diamond Syndicate (a consortium of large diamond dealers with the necessary overseas contacts) purchased rough diamonds from large, local producers on a contractual basis. They bought enough rough diamonds (in volume) on the open market to secure a degree of price stability. The forerunner of the CSO (founded in the 1930's; discussed in chapter 3) was established.

The Premier Mine started up in 1902, ahead of the world recession of 1907. During the 1914-18 First World War, in 1915-16, the export duty on rough diamond exports was put into effect. The duty was calculated on a sliding scale with five per cent of the rough diamond export value as maximum. The duty was mainly intended to contribute to State venues, but Government agreed that the duty should facilitate the development of a local processing sector. The export duty was, however, only levied on rough diamonds that originated from kimberlite mines. During this period, De Beers secured the controlling interest in the Premier Mine.

In 1919, the rough diamond export duty increased to 10 per cent (now also applicable to rough diamonds from alluvial deposits). The 'Act on Diamantslijperijen' was finalised. Of the many regulations set out in the Act, two were of special significance:

- (i) The Minister could command a producer/dealer to supply rough diamonds according to a cutter's demands, if the cutter failed to successfully negotiate its requirements.
- (ii) The Minister must dictate the prices of rough diamonds channelled to the cutter, including the concession prices that the local cutters enjoyed, which were 10 per cent less (on average) than the London CSO prices, i.e. international prices.

The Lichtenburg alluvial fields were discovered in 1925. Act 39 of 1925 was finalised, allowing Government the control of mine (kimberlite) diamonds only; not alluvial stones.

In 1927, the third world recession took place. Another local diamond discovery occurred, that of the Namaqualand alluvial fields. In the same year the Precious Stones Act (No 44 of 1927) came into effect, this time allowing Government control over alluvial diamonds. Despite the good fortunes enjoyed by the processing sector, it still remained small.

In 1928, Government congealed all private prospecting on Namaqualand alluvial fields and entered the diamond production fold through the establishment of the State Alluvial Diggings. Further Government assistance was at hand. In an agreement with a Belgian cutter (Rosenstrauch), the State finalised the founding of the first foreign cutting firm in Kimberley, instructed to train 500 South African cutters. At this stage, the local processing workforce totalled 775.

During the world recession of 1930-33, De Beers abandoned its mining activities at the Premier Mine, owing to the weak cash position of both its mines and selling organisation, and a massive rough diamond stockpile. Consequently, the Minister of Mining ordered a Commission of Enquiry into the local diamond industry (aborted in the same year).

In 1934, the Diamond Producers Association (DPA) was established. Diamond producers and Government were represented mainly to control local diamond production and marketing. Officially, De Beers' Central Selling Organisation (CSO) was sanctioned.

The diamond processing workforce in 1936 totalled a mere 211. During the Second World War (1940-45) the Belgian processing sector came to a standstill. As a consequence, RSA's processing sector moved to the foreground as a key, and important, supplier of polished diamonds.

In the 1950's, the Belgian processing sector regained its lost status. Both Africa's processing sector, however, encountered its first (of many) conflicts with labour disputes. As a result, the processing sector contracted.

During 1953, the Minister of Mining commissioned a 'Fact Finding' Committee to assess the status of, and to address discrepancies in the processing sector. The findings of the Committee led to the introduction of a quota system (constant volume of rough diamonds to cutters) accepted by the CSO as well as the MDCA (Masters Diamond Cutters Association), in 1956.

In 1955, The Diamond Cutting Act (Act 33 of 1955) replaced the Act on Diamantslijperijen of 1919.

Up until 1956, all rough gem diamonds from 'associated suppliers' (part of the CSO) were supplied to the processing sector on the basis of the amount of workers in service of a firm. This criterion of supply, combined with the cutters' opinion that a shortage of rough diamonds existed that could be profitably polished, led to fierce labour competition between firms (normally done through salary adjustments). With the introduction of the quota system, diamond cutting firms now received an allocated assortment of rough diamonds on a constant basis, the Minister being a decision maker on the qualities and quantities the cutters received.

In the early 1960's, the processing sector in South Africa started growing slowly due to growing diamond supplies (De Beers estimates of rough gem diamond supply improved). In 1961, the workforce of local cutting firms totalled 756.

In 1962/3, the Finsch Diamond Mine commenced production.

In 1966, the export duty on rough diamonds was increased from 10 to 15 per cent. Government continued its support of the processing sector by issuing new diamond licences with the provision of a quota of rough diamonds from the CSO. The CSO agreed to supply local cutters with London goods at London prices; during that year only 25 000 carats were supplied. The following year, the CSO continued its supply from London; a total of 50 000 carats. In 1968, the mass had reached the 100 000 carats mark.

Government granted permission for more apprentices to enter the processing sector in 1969.

Up to 1970, the South African processing sector had received all rough gem diamonds locally produced equal to, and above, 0,9 carats. The sector held a monopoly on Cape-yellow gems, which amounted to about 63 000 carats annually (originating from the then South West Africa). Licensed diamond cutting firms totalled 55. About 28 concerns employed a total of 13 so-called 'business schemes', i.e. mutual agreements in terms of diamond trade, finances, use of same premises, same directors etc.

In 1971, the workforce of the processing sector totalled 1603.

In the seven years from 1966-72, only 26 000 carats of the 175 000 carats of rough diamonds imported from London, were polished locally, mostly by the bigger firms. Cutters stated that the imported rough diamonds:

- (i) Were less profitable to work than local goods.
- (ii) Contained classes of diamonds that the local cutters did not specialise in.
- (iii) Produced lower yields than South African goods owing to their shape.

In 1979, the Diamond Cutting Act (No 89 of 1979) appeared. On 1 October, the Diamond Cutting Board, its predecessor being the Diamond Cutting Industry Board, was inaugurated. Seven years later, on October 1986, the South African Diamond Board (SADB) took over.

Up until 1 October 1986, i.e. the period before the inception of the SADB, rough diamonds were exported after payment of a 15 per cent export duty. De Beers had been granted a special formula for calculating the taxable export values on its rough diamonds which came into effect since the formation of the DPA in 1934. The formula was:

$SSV \times (98/100 \times 100/115)$, where SSV = CSO's Standard Selling Value for rough diamonds.

Effectively, it meant that 15 per cent duty was paid on 85,2 per cent of the SSV price. Historically, Government exempted also the Premier, Koffiefontein, Hefam, Star and Rovic diamond mines from the export duty, as these mines were deemed marginal, i.e. unprofitable should the export duty be paid by the mines.

However, on 4 March 1987, the SADB and De Beers (after strong opposition from De Beers) finalised an agreement whereby De Beers' rough diamond output be first offered to local cutters before allowed exportation, exempted from the 15 per cent export duty. Also for the first time, De Beers' entire production was classified into three categories, viz., SA, which are diamonds that can be economically processed locally (including so-called 'specials', i.e. stones of 10,8 carats and larger, as well as 'fancies', i.e. coloured and differently shaped goods); CONDITIONAL, stones which are considered by some cutters (not all) to be economical to process locally, and UNCONDITIONAL, rough diamonds exported duty free because they are considered uneconomical to process locally.

Another almost identical agreement between the SADB and Trans Hex Group Ltd (Trans Hex) was reached on 4 February 1988, whereby all Trans Hex's rough diamond output must be first offered on the Diamond Bourse of South Africa (DBSA) on a tender basis using a 'Reserve Price' system. In short, this system allows the producer to set a price on his rough diamond parcel whereon invited cutters tender (without knowing the Reserve Price). The highest bid is accepted as a true reflection of the market value of the diamonds. An unsuccessful sale leads to immediate exportation, duty free. The repatriation of the foreign sale is verified by the SADB (in conjunction with the SA Reserve Bank) within a given period (1 month).

In September 1987, the DBSA was established.

In 1990, the De Beers Venetia Diamond Mine commenced its mining operations. Recent assessments indicate that by 1993/1994, Venetia's annual output will total 5-6 million carats, making it the largest ever diamond mine in the Republic.

CHAPTER 3

3 ECONOMIC THEORIES ON GOVERNMENT INVOLVEMENT IN AN ECONOMY AND SINGLE CHANNEL MARKETING

Many conflicting ideas exist regarding the role of the State in a free market economy. So also, is the concept of single channel marketing of a commodity, which in this instance is diamonds.

This section aims to address these issues from a theoretical viewpoint. Where deemed relevant, factual reviews on State Policy and CSO operations are given.

3.1 Government Involvement in the Economy of a Country

To what extent should the Government of a nation be involved in the role of regulation and support?

Politically, the South African Government supports a free market economy, whereby individuals and groups are allowed freedom of entrepreneurial choice. South Africa is, in addition, a country richly endowed with important minerals.

In the case of rough diamonds, a near monopoly on production exists (by De Beers) which, from a free enterprise viewpoint, may be marketed according to De Beers' policy. The question surfacing now is whether or not State intervention in the diamond industry is acceptable, unwanted, or in fact a necessity.

3.1.1 The Mineral Policy of the South African Government

The White Paper on the Mineral Policy of the Republic of South Africa (Government Mineral Policy Framework, 1986, p 3), under the 14 point plan (of which six are deemed applicable) of the Government's Mineral Policy Framework, states the following:

- (i) The Government reaffirms its endorsement of the free enterprise system, which is regarded as a prerequisite for the continued health and growth of the country's mineral industry.

- (ii) The Government believes that every effort should be made to advance the existing spirit of co-operation between the State and private enterprise with regard to the development of the mineral industry.
- (iii) It is the Government's conviction that direct State intervention in the mineral industry would not be in the national interest and that its involvement must be of a complementary nature.
- (iv) The Government considers it of fundamental importance that the mineral industry should improve its productivity in order to enhance its competitiveness.
- (v) The Government reaffirms its commitment to the promotion of balanced economic growth, in terms of which no individual sector should be developed or benefited at the expense of another.
- (vi) Government reaffirms to further private initiative and effective competition.

In addition, Government's viewpoint, addressed under its Beneficiation Strategy (Government Mineral Policy Framework, 1986, pp 12-14) is aimed primarily at:

"...the optimal utilisation of all minerals produced in South Africa, subject to sound economic principles, with a view to increasing both domestic economic activity (coupled with the creation of additional employment opportunities) and foreign exchange earnings..."

The Paper also includes a nine point list of the requirements of the mineral community to enable this process. For the purpose of this study, attention is focused on four:

- (i) The provision and maintenance by the State of an adequate physical infrastructure to satisfy the requirements of the mineral beneficiation sector.
- (ii) Government promotion of the use of mineral commodities beneficiated in the RSA as substitutes for imported products.
- (iii) Realistic fiscal measures and incentives to stimulate the establishment of new beneficiation plants and the expansion of those already in existence.

- (iv) Encouragement by Government of foreign participation in local beneficiation projects, with a view to the augmentation of domestic capital sources, the importation of technology, and the establishment of a broader-based overseas market.

3.1.2 Economic Systems

Samuelson (1976, pp 148-149) states that the 19th century in America was one of rapid material progress and an environment of individual freedom, i.e. an economy in that state of laissez-faire which Carlyle called 'anarchy plus the constable'. There were also periodic business crises, wasteful exhaustion of irreplaceable natural resources, racial and sexual discrimination, extremes of poverty and wealth, corruption of Government by vested interest groups, and at times the supplanting of self-regulating competition by monopoly. No longer does modern man seem to act as if he believed "...that Government governs best which governs least...".

Samuelson continued that gradually, and in the face of continuing opposition, the constitutional powers of Government were interpreted broadly and used to 'secure the public interest' and to 'police' the economic system. Utilities and railroads were brought under State regulation; in 1887, the regulation of rail traffic across State boundaries; in 1890, laws against monopolistic combinations in 'restraint of trade'; after 1913, the regulation of banking, the Federal Reserve Bank set up to serve as a central bank. In the early 1900s food and drug acts were passed; loan sharks came under regulation; stringent regulation of financial markets following the abuses of high finance before and after 1929. He stressed that with the passage of time, the radical doctrines of one era became the accepted and even reactionary beliefs of a later era. State and federal legislation was expanded to include minimum wage laws; compulsory workmen's accident compensation insurance; compulsory unemployment insurance; old age pensions; public subsidy for medical care; maximum hour laws for children, women and men; regulation of factory conditions; compulsory collective bargaining, and fair labour relations acts.

What Samuelson implies is that private property is never wholly private, free enterprise never wholly free.

Unfortunately, not until long after the event will history tell us whether or not a given expansion of Governmental authority was a good or bad policy. Past history does seem to suggest this: Unyielding conservatism defeats its own purpose. Suffice to say, iron

without "give" will break suddenly under strain; flexible steel will bend. Brittle economic systems without the flexibility to accommodate themselves in an evolutionary manner to accumulating tensions and social changes, however strong such systems may appear in the short run, are in the greatest peril of extinction. If a system is to continue to function well, social institutions and beliefs must be able to adjust themselves to these changes (Samuelson, 1976, p 150).

In Hayek's "Serfdom Revisited" (Vaughn, 1984, p 122), K.I. Vaughn defines an economy as a spontaneous order which emerges from the purposeful actions of individuals but is, as a whole, intended by no-one. It cannot be said to have a purpose of its own, but only serves the purposes of the individuals whose actions create the order. Such an order is only possible, however, because individuals follow rules that make certain features of their behaviour predictable. Rules are important to set the framework within which the individuals can make their plans and pursue their interests. To a large extent, therefore, the kind of spontaneous order which emerges depends on the rules individuals follow both in their private dealings with one another and in their dealings with the State. Hayek stresses the importance of designing the 'right' rules. The immediate implication of Hayek's work on defining the rules of a liberal society was that Governments interfere in the particular operations of the spontaneous order at their (and their citizens') peril. Attempts to replace a spontaneous order with a conscious, comprehensive plan for society simply cannot work according to the planners' expectations.

Following on this, W.J Samuels (1979, p 223) writes that Governmental law influences the decisions made by 'private orders.' Every entrepreneur, in deciding how to invest his time, energy and money, calculates the profits expected from the course open to him. Every calculation includes an assessment of the law's impact on profits; subsidies make some investments more attractive while laws that force the entrepreneur to absorb the 'external' costs of an activity make that activity less attractive. To each entrepreneur, then, the law appears as a factor which affects his decisions but over which he has no control.

Thus, as S.H Schlichter (Samuelson, 1973a, p 14) stated:

"...every economic system must provide some way of doing three things... :

- (i) Getting goods produced.
- (ii) Determining what share each person shall have in the total product.

- (iii) Regulating the consumption of goods, that is, determining who shall consume these goods...".

The manner in which these three basic economic processes are performed stamps the economic system with its most essential characteristics.

Following on this, Hayek (Burton, 1984, p 92) stressed that:

"...nothing indeed seems more plausible, or is more likely to appeal to reasonable people, than the idea that our goal must be neither the extreme decentralisation of free competition, nor the complete centralisation of the single plan, but some judicious mixture of the two methods...".

Hayek (Burton, 1984, p 93) continued, saying:

"...both competition and central direction become poor and inefficient tools if they are incomplete; they are alternative principles used to solve the same problem, and a mixture of the two means that neither will really work and that the result will be worse than if either system had been consistently relied upon. Or, to express it differently, planning and competition can be combined only by planning for competition, but not by planning against competition...".

3.1.3 Free Enterprise

The free private enterprise system (Samuelson, 1973a, pp 14-19) is organised in an industry, in effect, by saying to an individual "you are free, subject to a few restrictions, to do as you desire." Under it the Government confines itself in the main to the suppression of fraud and violence and to the enforcement of contracts. The State does not itself engage in or attempt to guide the course of industry. It pursues a "let alone" or "hands off" policy. Competition, according to theory, is the great regulative force in a free private enterprise which establishes effective control over economic activities.

The most striking aspect of the theory of free enterprise is its assertion that intervention of Government in economic activities is unnecessary. The theory does not deny that restraints on human selfishness are needed. It simply asserts that we can trust competition to provide them. Closer enquiry reveals, however, that defenders of free

enterprise do not trust competition to do all things (Samuelson, 1973a, pp 19-20). Free competition may protect consumers against harmful foods, but it does not enforce contracts or prevent fraud.

Because the theory of free enterprise, invented several years ago to justify the demands of business men for the release from aggressive legal restrictions, assumes that competition is needed to prevent freedom from being abused, it must also assume that competition is a more economical method of production than monopoly. In many instances, however, it seems reasonably certain that monopoly is more economical than competition. 'Octopus' industries, i.e. power, water, railway for example, would make competition uneconomical due to the cost of duplication (Samuelson, 1973a, p 20). Therefore, although the theory that Government intervention in industry is unnecessary presupposes the existence of competition, the very absence of State interference often results in monopoly. Consequently the Government may find itself compelled to intervene either to enforce competition or to regulate monopoly. Either policy is a departure from the principle of free enterprise.

The 19th century was viewed as an age dominated, at least until its final quarter, by the principle and practise of laissez-faire (free market economy), expressed in terms both economic and social as "...the less Government intervention there was in the sphere the better..." (Taylor, 1978, p 13).

It is frequently argued (Samuels, 1979, p 219) that the more the State plans, the more power is placed in the hands of the planners. Social engineering begets power, and power tends to corrupt. The classical response has been the celebration of the free market economy. Social engineering and planning are perceived as the very opposites of the free market; intervention is the opposite of non-intervention. The legal expression of social engineering is perceived as a set of commands directed by the State to various citizens. The legal expression of the free market is perceived as facilitative law, of which the law of contract is the archetype. As social engineering is the opposite of a free market, so command law is the opposite of facilitative law.

Hayek (Burton, 1984, p 130) elaborates on this point, saying that:

"...unconstrained democracies provide an open invitation to special-interest groups to compete for ways to use Government to further their own ends at the expense of the general welfare of the community..."

From this, K.I. Vaughn (Burton, 1984, p 131) continued that interest groups have much to gain by lobbying for special favours from Government, while the average individual citizen stands to lose very little by their actions. Hence, interest groups have a much stronger incentive to organise to seek gain through preferential treatment than individuals have to stop them. More importantly, no interest group ever lobbies publicly for its own direct benefit; it always claims that its activities are in the public interest in some sense.

Be that as it may, Chancellor Helmut Kohl issued this warning (Day, et al., 1983, p 411):

"...particularly in these trying times it is necessary to keep the domestic markets, on all sides, free from (trade) restrictions. International trade must be able to fulfil its role in maintaining the competitive edge of our industries and in creating secure jobs..."

3.1.4 Government Involvement

No Government can remove itself entirely from involvement in the normal processes of a nation's economic life. All to a greater or lesser degree are consumers, all raise taxes and budget for their disposal. But above the minimal level the degree of Governmental participation can be, and historically has been, enormously varied (Taylor, 1978, p 59).

Haim (1968, p 104) reports that normally, the activities of the Government should support private enterprise. Where the State needs the products of private industry, tax money, spent in procuring the needed material, flows right back into the private sector. State regulation of private economic activity should, wherever possible, be indirect rather than direct and should support the forces of the market rather than interfere with them.

Worthwhile to mention here is the statement by Abraham Lincoln:

"...I believe the Government should do only that which the private citizens cannot do for themselves, or which they cannot do so well for themselves..."

Samuelson (1973c, pp 78-84) reversed Lincoln's formulation:

"...I believe the private economy should be left alone to do those activities which, on balance after netting out all advantages and disadvantages, it can best do..."

Samuelson elaborated on this in the following example:

"...traffic lights coerce me and limit my freedom, don't they? Yet in the midst of a traffic jam on the unopen road, was I really 'free' before there were lights? And has the algebraic total of freedom, for me or the representative motorist or the group as a whole been increased by the introduction of well-engineered Stop Lights? Stop Lights, you know, are also Go Lights..."

Samuelson also questions Stigler's attack on the defects of certain Government action (Samuelson, 1973b, pp 73-76). He stresses that, by itself, that is like pointing out certain defects of marriages. It is purely a lucky accident that so much of economic life can be performed reasonably well by markets. In fact, there are important cases where economics suggests that Government should intervene. For instance:

- (i) Monopoly must be fought tooth and nail.
- (ii) 'Externalities', which are those sectors that pollute the environment, cry out for laws, zoning ordinances, concise rules of the road, taxes and subsidies.
- (iii) The distribution of income and of opportunity demands that Governmental measures should be undertaken to reduce inequality.

Samuelson concluded by saying:

"...There are no rules concerning the proper role of Government that can be established by a priori reasoning..."

In other words, deductive reasoning from a general principle to expected facts or effects will not enable the formulation of rules concerning the proper role of Government. Following on this, he emphasised that 'to state the rule that there are no rules' may sound like a self-contradiction. However, Samuelson's Law does not claim to be established by reason, but merely to be a uniformity of experience, i.e. his experience.

It can be said that traditionally, the fear of monopoly exploitation led to the establishment of a vast network of public regulation. Particularly in this sphere, Governments have reacted

in a controlling and legislating fashion. As Samuelson points out, the State should be involved in an economy threatened by monopolies through:

- (i) The maintenance or restoration of competition by suitable merger prevention policies.
- (ii) Where substantial competition cannot be achieved, the entry into the field should be controlled by the State.
- (iii) In the few cases in which monopoly cannot be eliminated it must be left alone simply because there is no known method of effective control.

G.G Stigler (Samuelson, 1973b, pp 73-78) commented that the economic tasks the State should do, be considerably less than it could do, and that the State should adopt plausible rules concerning feasible economic controls. These rules are:

- Rule 1: The State can not do anything quickly.
- Rule 2: When the national State performs detailed economic tasks, the responsible political authorities cannot possibly control the manner in which they are performed, whether directly by Governmental agencies or indirectly by regulation of private enterprise.
- Rule 3: The democratic State strives to treat all citizens in the same manner; individual differences are ignored if remotely possible.
- Rule 4: The ideal public policy, from the viewpoint of the State, is one with identifiable beneficiaries, each of whom is helped appreciably, at the cost of many unidentifiable persons, none of whom is hurt much.
- Rule 5: The State never knows when to quit.

These rules, and others that could be added, do not say that the State cannot socialize the growing of wheat or regulate the washing of shirts. What the rules say is that political action is social action, that political action displays reasonable stable behavioural characteristics, and that prescriptions of political behaviour which disregard these characteristics are simply irresponsible.

Hayek (Burton, 1984, pp 95-96) continued on the creation of interest groups by Government intervention. He stressed that virtually all acts of Government create a group of (net) beneficiaries and another group of (net) losers*. For example, subsidies to declining 'smokestack' industries are welcomed by their management and employees, but at the cost of delaying adjustment to the rest of the economy. Minimum wage laws are beneficial to employees who retain jobs, but harm people who are made unemployed by the measure. The inflationary financing of Government expenditure by expanding the money supply will, during the initial period when the inflation is not fully anticipated, redistribute wealth from creditors to debtors. Social security systems provide income for recipients and welfare administrators, but the costs have to be borne by tax payers. In short, there is no such thing as a free lunch provided by Government intervention: somebody has to bear the costs. Almost by definition, the two groups created by Government intervention, the beneficiaries and the losers, are likely to feel differently towards it, provided they appreciate what is happening. The beneficiaries will tend to favour the intervention and press for its retention and/or extension. Losers, if they are aware of the burdens imposed upon them, are likely to be much less enthusiastic, if not actively hostile. They have an inherent incentive to resist the burdens imposed on them, and, if they cannot resist them politically, to escape them by other means. Modern democratic Governments long ago discovered that, to stay in power by currying the support of a majority of the electorate, it is necessary to construct a plethora of interventions to retain the backing of important groups of beneficiaries, while hiding the costs to the losers, by dispersing them as widely as possible, even to generations yet unborn.

(* Economists envisage that Government provision of pure public goods, i.e. goods having technical features which prevent them from being marketable could possibly render all members of society net beneficiaries provided Government could judge the optimal supply correctly. This latter condition is impossible to implement in practise. Moreover, what some people judge to be a public good, others may judge a public 'bad' (a negatively valued good). Thus, if they are forced to pay for its provision by taxation, they are net losers. For example, while national defence is often considered a classic good, pacifists consider it a 'bad' and resent having to pay taxes to finance it.)

In conclusion, it can be said that the exact pin-pointing of Government's role in an economy, particularly in such a diversified and complex one in South Africa, cannot be easily done. But, Government unquestionably needs to be involved to such a degree

shaping the economic environment that will allow the optimal utilisation of a commodity, in this case diamonds.

Thus, State intervention should protect consumers (and the local industry) within an economy through regulation whilst remaining supportive, and should rather be defined as 'the creation of an acceptable opportunity' for those sectors that constitute the economy.

The State has the responsibility of fostering economic growth by means of capitalist market forces whilst intelligently policing the country's unique resources. Government, therefore, should always endeavour to fulfill a complementary role.

3.2 THE CSO AND ECONOMIC THEORIES ON SINGLE CHANNEL MARKETING

The Central Selling Organisation (CSO) is synonymous with the diamond industry. Established by De Beers Consolidated Mines (Pty) Ltd, the CSO controls the supply of rough diamonds worldwide.

The following section reviews the workings and structure of the CSO and provides a theoretical background to the concept of single channel marketing.

3.2.1 Review of the CSO

A short review of the history, objectives and structure of the CSO follows.

3.2.1.1 History of the CSO

During the late 1800s and early 1900s, the diamond market was subject to successive boom/bust cycles of about eight years duration. However, the Great Depression of the early 1930s brought the entire diamond industry to an almost complete halt. Demand for diamonds suddenly collapsed and the over-supply situation was exacerbated by the then newly discovered alluvial fields of Namibia, Namaqualand and Lichtenburg, which had begun producing large quantities of high quality diamonds at relatively low cost. Throughout the early 1920s, the diamond market was contracting and yet newly mined output was expanding. Due to producer conflicts, the public's faith in diamonds was reduced even further. As a result by 1934, De Beers' Kimberley mines had closed down. It was the Great Depression which engineered the concept of the CSO as we know it today. In principle, the CSO endeavours to control rough diamond world supply and

regulate sales, thereby attempting to curtail large price fluctuations. Others believe that the CSO creates a manipulated, artificial industry, where demand is controlled via the availability of certain categories of rough diamonds. (Miller, 1987, pp 37-38)

Nicholas Oppenheimer (De Beers, p 3), the current CSO chairman, said in his address to the Botswana Government recently:

"...history has shown that the level of diamond sales is linked to economic cycles and that without a single body regulating supplies to the market, diamond prices would fluctuate violently during these cycles. The CSO operates as a buffer pool between the producers and consumers, absorbing surplus production when market demand is weak, and providing an orderly and disciplined supply when the market is strengthening. The CSO exists to give producers and consumers confidence and to ensure the long-term stability of the industry..."

In 1929, the re-activated London Diamond Syndicate ceased its activities as a marketing channel and was replaced in 1930 by the Diamond Corporation, which Sir Ernest Oppenheimer absorbed into what became the CSO. All the significant producers at that time, Angola, Ghana, Namibia and Zaire, together with De Beers, agreed to sell exclusively through the CSO in London. The key principles underlying this new marketing policy were guarantees given by the CSO to buy all productions under set quotas at fixed prices, and to stockpile, together with its producer partners, when market conditions so required (De Beers, p 13).

3.2.1.2 CSO Objectives

In 1938, Sir Ernest Oppenheimer wrote in his foreword to Hedley Chilvers' "The Story of De Beers" (James Capel Mining Research, 1992, p 9):

"...in the purely diamond sphere (Cecil) Rhodes laid down as the policy of De Beers to acquire the control of diamonds in South Africa, and to arrange, in so far as possible, for the entire diamond production of the world to be marketed through one channel. These remain the fundamental aims of De Beers and principles on which the diamond trade is based. It was, moreover, now possible to design and conduct mining operations systematically and

economically, and what was of still greater importance, to regulate output according to market demand...".

Diamond prices have been successfully upheld as a result of single channel marketing, and this is the reason why the CSO has survived where other organisations involved with commodity stabilisation agreements have foundered. The example of OPEC and the price of oil is worth examining closer. Without ever being a central selling channel, OPEC tries to operate in many ways like the CSO, particularly in regard to harmonising production and consumption, and in stabilising prices. However, most, if not all the OPEC producers exceed their agreed production quotas and, although this does not constitute a large percentage of total oil sales, it is enough to undermine oil prices. Perhaps one should also mention the collapse in October 1985 of the International Tin Council which, overloaded with high-priced stocks, removed its support from the market, with disastrous consequences for the price of tin. Because the major producers freely consent to sell exclusively through one channel, the CSO is able to preserve an orderly market by matching rough diamond sales closely to final consumer demand. Diamonds that are surplus to the market's requirements and which would depress prices if made available, are kept in reserve. By selling through the CSO, the producers are protected against short-term price fluctuations and have the benefit of guaranteed sales at stable prices, an aspect critical for diamond mines.

These features of single channel marketing, and the matching of supply with demand, ensure price stability of rough diamond prices, and remain as valid today as they did some sixty years ago (Miller, 1987, p 46). They are fundamental to the operations of De Beers' CSO. According to the CSO's PR brochure:

"...the Central Selling Organisation provides the mechanism for the orderly marketing of the world's diamonds in line with demand in order to ensure stable market conditions. The CSO is best described as a producers' co-operative whose main role is:

- (i) To purchase an agreed minimum quantity of diamonds from major producers.
- (ii) To maintain substantial financial resources, which enables it to stock any surplus quantities of rough diamonds which the market cannot absorb.

- (iii) To market rough diamonds on behalf of major producers.
- (iv) To advertise and promote the sale of both gem and industrial diamonds on a global scale, utilising its unrivalled creative skills and knowledge of consumer markets...".

During De Beers' Investor Presentation to the financial community at the Carlton Hotel in Johannesburg, South Africa (De Beers, 1990), the following benefits of single channel marketing were highlighted:

- (i) Steady and sustained growth in diamond prices.
- (ii) Confidence throughout the industry leading to stability and continued prosperity.

To participating producers De Beers offers:

- (iii) Advertising, promotion and market research.
- (iv) Financial strength and buffer stock operation.
- (v) Guarantee of purchase.
- (vi) Research and development.
- (vii) Expertise in sorting, valuing and marketing.
- (viii) Knowledge of the diamond pipeline.
- (ix) A history of success.

Naturally, the demand for diamond jewellery is continuously stimulated by the CSO's sophisticated consumer advertising and promotional campaigns that cover 30 countries, and which are supported by a substantial annual budget (more than US\$160 million for 1993) (De Beers, 1992, p 41).

3.2.1.3 Structure of the CSO

The CSO is an association of diamond trading companies controlled by De Beers. De Beers attempts to control supply and not production since foreign producers have the option of either cutting back production or stockpiling at their expense. Such producers may not normally offer any excess production over their quotas for sale elsewhere. Supply of diamonds to the CSO, subject to quota impositions, is made attractive by the price received by the producers. This is generally a discount to the CSO official prices received at sights, in the region of 12 per cent, which is a small price to pay for the CSO marketing and advertising expertise and the guaranteed sale of at least a portion of the production. It is also significant that the CSO has never actually decreased the price of rough diamonds across the board. Whilst defection from the CSO and independent selling could perhaps result in increased sales volumes for a producer, such sales will probably be at a substantial discount. They may even be bought at that discount by the CSO, as happened to Zaire during its short defection in the early 1980s (Bright, 1987, p 70).

Bright continues (1987, p 75), stating that few inefficiencies have been exposed in the CSO system for regulating world diamond markets and hence prices during its many years of operation. Should another party be successful in obtaining large quantities of stones from non-CSO producers or defectors, De Beers with its immense stockpile, diversity of stones and huge financial resources could disrupt any competitor or sustain a price war. A considerable proportion of the world's quality diamond output comes from third world countries having few other sources of foreign exchange. De Beers' contracts ensure long-term income stability. However, a problem exposed in the CSO's system in recent years was that of dangerously low levels in diamond stocks (1977 to 1980). Being unable to supply sufficient quantities of certain types of diamonds to a world gripped with 'diamond fever', some producers became sceptical that they were getting the best possible deals from De Beers, and have since split their production, selling a portion outside of the CSO.

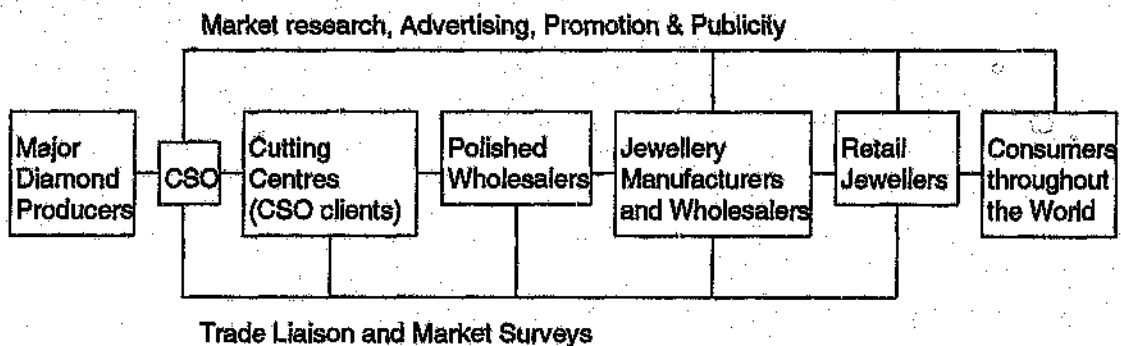
CSO sales are market-led and reflect the state of the market itself. Simplified internationally, De Beers' Diamond Producers Association (DPA) formulates policy and seeks to set output quotas. The Diamond Trading Company (DTC) buys gem diamonds from the DPA through the Diamond Purchasing and Trading Company (PURTRA). The DTC then sorts the diamonds and offers them to the general public at sales which are known as 'sights'. These sights occur 10 times per annum at the CSO's head office in London at 17 Charterhouse Street. Smaller sights take place in Johannesburg and

Lucerne, but these only account for about five per cent of the CSO's total sales (Miller, 1987, pp 38-40).

Roughly 80 per cent of the world's diamond production passes through the CSO. The remaining 20 per cent (the so-called 'outside market') consists mainly of widespread alluvial deposits in Africa, South America and elsewhere (De Beers, 1992, p 33).

The CSO employs 1300 staff in London, 600 of whom are sorters. Some 14 tons of rough diamonds each year (around 650 million stones) are sorted into well over 5000 individual categories (depending, mainly on size, shape, colour and clarity) (De Beers, 1992, p 35).

The full marketing channel (De Beers, 1990) that a diamond passes through on its journey from the earth to its final owner is commonly called the 'diamond pipeline', shown below.



In South Africa, rough diamond distribution by De Beers is as complex as that of International diamond distribution. Diamonds produced by De Beers mines, those from producers contracted to De Beers and other sources (diggers for instance), find their way to the Harry Oppenheimer House (HOH) in Kimberley where they are subsequently sorted and priced by CSO Valuations staff. From here, the rough diamonds deemed economical to process locally go first through PURTRA, which sells to the De Beers Sightholders. The DTC sells at regular 'sights' (10 times per annum as is the case in London) to De Beers sightholders, of which there are 20 (of the estimated 160 worldwide) in South Africa. However, local sightholders do not deal with CSO brokers as is the policy overseas. The DTC also sells to the Diamond Development Company (DIAMDEL) which again sells to non-sightholders. Diamonds deemed uneconomical to process locally are exported through the Diamond Corporation (DICORP) and De Beers Industrial Diamonds (PTY) Ltd (DEBID).

3.2.2 Economic Systems

The concept of single channel marketing, particularly in the case of rough diamonds, have received extensive praise and ridicule since the establishment of the CSO.

A concise review of those factors and market systems relevant to the diamond industry, which have often been misrepresented, is discussed below.

3.2.2.1 Background

Koutsoyiannis (1982, p 154) describes perfect competition as a market structure characterised by a complete absence of rivalry among individual firms.

In any economic system the production of goods take place, i.e. the creation of supply. Stonier (et al., 1972, p 33) states that supply depends on scarcity and whether a good is economically scarce depends on its relation to the demand for it. The answer to why goods are scarce then is that goods can only be produced with the help of the factors of production, e.g. workers, equipment, entrepreneurs etc, and these factors are themselves limited in amount.

The traditional theory of demand (Koutsoyiannis, 1982, p 13) has concentrated on four determinants; the price of the commodity, other prices, income and tastes. However, demand is a multivariate relationship, that is, it is determined by many factors simultaneously. Some of the most important determinants of the market demand for a particular product are its own price, consumers' income, prices of other commodities, consumers' tastes, income distribution, total population, consumers' wealth, credit availability, Government policy, past levels of demand, and past levels of income.

It can be said that the existing diamond industry in South Africa mirrors the international diamond industry, though, of course, much smaller in terms of production and consumption. De Beers contributes approximately 95 per cent to South African production.

Most interesting about the diamond industry is that the regulation of supply ultimately determines the level of demand. Moreover, it is the manipulation of supply that leads to the creation of an artificial industry. Often the mistake has been made by assuming that rough diamond production equals rough diamond supply. This is not the case. Internationally, De Beers only accounts for about 30 per cent (including Debswana, i.e. Botswana's diamond mines, and Namibia) of natural rough diamond production. It is

contractually linked to producers in Australia, the CIS, African Countries such as Zaire, Angola, Guinea etc and others worldwide which enables De Beers, through the CSO, to supply some 80 per cent of rough diamonds to the market. From here, the CSO 'prepares' the consumer market by advertising and polished diamond promotion campaigns.

3.2.2.2 Cartels

Within cartels, two collusive forms are found (Koutsogiannis, 1982, pp 242-243); non-price competition agreements (member firms agree on a common price) and determining of quotas (agreement on the quantity each member may sell).

Miller (1987, p 37) explains that for cartels to be able to survive the test of time, a sufficiently high share of production, or the price of the product (or commodity) needs to be controlled. A decline in the majority share of output undermines the global price and if the price is too high, substitution or conservation measures tend to erode the overall level of market demand. Inevitably, in weak markets cartel members become involved in competitive price-cutting. For a cartel to be successful, it must have a flexible (fair) price mechanism which:

- (i) Discourages the creation of new supply unless it can be simultaneously generate sufficient new demand.
- (ii) Provides little impetus for research into substitution and conservation.

Therefore, for a cartel to continue to expand, it must conform to the above criteria, but must also be able to:

- (iii) Demand that members reduce or stockpile production during periods of low economic activity.
- (iv) Finance the holding of excess supplies which may be needed during periods of lean demand.

In summary, a cartel must act in a way which is to the long term benefit of the majority of both producers and consumers. If otherwise, it is bound to fail.

3.2.2.3 Monopolies

A monopoly (Koutsoyiannis, 1982, p 171) is a market structure in which there is a single seller, there are no close substitutes for the commodity it produces and there are barriers to entry. The main causes that lead to monopoly are:

- (i) Ownership of strategic raw materials.
- (ii) Exclusive knowledge of production techniques.
- (iii) Patent rights for a product or for a production process.
- (iv) Government licensing or the imposition of foreign trade barriers to exclude foreign competitors.
- (v) The size of the market may not be able to support more than one plant of optimal size.

Importantly, Stonier (1972, p 200) stresses that many firms which are described as monopolists in discussion in the press, radio or television are not monopolists at all in the economist's sense of the word, i.e:

"...for a monopolist to exist, the only condition required is that within the relevant market area there shall be no close substitutes for the products of the firm in question..."

Monopolies have always been seen as something sinister and undesirable. Undoubtedly, some are. But, it cannot be claimed that De Beers has a monopoly of production since it only represents about eight and 16 per cent of the world's output by volume and value, respectively. This increases to 28 and 53 per cent respectively if Botswana and Namibia are included (James Capel Mining Research, 1992, pp 9-11).

3.2.2.4 Oligopolies

An oligopoly is a market form of imperfect competition. A monarchy has a single ruler, an oligarchy has a small group of rulers. The simplest case of oligopoly occurs when there are only two sellers and is known as duopoly (Stonier, 1972, p 227).

Koutsoyiannis (1982, pp 237-238) further emphasised that in terms of an oligopoly, two distinctive market industries are found; non-collusive and collusive oligopoly. The two main types of collusion are cartels and price leadership. Cartels imply direct (although secret) agreements among the competing oligopolies with the aim of reducing uncertainty arising from their mutual interdependence. In this particular case the aim of the cartel is the maximising of the industry (joint) profit. The situation is identical with that of a multiplant monopolist who seeks the maximising of his profit. In this study, we concentrate on a homogeneous or pure oligopoly, i.e. an oligopoly where all the firms produce a homogeneous product. The firms appoint a central agency, to which they delegate the authority to decide not only the total quantity and the price at which it must be sold so as to attain maximum group profits, but also the allocation of production among the group members of the cartel, and the distribution of the maximum joint profit among the participating members. The authority of the central agency is complete. Clearly the central agency will have access to the cost figures of the individual firms.

Price leadership (Koutsoyiannis, 1982, pp 244-248) is a form of co-ordinated behaviour of oligopolists where one firm sets the price and the others follow it because it is advantageous to them, or because they prefer to avoid uncertainty about their competitors' reactions. It may be practiced either by explicit agreement or informally. Price leadership is more widespread than cartels, because it allows the members complete freedom regarding their product and selling activities and thus is more acceptable to the followers than a complete cartel. There are various forms of price leadership. The most common are:

- (i) Price leadership by a low-cost firm.
- (ii) Price leadership by a large (dominant) firm, also a 'partial monopoly'.
- (iii) Barometric price leadership.

The price-leadership model will lead to a stable equilibrium if the leader has the power to make the other firms in the industry follow his price increase or price decreases, and provided that there is some agreement (or other means) for sharing the market, so that the followers produce the 'right' quantity, that is, the quantity which is required to maintain the price set by the leader. In order to have the power to impose his price the leader must be both a low-cost and a large firm. In the case of a barometric price leader, it is formally or informally agreed that all firms will follow (exactly or approximately) the changes of price in

a firm which is considered to have a good knowledge of the prevailing conditions and can forecast better than the others future developments in the market. In short, the firm chosen is considered as a barometer, reflecting the changes in economic environment.

Probably the most accurate description of the workings and structure of the CSO has been given by M von Saldern (Resources Policy, 1992, pp 45-58) in the process of acquiring his Ph.D thesis titled 'Forecasting rough diamond prices: A non-linear optimization model of dominant firm behaviour'.

He explains that the CSO, acting as a dominant firm, controls about 75 per cent of the world supply of rough diamonds and exercises substantial market power. By announcing non-negotiable prices and manipulating supply and demand through stockpiling and advertising activities, the CSO acts as a price setter and not as a price taker.

All major producers have found it in their economic interest to enter into sales agreements with the CSO for the benefit of stable and higher prices than would otherwise prevail. Typically, the CSO currently charges a 10 per cent commission for its services, which includes the actual sorting and marketing of a producers' entire product line, price supporting activities such as buffer stocks, and a major global advertising programme. While the CSO in effect guarantees minimum revenues to the producers and thus significantly reduces their downside market risk, it also retains the right to enforce production quotas. The CSO continuously faces the challenge that producers prefer to enjoy the benefits of higher prices without contributing to the costs of buffer stocks and global marketing. This is especially true of smaller producers who tend to market their goods independently since they evaluate their market risks differently from larger producers and enjoy a 'free rider' situation. Nevertheless, only about a quarter of the world's rough diamond production eludes the CSO. Thus, the interface between the extraction of rough gem diamonds and the further processing of these stones in cutting centres represents a bottle-neck at which the CSO commands substantial market power.

According to Von Saldern (Resources Policy, 1992, pp 47-48) out of the many economic theories describing non-competitive market structures the definition of an oligopoly, with the CSO acting as the dominant firm facing several competitive fringe producers, best portrays the given particularities. The CSO, and not De Beers, was chosen as the dominant firm because it is at the marketing level of rough gem-quality diamonds rather than at the production level itself that competition is most severely curtailed within the industry. The CSO faces fringe producers who market their production or portions of their

production outside CSO channels. The dependency between the dominant firm and all other suppliers of rough diamonds (the 'fringe') can be multifaceted. For the sake of simplicity the Von Stackelberg theory of price leadership was chosen to describe such interaction. According to the Von Stackelberg model the competitive fringe is assumed to be a price-taker, while the dominant firm acts as a price-maker who considers the reaction of the competitive fringe. In accordance with these assumptions, the dominant firm maximises its profit by applying the monopoly solution to its net demand. Net demand is defined as the residual demand obtained by subtracting the quantity supplied by the fringe firm from total demand; thus net demand represents the demand facing the dominant firm.

As a concluding statement, one can do no better than quote Mr Harry Oppenheimer, former Chairman of De Beers, when questioned as to whether De Beers operated a monopoly:

"...but if it does, it is certainly a monopoly of a most unusual kind. There is no one concerned with diamonds, whether as producer, dealer, cutter, jeweller or customer, who does not benefit from it. It protects not only the shareholders of diamond companies, but also the miners they employ, and the communities that are dependent on their operations (James Capel Mining Research, 1992, p 11)...".

CHAPTER 4

4 ROUGH DIAMOND SUPPLY

This chapter examines primarily the quantity and quality of rough diamonds mined from the various deposits in South Africa. The importance of De Beers Consolidated Mines is also evaluated.

4.1 Occurrence of Diamond Deposits

In South Africa, the largest proportion of diamond production originates from kimberlite pipes and fissures, followed by alluvial and then marine deposits.

The major kimberlite diamond mines in South Africa are the Finsch Mine (located in the Cape Province, near Lime Acres), Premier Mine (in the Northern Transvaal, near Cullinan), the Kimberley 'Pool' Mines (Dutoitspan, Bultfontein and Wesseltown in Kimberley) and the newly started Venetia Mine (at Alldays in the far Northern Transvaal).

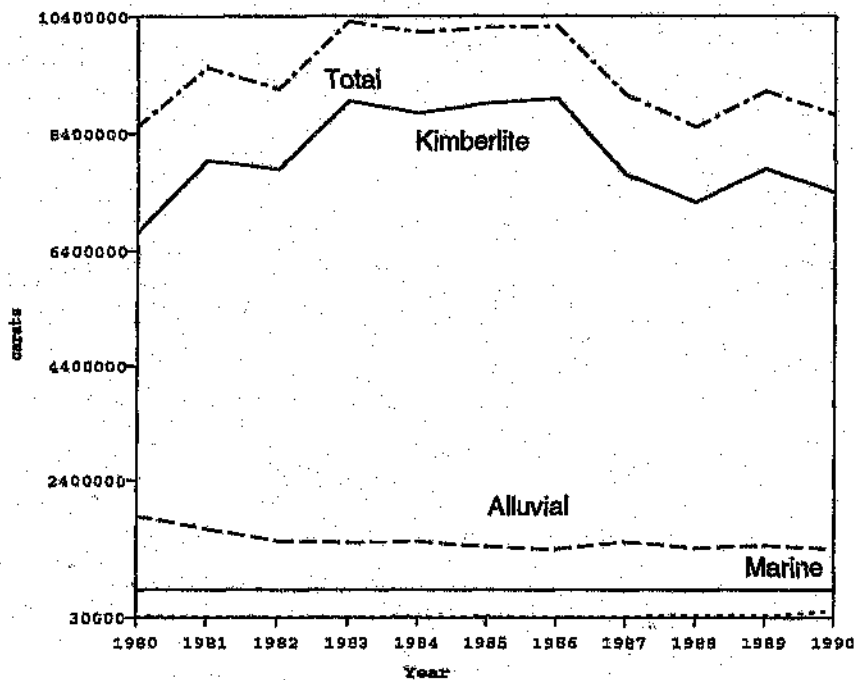
The principal alluvial deposits in South Africa are those found around the confluence of the Vaal and Harts Rivers (Prieska to Potchefstroom), those on the plains of the Western Transvaal (Lichtenburg and Ventersdorp districts), and those on the Namaqualand coast, from the mouth of the Orange River southward. Some minor occurrences of alluvial diamonds are also found in the Northern Transvaal, east along the Vaal River (Standerton) and further east, up the Orange River to Aliwal North.

Marine (coastal) deposits are mined on the West Coast, from Alexander Bay at the mouth of the Orange River, southwards. A total of 20 demarcated concession areas stretch from Alexander Bay down south past the Olifants River to Cape Columbine. Approximately 30 companies are active in these concession areas.

4.2 Production by Type of Deposit

Figure 4.1 depicts the kimberlite, alluvial and marine rough diamond production of South Africa from 1980 to 1990.

FIGURE 4.1 - RSA DIAMOND PRODUCTION BY TYPE OF DEPOSIT, 1980-1990



In 1990, South Africa's annual rough diamond production amounted to 8,71 million carats; fifth largest worldwide.

From 1980 to 1990, a total of 103,4 million carats were mined from kimberlite, alluvial and marine diamond deposits in South Africa (see Appendix 1). This equals about one year's current natural rough diamond production in the world.

4.2.1 Kimberlite Diamond Production

In 1990, 7,4 million carats of kimberlitic diamonds were produced. Its share of total output amounted to 85 per cent.

From 1991 onwards, the share held by kimberlite mines is expected to increase due to mining of the Venetia diamond deposit. Venetia's output of 5-6 million carats per year is expected towards 1993/1994. Theoretically, South Africa's diamond production should be boosted to some 14-15 million carats per annum. However, declining output from the older mines, particularly those belonging to the Kimberley 'Pool' group, i.e. the Dutoitspan,

Bultfontein and Wesselton Kimberley mines and Premier Mine, is expected to suppress higher output levels.

With the exception of Venetia, all South African kimberlite mining is currently underground. These mines are still expected to play a major role in the supply of gem-quality diamonds locally. But, it is expected that fewer gems will be recovered, due to deeper underground mining, and combined with this, an expected deterioration in quality and overall size. Diamonds recovered from the Venetia Mine are moderate to good gem-quality material. These stones may (still to be proven) be profitable to cut and polish locally. The stones from Venetia are assumed to be similar to Australian diamonds in terms of hardness (and twinning), making them more difficult and time consuming to process.

4.2.2 Alluvial Diamond Production

In 1990, alluvial output amounted to 1,2 million carats, or 14 per cent of total production. The approximate 400 alluvial diggers currently active make a valuable contribution to local rough diamond supply that is economically profitable to process locally.

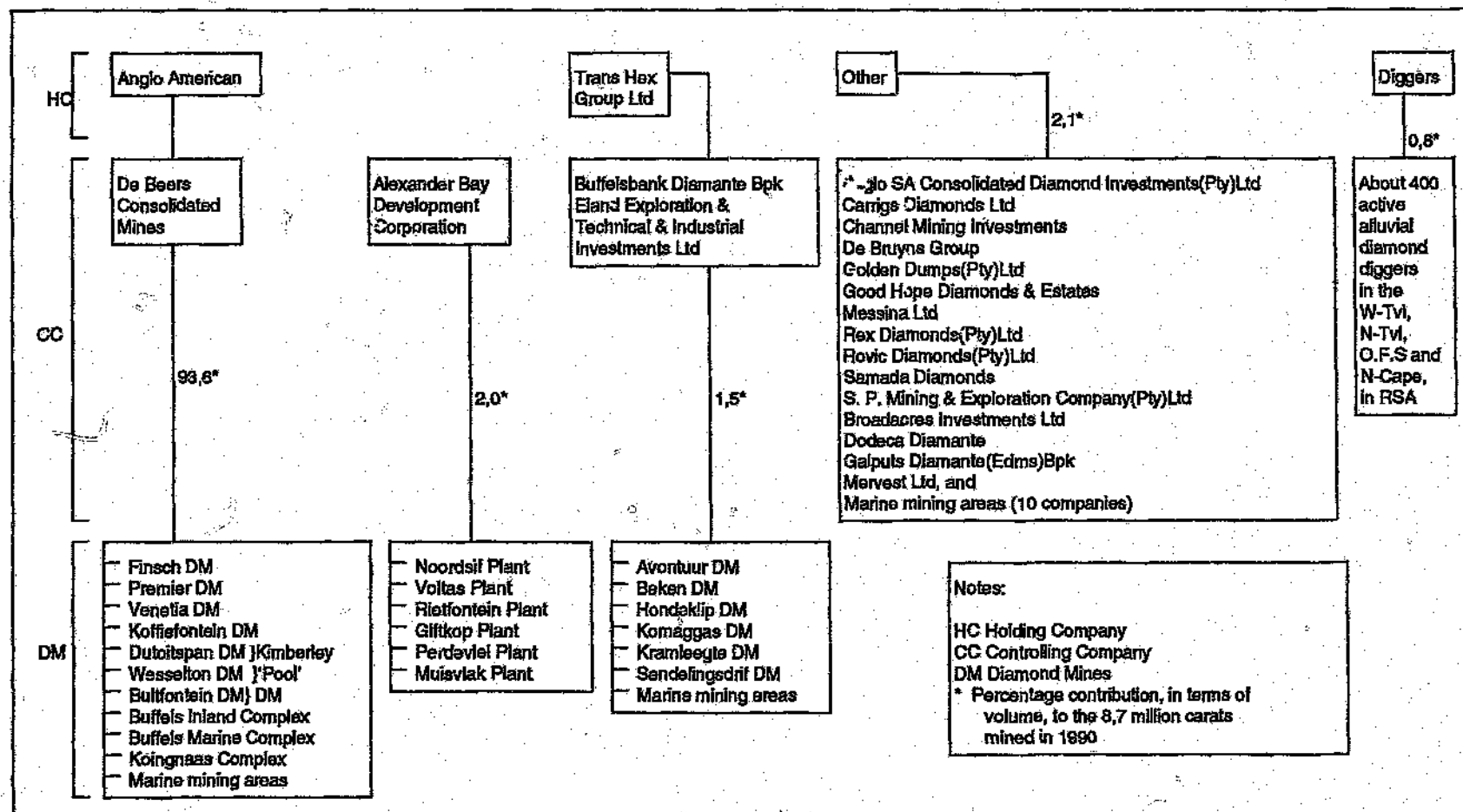
On average, more than 80 per cent of alluvial stones are gem-quality. The stones are normally more rounded (which allows a greater yield percentage than normal crystal structured stones) and higher in terms of quality, i.e. more homogeneous in clarity and size with good colour.

4.2.3 Marine Diamond Production

Diamonds recovered from marine deposits, in volume terms, are minimal when compared to kimberlite and alluvial deposits. In 1980, marine diamonds mined totalled a mere 45 002 carats. As operations are dependent on weather conditions, output is more variable than kimberlite or alluvial mining. In 1990, marine diamond production more than doubled from 1989, to 130 064 carats, or 1,5 per cent of the year's total diamond output.

As in the case of alluvial diamonds, marine stones are typically gem-quality, with an average gem percentage (in volume) of 85 per cent. Marine diamonds recovered from coastal gravels (including those found in submerged trenches and gullies) contain more crystal shaped (octagonal) stones than do alluvial's. They are generally also smaller, and in some cases extremely hard. The majority of marine output is locally processed.

FIGURE 4.2 - STRUCTURE OF SOUTH AFRICA'S DIAMOND MINING INDUSTRY, 1990



Source: The South African Diamond Board, 1991

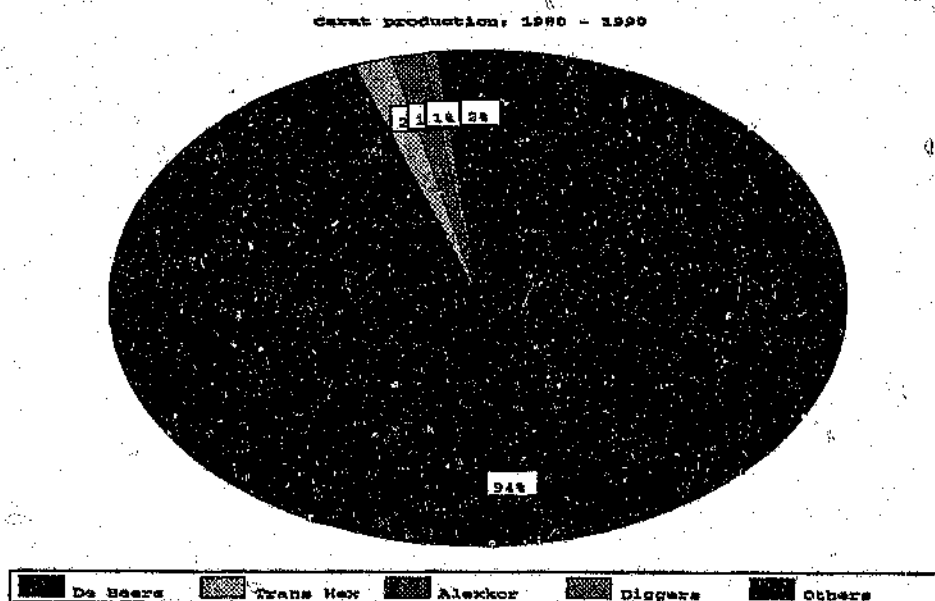
4.3 Mining Companies: Structure and Production

Figure 4.2 depicts the structure of South Africa's diamond mining industry.

In 1990, there were 72 mines operating in the country (excluding about 400 alluvial diggers operative in the Transvaal, Cape Province and Orange Free State). Of these, 27 mined kimberlites, 18 alluvial deposits and 27 marine areas.

Contributing 8,15 million carats (or 93,6%) to South Africa's total diamond output in 1990, De Beers Consolidated Mines is the most important diamond mining company in South Africa (Figure 4.3). The non-De Beers sector comprises a few moderately sized producers such as Trans Hex Mining (Trans Hex), Alexander Bay Development Corporation (Alexkor), Carrig Diamonds and Helam Mining, smaller companies and the alluvial diggers. Trans Hex and Alexkor accounted for 134 100 carats (1,54% of the total) and 173 897 carats (2%), respectively. Some 68 171 carats (0,8%) originated from alluvial diggers.

FIGURE 4.3- CONTRIBUTION TO DIAMOND OUTPUT BY PRODUCERS



Put in perspective, the non-De Beers sectors' total diamond output (in carats) from 1980 to 1990, approximates merely 71 per cent of De Beers' 1990 production.

4.3.1 RSA Gem Diamond Production

James Capel Mining Research (1992, p 30) reports that 62 per cent of South Africa's entire rough diamond natural production (for the years from 1986 to 1992) is of gem (25%) and near-gem (37%) quality. The balance, those diamonds of industrial quality, totals 38 per cent.

However, respected and knowledgeable diamond analysts (Kartun, K., Brown, P., 1992, personal communication) estimates a higher gem and near-gem percentage share; more in the order of 70-75 per cent.

In terms of the gem : industrial world diamond output ratio (excluding Namibia), South Africa could well rank first in the world. However, the substantial share of gem diamonds to industrials, must be seen in perspective.

Gem-quality diamonds are determined principally by the economic value of the stone. At present, low, cheaper quality stones (classified as industrials a few years ago), are called 'near-gems'. The continual increases in rough diamond prices, a trend never reversed in the diamond industry, boosted low priced goods into competitive margins. Low-cost processing firms in countries such as India are able to profitably process these stones. Along with that, demand for small, low value polished diamonds increased in the Pacific Rim countries, owing to more aggressive marketing from De Beers.

CHAPTER 5

5 DIAMOND TRADING

Rough diamond trading in South Africa is complex. This chapter purposes, on the one hand, to evaluate the consumption of rough diamonds by local dealers and cutters mined from the various deposits by local companies in the Republic. In addition, it aims to examine the role of the principal players, i.e. producers, dealers and cutters in South Africa's diamond trading network. It is therefore pertinent that the sales of rough diamonds by producers from kimberlite, alluvial and marine deposits are examined, followed by a revision of the trade profile of diamond dealers, producers and cutters.

5.1 Structure of Rough Diamond Trading

Figure 5.1 depicts the movement of diamonds in South Africa's trading industry.

5.2 Examination of Diamond Deposit Sales

5.2.1 The 'Average Price/Carat' Factor

Diamonds are traded in US dollars internationally, and in South Africa. The exchange rate naturally plays an important role in diamond trading as dollar accounts locally are not allowed.

The average diamond price, i.e. the unit value, is expressed as \$/carat (mainly), and R/carat and applied as an indicative factor implying a trend of development in a specific category, i.e. gem-quality diamonds, whether rough or polished. In the diamond industry the use of 'average prices' can be misleading. Parcel 'make-up', or the so-called 'mix' can differ greatly in terms of volume, mass, quality and shape, and still equate to one value.

5.2.2 Kimberlite Diamond Sales

In volume terms, 51,2 per cent more kimberlite diamonds were sold locally in 1990 than in 1985 (Table 5.1). However, the 702,2 thousand carats absorbed by the local processing

The flowchart illustrates the diamond trade in South Africa, starting with 'Imports' and 'Diggers' at the bottom left. 'Diggers' supply diamonds to 'Other Mines (non-contracted)' and 'Non-De Beers (contracted)'. These, along with 'De Beers' (labeled as 'De Beers' in the original image), supply diamonds to 'CSO Valuations (sort & pricing)'. 'CSO Valuations' supply diamonds to 'DICTOP'. 'DICTOP' supplies diamonds to 'PURTRA', 'DTC (signs)', 'DIAMDEL', and 'Toolmaking Industry'. 'DICTOP' also supplies diamonds to 'DEBID'. 'DEBID' supplies diamonds to 'CUTTING INDUSTRY (processing diamonds)'. 'CUTTING INDUSTRY' supplies diamonds to 'Local Sales (polished diamonds)' and 'Export (polished diamonds)'. 'DIAMDEL' supplies diamonds to 'Export (polished diamonds)'. 'Toolmaking Industry' supplies diamonds to 'Export (polished diamonds)'. 'DIAMOND BORSE (market)' supplies diamonds to 'Export (polished diamonds)'. 'Export (polished diamonds)' is the final destination for all polished diamonds. The flowchart is titled 'S A D I A M O N D B O A R D' on the right side.

Notes: # Rough gem-quality diamonds suitable for local cutting/polishing
 □ Rough gem-quality diamonds unsuitable for local cutting/polishing
 * Rough industrial-quality diamonds

DICORP	Diamond Corporation (Pty) Ltd
DTC	Diamond Trading Company (Pty) Ltd
PURTRA	Diamond Purchasing and Trading Company (Pty) Ltd

DIAMDEL	Diamond Development Company (Pty) Ltd
DEBID	De Beers Industrial Diamonds (Pty) Ltd

industry in 1990, amounted only to 9,4 per cent of total kimberlite sales, the balance (90,6%) being exported.

In 1990, local sales of kimberlite diamonds were 133,5 per cent higher than 1985's figure, and 54 per cent of total sales. The R/carats price increased by 54,4 per cent (from 1985 to 1990), whilst the \$/carat value improved only 32,8 per cent.

The cumulative nominal CSO (London) price increases (from 1986 onwards) totalled 59 per cent. The \$/carat growth of 32,8 per cent from 1985 to 1990 in South Africa, implies a 'lower' than average rough diamond price increase. This is evident by the growth in \$/carat sales of alluvial and marine local gem diamonds viz., 81,2 per cent and 93,3 per cent.

Kimberlite diamond exports declined by 15,8 per cent to 6 745,6 thousand carats in 1990 (8 008,7 thousand carats in 1985), whilst the revenue generated from the sales increased by 62,9 per cent.

5.2.3 Alluvial Diamond Sales

Alluvial local and export diamond sales followed a similar trend to that of kimberlite diamond sales. For the six years (Table 5.1) up to 1990, sales volume and value increased by 115,4 per cent (to 662 thousand carats) and 354,8 per cent, respectively. In addition, alluvial diamond sales mass and value increased to 54,9 per cent and 74,4 per cent of local sales in 1990, respectively. The average price in 1990 rose by 81,2 per cent from the 1985 figure.

Alluvial export sales (in 1990) decreased by 32,9 per cent from 1985 (to 544 300 carats), whilst its value (1990's) improved by 24,8 per cent. The reason for this was the 60,3 per cent increase in export price from 1985 to 1990.

5.2.4 Marine Diamond Sales

Since 1985, marine diamonds sold to local cutters increased by 333,9 per cent in volume (to 112 800 carats), and 872,4 per cent in value in 1990 (Table 5.1).

TABLE 5.1 - ROUGH DIAMOND DEPOSIT SALES, 1985*-1990

KIMBERLITE DIAMOND SALES						
LOCAL				EXPORT		
YEAR	car'000	%car	%R	car'000	%car	%R
1985	464,4	5,5	45,1	8 008,7	94,5	54,9
1986	510,5	6,0	42,5	7 942,4	94,0	57,5
1987	583,8	5,9	43,9	9 234,1	94,1	55,1
1988	952,1	12,5	61,8	8 667,2	87,5	38,2
1989	784,2	10,6	53,9	6 579,9	89,4	46,1
1990	702,2	9,4	54,0	6 745,6	90,6	43,0
TOT	3 997,3	8,1	51,2	45 178,1	91,9	48,8
ALLUVIAL DIAMOND SALES						
LOCAL				EXPORT		
YEAR	car'000	%car	%R	car'000	%car	%R
1985	306,6	27,4	44,4	811,3	72,6	55,6
1986	437,8	26,8	45,2	1 194,3	73,2	54,8
1987	480,4	34,1	52,6	929,3	65,9	47,4
1988	800,3	58,7	76,5	562,0	41,3	23,5
1989	787,8	65,2	79,6	421,4	34,8	20,4
1990	662,0	54,9	74,4	544,3	45,1	25,6
TOT	3 474,8	43,8	66,5	4 462,5	56,2	33,5
MARINE DIAMOND SALES						
LOCAL				EXPORT		
YEAR	car'000	%car	%R	car'000	%car	%R
1985	26,0	58,1	64,2	18,8	41,9	35,8
1986	23,8	63,6	72,6	13,6	36,4	27,4
1987	23,0	62,7	64,5	13,7	37,3	35,5
1988	47,3	80,7	91,0	11,3	19,3	9,0
1989	73,5	96,4	98,9	2,8	3,6	1,1
1990	112,8	92,0	97,5	9,8	8,0	2,5
TOT	306,4	81,4	91,3	69,9	18,6	8,7

Source: The Minerals Bureau of South Africa, 1992

Notes: * Earlier records made no provision for kimberlite, alluvial and marine diamond sales

car carats

% Percentage share

In terms of total marine production, the share absorbed by the local industry improved from 58,1 per cent (1985) to 92 per cent (1990) in volume. Similarly, 97,5 per cent of the value of marine diamond sales was absorbed locally (1990), at an average rough diamond price which was 93,3 per cent higher than that of 1985's.

Exports of marine diamonds dropped significantly. Rough diamond mass, value and price decreased from 1985 to 1990 by 57,9 per cent in volume (9 800 carats), 53,7 per cent in value and 26,7 per cent in price (\$/carat), respectively. The price decline was probably the result of lower gem-quality diamond exports.

5.2.5 Total Diamond Sales

Total local rough diamond sales from kimberlite, alluvial and marine deposits to local industry were 800 000 carats in 1985 (Table 5.2). Growing steadily, and peaking at 1,8 million in 1988, it levelled off to 1,48 million carats in 1990. Although diamonds from kimberlite deposits still feature prominently as a supplier of economically cuttable gems to South Africa's processing industry, its domination (in the short period from 1985 to 1990) has faded. In terms of mass and value, kimberlite diamonds contributed 58 per cent and 68 per cent to local demand, respectively. But, in 1990, however, its contribution decreased to 48 per cent (in mass) and 50 per cent (in value). Since total local demand has increased, the importance of alluvial and marine stones for local consumption has heightened. Reasons for this could be the expected decline in quality and caratage produced by kimberlite diamond mines.

Marine diamonds' contribution to local sales, in 1985, almost trebled to eight per cent in 1990, both in terms of mass and value.

The average dollar/carats price for all three types of deposits improved steadily; a 47,7 per cent increase from 1985 to 1990.

The strong impact of industrial diamond sales on local and export sales, and on the overall diamond contribution from kimberlite deposits is noticeable. Some 85 per cent of total sales mass of industrial-quality diamonds originated from kimberlite diamond deposits.

From Figure 5.2 it can be seen that the volume of diamonds absorbed locally from kimberlite deposits is mirrored by the local alluvial diamond sales volume. A steady increase in marine diamond consumption also occurred as overall production improved.

TABLE 5.2 - TOTAL DIAMOND DEPOSIT SALES, 1985-1990

LOCAL DIAMOND SALES							
Year	car'000	K share		A share		M share	
		%car	%R	%car	%R	%car	%R
1985	797,0	58	68	39	30	3	3
1986	972,2	53	63	45	35	3	2
1987	1 087,2	54	65	44	34	2	2
1988	1 799,8	53	58	45	39	3	3
1989	1 645,4	48	51	48	44	5	5
1990	1 477,0	48	50	45	43	8	8
TOT	7 778,5	51	56	45	40	4	4
LOCAL AND EXPORT DIAMOND SALES							
Year	car'000	K share		A share		M share	
		%car	%R	%car	%R	%car	%R
1985	9 835,8	88	68	2	31	1	2
1986	10 122,5	84	65	6	34	<1	1
1987	11 264,2	87	69	3	30	<1	1
1988	9 040,5	84	64	5	34	1	2
1989	8 649,4	85	61	4	36	1	3
1990	8 776,7	85	58	14	37	1	5
TOT	57 489,1	86	63	14	34	1	3

Source: The Minerals Bureau of South Africa, 1992

Notes: car carats
 % Percentage share
 K Kimberlite diamond deposits
 A Alluvial diamond deposits
 M Marine diamond deposits
 < Less than

In terms of local sales value, a similar trend is portrayed to that of local sales volume (Figure 5.3).

Figure 5.4 shows that the \$/carat value of kimberlite diamonds sold locally throughout the six year period was higher than that of alluvial stones'. Whilst kimberlite diamond prices decreased marginally from 1987 to 1989, those of alluvial diamonds steadily improved from 1985 to 1990. In addition, marine diamonds experienced the largest price increase during this period, almost doubling in the \$/carat price from 1987 to 1989, i.e. higher than kimberlite prices.

FIGURE 5.2 - ROUGH DIAMOND CONTRIBUTION BY DEPOSIT TO LOCAL INDUSTRY
(in carats), 1985-1990

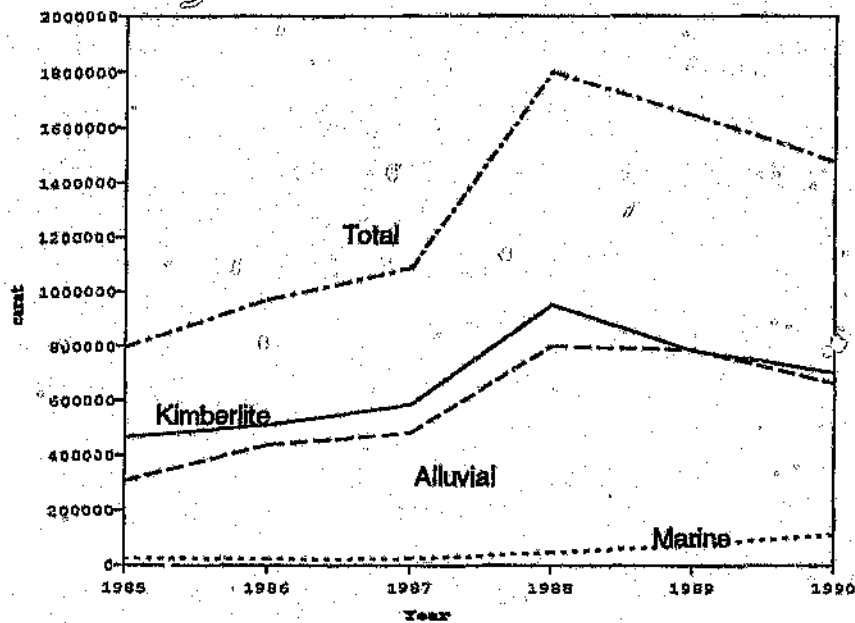


FIGURE 5.3 - ROUGH DIAMOND CONTRIBUTION BY DEPOSIT TO LOCAL INDUSTRY
(in value), 1985-1990

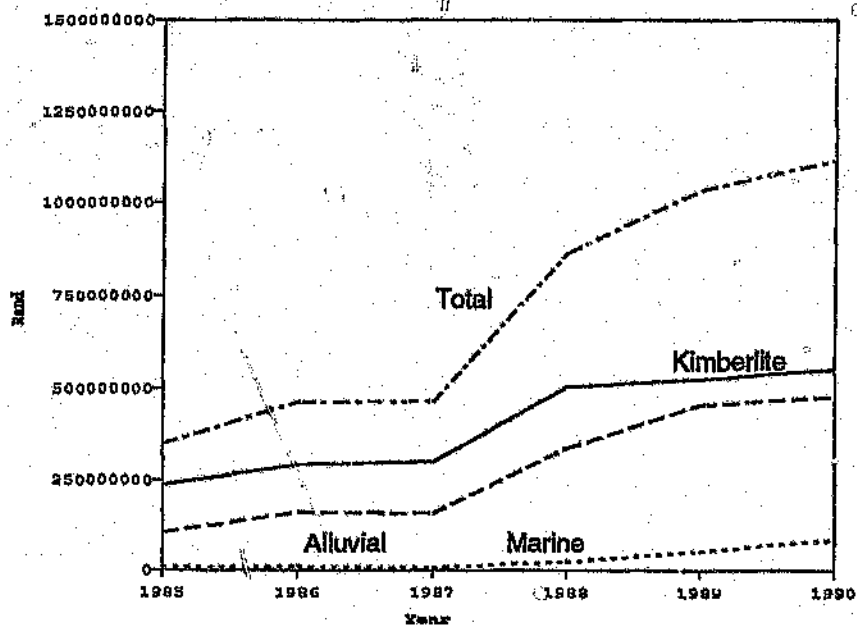


FIGURE 5.4 - ROUGH DIAMOND CONTRIBUTION BY DEPOSIT TO LOCAL INDUSTRY
(in \$/carat), 1985-1990

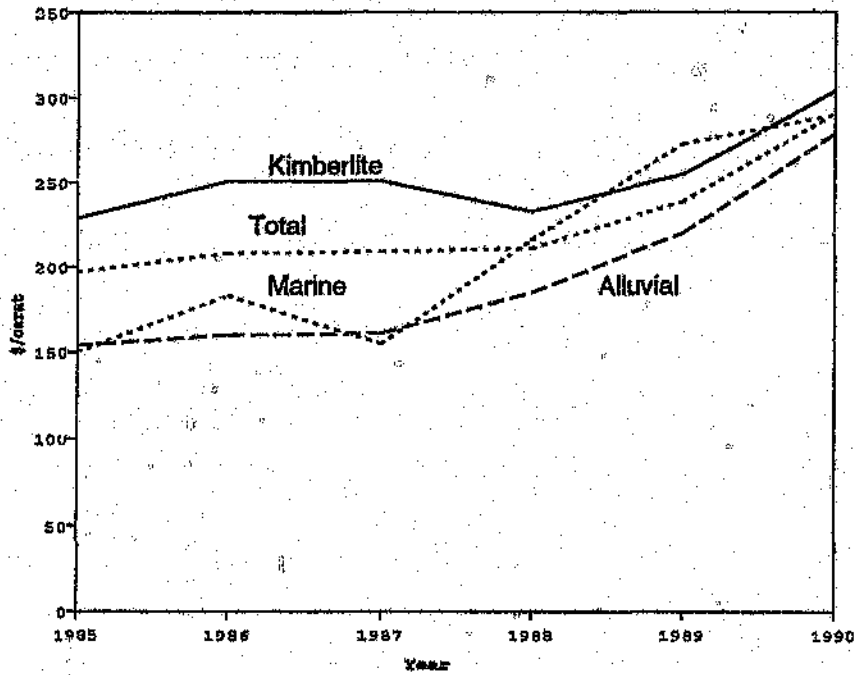


FIGURE 5.5 - ROUGH DIAMOND CONTRIBUTION BY DEPOSIT TO LOCAL INDUSTRY
(as a percentage), 1985-1990

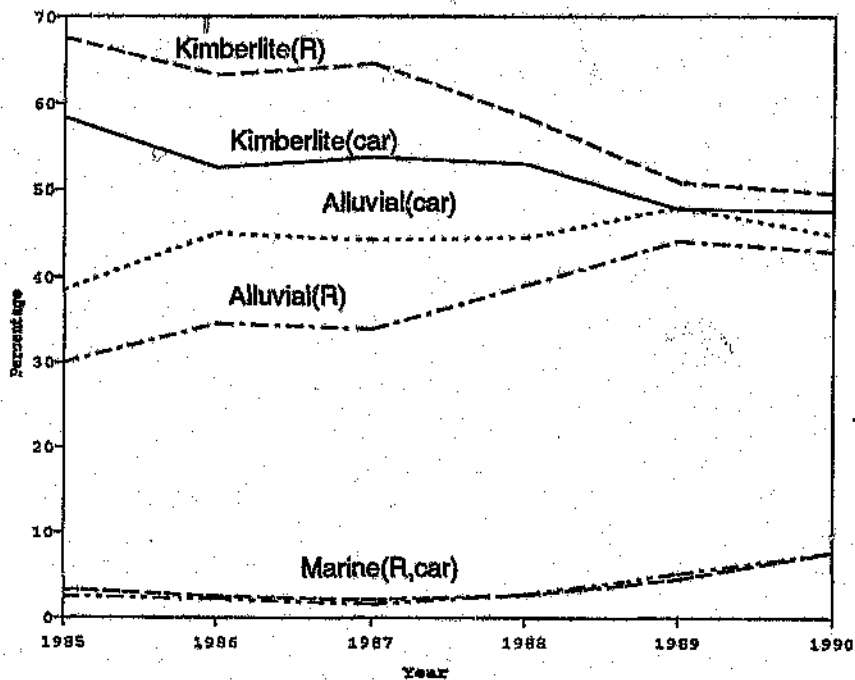


Figure 5.5 depicts the percentage contributions made by the three deposits; kimberlite, alluvial and marine, to South Africa's local rough diamond consumption in terms of volume and value. Kimberlite diamonds consumed locally have decreased in both respects from 1985 to 1990, whilst the opposite occurred for alluvial and marine diamonds.

5.2.6 Company Contribution to Diamond Sales

The dominance of the De Beers, again, is reflected in the sales figures of Table 5.3.

As expected, De Beers dwarfs the two most prominent non-De Beers diamond mining companies, Alexkor and Trans Hex in respect of diamond sales. However, Alexkor achieved the highest average \$/carat value for its alluvial and marine workings. Importantly, De Beers markets Alexkor's entire production.

A low percentage of gem-quality rough diamonds of De Beers' production (in mass) is consumed locally; a minimum of 7,1 per cent in 1982 and a maximum of 24,6 per cent in 1988.

The growth in local demand for De Beers' rough diamonds probably coincide with the trends set internationally. In 1980, the diamond industry slump in rough gem diamond demand was due to rough diamond oversupply and investor speculation. Whilst the strong sales surge between 1986 and 1989, resulting in record breaking years for CSO sales, reflected a stable rough gem supply on the one hand, and polished diamond offtake in Japan and the USA.

5.3 Activities of RSA Diamond Dealers

The existence of rough diamond dealers is credited to the fact that their main function is that of supplying diamonds of specific qualities to clients. Also, dealers supply the right volume (which combined with the specific quality) make up the required parcel-mix.

To cutting firms, the supply of constant volume of rough diamonds at consistent periods is critical to the effective running of a factory.

In the following discussion, emphasis is first placed on diamond dealers' purchases and then their sales (Table 5.3).

There were 54 registered rough diamond dealers during 1988 to 1990, of which five recorded no trade during this period. Four of the 54 companies are subsidiaries of De Beers, viz., the Diamond Corporation (DICORP), the Diamond Development Corporation (DIAMDEL), De Beers Industrial Division (DEBID), and De Beers Industrial Diamonds Division. DICORP featured the most prominently in terms of rough diamonds traded (mass and value).

TABLE 5.3 - ROUGH DIAMOND TRADE BY RSA DEALERS, 1988-1990

	MASS	VALUE	PRICE	
	carats	R'000	R/car	\$/car#
Purchases by dealers				
From other RSA*	34 485	6 977 949	182	73
Imported	849	235 104	277	111
Other+	1 867	66 338	36	14
TOTAL	37 201	7 279 391	196	79
Sales by dealers				
To RSA dealers	17 014	2 525 085	148	60
To RSA cutters	4 542	3 298 205	726	291
Exported	15 296	1 361 348	89	36
TOTAL	36 852	7 184 638	195	78

Source: The South African Diamond Board, 1992

Notes:

- * Excluding purchases by dealers from Diamdel
- * Including RSA diggers and non-De Beers producers
- + Including mainly other dealers as well as local cutters
- # Three year average dollar price, calculated at R2,4942/\$

5.3.1 Diamond Purchases by Dealers

Rough diamond purchases by dealers from South African producers (alluvial diggers and non-De Beers producers) from 1988 to 1990, totalled approximately R7 billion (34,5 million carats). Expectedly, rough diamond dealers' main source are diamond mines; amounting to 96 per cent (in value) and 93 per cent (in volume) from 1988 to 1990.

Rough dealers' imports from 1988 to 1990 totalled R235 million (849 000 carats). Only 25 of the 54 dealers imported diamonds. With an import duty of 25 per cent on all polished

diamonds, it is assumed that the largest proportion, if not all, were rough diamonds. Besides isolated cases of industrial-quality diamond imports, the rough diamonds brought into the Republic, in terms of \$/carat, is higher than those stones purchased from South African diamond producers. Demand by South African cutters for specific rough diamonds, which should be more expensive, but more importantly, are not produced locally, may explain the low volume/high value of imports.

Purchases between local cutters and dealers (also between cutters and dealers themselves) amounted to R66,3 million (1,9 million carats) from 1988 to 1990. Only 10 companies were involved in this type of activity, foremost being again DICORP, accounting for R53 million (80%) for the three years, at \$16/carats. DIAMDEL did not sell to any dealers during this period. Acting as a dealer itself, DIAMDEL sells mostly to smaller cutters (non-sightholders). This 'incentive' by De Beers commenced in the middle 1980's, as smaller cutters requested a wider selection of goods, in order to obtain a 'window' on local sightholders' 'sights'.

Total purchases by RSA dealers improved from 2,5 million carats (R1 billion) to 14,7 million carats (R3,1 billion) and 20 million carats (R3,2 billion) in 1988, 1989 and 1990, respectively. The price, however, deteriorated from \$168/carats to \$83/carats and \$61/carats, respectively. This possibly was the result due to DICORP's increased purchases of lower quality goods. (Note: DICORP mirrors the function of the DTC but only outside of South Africa, i.e. it channels rough diamonds to the CSO in London. This negative trend may imply that less good quality diamonds are coming from De Beers's Mines).

De Beers' share with regard to purchases (from 1988 to 1990) amounted to 54, 95 and 97 per cent in volume terms, respectively. In terms of sales value, the company's contribution totalled 78, 91 and 97 per cent, respectively.

DICORP alone contributed 75 per cent (in mass terms) and 97 per cent (value terms) to total dealers purchases for the three year period.

5.3.2 Diamond Sales by Dealers

From 1988 to 1990 dealers sold rough diamonds principally in three ways; between themselves, to South African cutters and, to foreign diamantaires.

Diamonds sold by dealers intended for commission work, i.e. rough diamonds processed by other factories locally or overseas, totalled 4 824 carats, valued at R67,1 million.

Rough selling between dealers from 1988 to 1990 totalled R2,5 billion; some 17 million carats. DICORP's share was 93 per cent of the total (by value). About 43 dealers participated, contributing 46 per cent (mass) and 35 per cent (value) to the total. It can be argued that such trade activity confirms the importance and need of rough diamond dealers in the industry.

Rough diamond sales by dealers to South African cutters constitute the highest value of the total, that of R3,3 billion (1988-1990). Yet, the volume sold (4,5 million carats) was low, explaining the high average price.

Rough dealers' exports amounted to R1,4 billion (15,3 million carats), principally by DICORP (82% of value and nine million carats in volume). At R92/carats (about \$30/carats), the diamonds exported include gem, near-gem and industrial quality goods. Only 22 dealers exported rough diamonds from 1988 to 1990.

Featuring also prominently during this period was Trans Hex, the majority of its rough diamonds absorbed by local cutters.

Total RSA dealers sales (from 1988 to 1990) amounted to 36,9 million carats (R7,2 billion). Total dealers sales (for the three years) were marginally lower than total purchases, some 0,9 per cent and 1,3 per cent in mass and value terms, respectively.

De Beers' share of total sales were 55, 95 and 98 per cent in volume terms for the three years. In terms of value, it totalled 79, 90 and 91 per cent, for the corresponding period. Notably, the non-De Beers dealers sector (which only accounts for 1,7 per cent (mass terms) and 10 per cent (value terms) of total sales) sold diamonds at \$468/carats, some 156 per cent higher than its \$183/carats purchase price. However, De Beers' dealers purchase price (\$73/carats) and sales price (\$72/carats) showed marginal differences. Also, the non-De Beers dealers average purchase price were more than double than that of De Beers'.

Whilst most dealers deal in gem-quality diamonds, the volume of De Beers sales coming from DEBIDD, were of industrial quality.

Overall, South Africa's rough diamond trade industry is dominated by De Beers' trading companies.

5.4 The Role of the Diamond Bourse of South Africa

The Diamond Bourse of South Africa (DBSA) was established in October 1987, by virtue of the Diamonds Act, 1986 (No 56 of 1986).

The Bourse, a corporate body, is located in Johannesburg. It serves as a venue where trading of rough diamonds may be conducted between authorised diamond producers, dealers and cutters. In the main, the rough diamonds on offer originate from producers not contracted to De Beers, from rough diamond imports, and from stocks held by dealers and cutters. Diamonds tendered are principally divided into two categories; those selected for local consumption, and those destined for export. Since its establishment, Bourse membership has grown to approximately 160 members. It recently established a centralised trading floor (on the premises) that may increase the level of activity in this sector.

The Bourse is financed by a levy of 0,5 per cent on the value of a parcel locally sold; a one per cent levy on the value of an exported parcel, and 1,5 per cent on the value of a parcel with a price above R1,5 million.

In essence, the main thrust of the Bourse's activities lies in the creation of an opportunity for RSA producers to competitively trade their goods (assuring an 'international' sale), whilst tenderers (over a period of seven days) are offered a larger variety of rough diamonds, differing in volume and value, that otherwise would have been exported. De Beers, of course, does not trade on the Bourse.

From 1987 to 1990 (Table 5.4), some 274 000 carats of rough diamonds were sold through the DBSA locally, valued at R191,5 million, at an average price of \$278/carats. Parcels qualifying for export duty exemption totalled 770 000 carats, worth R306,9 million.

RSA diamond producers criticise the Bourse's (and for that matter the SADB's role therein) trading practises in respect of the 'reserve price fixing' system, i.e. a producer must set a minimum selling price (the reserve price), unknown to the buyer, on its rough diamond parcel. The highest bid by a tenderer, equal to or above this price is considered a successful sale, which also determines the 'acceptable market value' of the parcel. This

system, producers argue, prohibits the producer from earning 'top dollar' for its rough diamonds by forcing him (the producer) to sell his quality production locally, not being allowed to compete internationally through a 'marketing window'. Not only is the 'run of the mine' output, which can be defined as the production mix, drastically devalued (as cutters absorb the best qualities through tendering), therefore burdening the producer with the problem of marketing inferior qualities, but in addition, severe conflict develops when such a producer learns that its own diamond production, in an unpolished state, is being marketed abroad by a South African cutter.

TABLE 5.4 - LOCAL SALES THROUGH THE DBSA, 1987-1990

car'000	R Million	R/car	\$/car
PARCELS SOLD LOCALLY			
274	191,5	700	278
PARCELS QUALIFYING FOR EXPORT DUTY EXEMPTION			
770	306,9	399	157
TOTAL ROUGH TRADED*			
1 095	523,0	478	189

Source: The Diamond Bourse of South Africa, 1992

Notes: * Excluding 'failures', i.e. where a parcel did not have a 'reserve price', and less than three tenders were received on it

Unsuccessful sales, those that are allowed exportation, need to be concluded at the reserve price (the Reserve Bank allows about a two per cent margin) and also within a short period to ensure the repatriation of the foreign sale.

Local producers demand that they be allowed the option to market their output as they see fit, which they believe will realise higher prices outside of South Africa. However, since local tenderers do not know the reserve price of a rough diamond parcel, a higher bid than normal often takes place.

CHAPTER 6

6 DIAMOND PROCESSING

This chapter explains the structure and activities of South Africa's processing sector and the beneficiation (the adding of value through cutting and polishing) of rough diamonds.

6.1 Structure of the Processing Sector

Two distinctively different diamond processing groups are found in South Africa, so-called 'sightholders' and 'non-sightholders'.

Sightholders are large cutting concerns contracted to De Beers (CSO - Kimberley) for their supply of rough diamonds. These sightholders, similar to those found overseas, receive their parcels 10 times per annum, at so-called 'sights'.

In 1990, there were 21 South African sightholders (1989=19; 1988=24). Each sightholder consists of at least one, in most cases more, diamond cutting and polishing firms, referred to as 'cutting concerns'. Exporting and sales companies (which market the polished diamonds that originate from the cutting concerns) are directly linked to the sightholders.

Of the 21 sightholders, 49 cutting firms make up these 'cutting concerns'. Polished diamond marketing companies total 12. Coincidentally, 12 sightholders do not employ any marketing/sales companies.

Non-sightholders comprise those smaller cutting firms that do not qualify as sightholders. De Beers determines these 'qualification' prerequisites in terms of, inter alia, the financial record of firms, operating stability, workforce size and workmanship quality.

In 1990, approximately 140 South African cutting firms were registered (at the SADB). About 100 are non-sightholders, of which an estimated 90 per cent (of the 100) are fully operational. These small cutting firms rely on the non-De Beers producers (including to a large degree the alluvial diggers), rough diamond dealers, imports and the DBSA for cuttable supplies.

6.2 Structure of Sightholders

The ownership structure of South African sightholders explains the polishing and trading policy of the various cutting concerns. Table 6.1 shows the ownership structure of sightholders in South Africa's cutting industry.

TABLE 6.1 - OWNERSHIP STRUCTURE OF SIGHTHOLDERS, 1990

SIGHTHOLDING GROUP	FROM THE DTC	
	carats (%)	Rand (%)
RSA controlled	24,9	17,2
RSA controlled (non-resident Co director)	4,5	7,0
RSA controlled with foreign interest of 40-50%	7,8	9,4
Foreign controlled with minor RSA interest	19,4	21,4
Foreign controlled	43,1	45,0

Source: The South African Diamond Board, 1992

Note: DTC Diamond Trading Company of De Beers

Sightholders which are fully controlled by South African parties account for 25 per cent (volume) and 17 per cent (value) of DTC sales. Against this, sightholders which are fully foreign controlled (mainly from Belgium, but also Israel, England, USA and Hong Kong) account for 43 per cent (in volume) and 45 per cent (in value) of DTC sales.

6.3 Activities of Sightholders and Non-sightholders

As mentioned previously, RSA cutting concerns imply both sightholding and non-sightholding cutting firms and their related marketing companies. Table 6.2 summarises their trade pattern, i.e. purchasing and selling of rough/polished diamonds from 1988 to 1990.

Of the 4,9 million carats (valued at R4 billion) purchased by RSA cutters during 1988-1990, sightholders contributed 90 per cent and 87 per cent to the total, in volume and value terms, respectively. The importance of De Beers' diamonds for sightholders is obvious, supplying 82 per cent (in volume) and 74 per cent (in value) of sightholders' total purchases.

TABLE 6.2 - DIAMOND TRADE OF RSA CUTTERS, 1988-1990

ACTIVITY	SIGHTHOLDERS			NON-SIGHTHOLDERS			RSA CUTTERS		
	car'000	R'000	\$/car	car'000	R'000	\$/car	car'000	R'000	\$/car
ROUGH PURCHASES									
TOTAL*	4 866	3 476 059	320	510	504 064	396	4 866	3 980 123	328
ROUGH SALES									
Exported	208	73 990	143	44	8 494	77	252	92 484	131
To dealers	93	63 371	272	63	79 894	506	166	142 765	366
To cutters	245	218 815	358	34	30 015	352	280	248 830	357
TOTAL	546	356 175	281	141	117 903	335	687	474 079	277
POL. PURCHASES									
RSA cutters/dealers	52	106 650	820	31	64 428	826	83	171 079	822
From Other+	9	39 440	1 801	3	7 844	1 208	11	47 083	1 668
TOTAL	61	146 090	962	34	72 072	854	95	218 162	923
POL. SALES									
Exports#	57	97 375	684	3	11 163	1 746	60	108 538	730
Exports	1 271	2 650 205	836	77	212 897	1 114	1 348	2 869 102	662
RSA cutters	94	192 023	822	35	90 848	1 042	129	282 871	882
Local sales-other	126	270 316	862	38	93 340	980	164	368 656	890
TOTAL	1 547	3 208 919	832	152	408 248	1 074	1 700	3 618 166	854

Source: The South African Diamond Board, 1992

Notes: car carat
 <1 Less than 1000 carats
 # Exports to Lesotho, Swaziland and independent neighbouring black states
 * From DTC, DIAMDEL, other dealers, non-De Beers producers, the DBSA and imports
 + Mainly imports
 POL. Polished Diamonds
 dealers RSA Diamond Dealers

Though caution must be taken when examining these average diamond prices, it is significant to note that the \$290/carats average price paid by sight holders for De Beers rough diamonds from 1988 to 1990, is \$103/carats, \$46/carats and \$441/carats less than the price of rough diamonds supplied to sight holders by DIAMDEL, other RSA, and imports, respectively. The following comments deserve mentioning:

- (i) How true is the statement made by sight holders that rough diamonds are cheaper outside of the Republic if rough diamond imports are almost three times more expensive (in terms of \$/carats) than rough diamonds purchased from the DTC?

- (ii) In De Beers' attempt to control rough diamond supplies, it may be responsible for inadvertently increasing the rough diamond prices of non-De Beers producers. Unquestionably, non-sightholders do not have the financial muscle to outprice De Beers offers on local rough diamonds.

Sightholders' unpolished diamond sales to dealers, other cutters and those exported amounted to 13 per cent of its purchase total. Non-sightholders sales were even larger; some 28 per cent of its purchases. Sightholders sold more rough diamonds to other RSA cutters than they (sightholders) exported. Undoubtedly, those cutters who purchase unpolished diamonds from sightholders realise a profit, which implies that sightholders find (in this instance) rough diamond trading more profitable. The following elaborates on this aspect:

- (i) RSA cutters generally specialise in cutting and polishing certain categories of diamonds (discussed in chapter 7 (7.3.3)). Due to this, cutters will channel rough diamonds deemed uneconomical to process to other cutters. This could be a reason for the above behaviour.
- (ii) Bear in mind that RSA cutters have only recently been allowed (by the SADB) to trade their rough diamonds at will. In the past, cutters had to process their entire volume of purchases.
- (iii) This form of diamond trading has received severe criticism, particularly from producers, since cutters (who theoretically should polish their goods) now enter the markets of producers and dealers.

Reflecting on the above, it would be appropriate to evaluate De Beers' rough diamond pricing policy.

From industry sources, it is estimated that De Beers would price its rough diamond production by discounting the eventual polished diamond end-product by 20 per cent from the Rapaport Diamond Price list [The Rapaport Diamond price list, established by Martin Rapaport (New York based) some 15 years ago, is an international esteemed polished diamond price list that reflects the asking prices of gems between dealers and cutters]. What is certain is that De Beers monitors the polished diamond markets to ascertain the current (and projected) demand for polished diamonds. Now, more than ever, the processing industry worldwide criticises De Beers' pricing policy. Whilst rough diamond

prices (on average) have increased by 77 per cent (nominal \$/carat terms) from 1980 to 1990, polished diamond prices, in general, have only increased by 20 per cent.

- (i) The existing price conflict between De Beers and cutting firms (principally sightholders) is mainly the result of De Beers' international perspective with regard to the diamond industry, i.e. De Beers artificially manipulate demand for polished diamonds by controlling rough diamond supplies. It monitors the polished diamond consumption patterns worldwide intensely, to determine the type of rough diamonds that should enter the market through cutters who would achieve the anticipated polished diamond yield. This global perspective does not, and cannot take into account the specific needs of individual cutting firms.

Polished diamond trade statistics locally shows that sightholding and nonsightholding cutting firms purchased polished diamonds from one another, from dealers and also imported some. With a 25 per cent import duty on polished diamonds, average prices are substantially higher (\$1801/arat for sightholders) than the average prices of polished diamonds traded between cutters.

From 1988 to 1990, exports of locally processed diamonds totalled 1,35 million carats, with a value of R2,86 billion. Since sightholders mostly export their polished diamonds, the bulk of locally processed stones, viz., 79 per cent in volume and value, falls in this category.

6.3.1 Trends and Remarks on Activities of Sightholders and Non-sightholders

RSA cutters trade trends are portrayed in Table 6.3. In all three categories, i.e. mass, value and price (R/carats, \$/carat), rough diamond purchases by RSA cutters increased from 1988 to 1990, except for sightholders' in terms of mass. The latter trend suggests that fewer rough diamonds have been offered to sightholders by the DTC, i.e. that less gem-quality material is available; that sightholders have refused their parcels because they deem it unprofitable to locally cut and polish; or the average price of rough diamonds for sightholders has increased above international acceptable price levels.

In all three categories (as above), rough diamond sales by RSA cutters improved from 1988 to 1990, with a doubling of mass and value for non-sightholders' sales. It seems as though cutters have negated their role as processors of rough diamonds. Cutters probably find rough diamond dealing more profitable than diamond processing.

In respect of polished diamond purchases, an opposite trend exists between sightholders and non-sightholders in that sightholders' mass (and value) figures decreased pronouncedly, though the average price per carat of their purchases more than doubled. Non-sightholders, on the other hand, doubled their purchases (in mass and value) but at a 1990 average price (per carat) that is half that of 1988's.

TABLE 6.3 - RSA DIAMOND TRADE TRENDS, 1988-1990

DIAMOND TRADE	CUTTERS	CARATS	RAND	R/carat	\$/carat
Rough purchased	SH	D	I	I	I
	NON-SH	>I	>I	I	I
	RSA	<D	>I	I	I
Rough sold	SH	>I	>I	I	I
	NON-SH	>II	>II	>I	>I
	RSA	>I	>II	>I	>I
Polished purchased	SH	DD	>D	II	II
	NON-SH	>II	>I	D	D
	RSA	DD	>D	I	I
Polished sold	SH	D	I	I	I
	NON-SH	>I	>II	I	I
	RSA	<D	>I	I	I

Source: The South African Diamond Board, 1992

Notes:

- SH De Beers sightholders
- NON-SH Non-De Beers sightholders
- D Denotes a decrease from 1988 to 1990
- I Denotes an increase from 1988 to 1990
- DD Denotes half (or more) decrease from 1988 to 1990
- II Denotes double (or more) increase from 1988 to 1990
- >I, >II Where the 1989 figure is greater than 1990's
- >D Where the 1989 figure is less than 1990's
- <D Where the 1989 figure is greater than 1988's

6.4 Value Added - the Concept

Value added is the total value of any industry's (or in this instance, cutting firm's) output minus the value of all the intermediate goods and services consumed during production within the sector. It is therefore equal to the labour remuneration plus the gross operating

surplus of the sector, i.e. what is available for distribution to the factors of production in the form of wages and salaries, profits, rent, depreciation allowances, interest and dividends (Botha, Z.C., et al., 1988, p 39, 86).

Elaborating on this, value added can be described as either the relationship between the operating expenses (OE=processing cost (PC)+markup) and rough diamond input (RI, the rough diamond price for instance); which can be defined as Method X below. In addition, when expressed as the relationship purely between RI and the selling price (SP) of the finished product, Method Y below.

For clarification purposes, the following example will suffice. RI (R50), PC (R20) and SP (R100), and OE therefore, totalling R50. As formulae, then:

VALUE ADDED					
Method X			Method Y		
$\frac{SP-RI}{RI}(\%)=OE(\%)=50(\%)=100\%$			$\frac{SP-RI}{SP}(\%)=OE(\%)=50(\%)=50\%$		
RI	RI	50	SP	SP	100
where: SP = Selling Price RI = Rough Input OE = Operating Expenses					

Method X defines value added with respect to rough diamond input, implying a doubling of the rough diamond input value (Axsel, K., et al., 1991, p 9).

Method Y, on the other hand, takes a different angle of approach by equaling the relationship between operating expenses and the products' selling price, i.e. 50 per cent of the selling price is accredited to beneficiation.

Both methods are fundamentally sound, with value added percentage differences (as shown above) the result of rough diamond input or selling price approaches.

Owing to this, all value added figures that follow are marked X or Y; denoting method X or method Y.

A Diamond Trading Company expert expressed his concern about added value as follows:

"...without the manufacturing sector there is no business overall. And we see that it shares very little of the added value from rough diamond to retail diamond sales..." (Mazal U'Bracha, 1991, p 18).

Profits (in real terms) for the manufacturing industry worldwide are estimated at two per cent, and for the polished diamond trading industry, at least twice as high.

At the biannual talks between the Central Selling Organisation (CSO) and Israel's Diamond Manufacturers Association (IDMA), the IDMA president reiterated that neither the price of rough diamonds, nor the price of polished diamonds are under cutters' control. Cutters are therefore forced to operate between these two limits, and in doing so, must take the financial risks that accompany it. Additionally, it is the cutter that is expected to invest in sophisticated technology, in the development of new markets and, in some cases, the financing of its customers.

Much deliberation with regard to the development of a large processing industry in Botswana (diamonds from Botswana have been processed since 1980 in Gaborone, on small scale) are presently in progress. Being one of the largest diamond producers in the world in terms of volume (about 17 million carats annually), and value (about \$1 billion in 1990), the Government of Botswana insists on its establishment. It believes that this endeavour will create additional jobs, promote mining in the region, as well as adding further value to local output.

Mr C M Lekaukau, Permanent Secretary of the Ministry of Mineral Resources and Water Affairs, Republic of Botswana, when questioned on the viability of such a venture in general, commented (Mazal U'Bracha, No 42, 1991, p 33):

"...we don't want to encourage cutting for the sake of it, we want cutting to be viable. South Africa had incentives for investment, but those incentives are now diminishing, and with it part of the industry. You really have to be careful about giving handouts. We are forced to give handouts. We want to become competitive on international terms - only in this way can we build a healthy manufacturing centre in Botswana..."

World rough diamond purchases in 1990 is estimated at \$5,7 billion, and polished diamond wholesale prices at \$7,2 billion (Table 6.4). The margin of \$1,5 billion, or a value added of 26 per cent, implies that the profit gained on such transactions could not exceed this level.

TABLE 6.4 - ESTIMATED ADDED VALUE MARGINS OF INTERNATIONAL DEALERS/CUTTERS, 1988-1990

YEAR	WORLD ROUGH PURCHASES	WORLD POLISHED SALES AT WHOLESALE PRICES	MARGIN Value Added
	\$ billion	\$ billion	\$ billion
1988	5,2	6,8	1,6
1989	5,4	7,0	1,6
1990	5,7	7,2	1,5

Source: Diamond International, May/June 1990, p82

The following theoretical example (Table 6.5) portrays the value added in the diamond processing industry.

TABLE 6.5 - THE ROUGH DIAMOND BENEFICIATION PROCESS

CASE	RI	PC	RP	YIELD	PO Mass	WHOLESALE			RETAIL		
						Price	Value Added		Price	Value Added	
	\$	\$	\$	%	carats	\$	X(%)	Y(%)	\$	X(%)	Y(%)
A	200	50	250	42	0,408	254	24,0	21,3	339	69,5	41,0
B	200	50	250	45+	0,436	271	35,5	26,2	362	81,0	44,8
C	200	40*	240	45	0,436	271#	35,5	26,2	362#	81,0	44,8

Source: The Minerals Bureau of South Africa, 1992

Notes:

- Case A Traditional technology
- Case B Modern technology (improved yield)
- Case C Modern technology (improved yield and lower cost)
- RI Rough Price - It is assumed that rough diamonds purchased from the GSO, i.e. the market price, is GSO-20%, in this case, \$250/carat-20%=\$200/carat
- PC Processing cost - including fixed and operating costs
- RP Rough Production - Purchase of rough diamonds and cost of processing
- Yield In 1990, the average yield totalled 42% for RSA cutters
- PO Polished Output - $2 \times 0,5$ carat less 3% (sawing) $\times 42\%$ yield $\times 2 = 0,408$ carats
- Wholesale Rapaport polished diamond price less 25% (locally)
- Retail The Rapaport polished diamond price: (April 10, 1992, Vol.15, No 14; G-H colour diamond, VS clarity, large melee (0,08-0,14 carats))
- VA Value Added; expressed in value and percentage
- + Improve yield by 3%
- * Decrease labour cost by \$10
- # The Rapaport categorises 8 to 14 pointers together as one price group

In South Africa in 1990, rough diamond purchases by RSA cutters averaged \$328/carat. For the purpose of this example, a price of \$200/carat for two stones (50 pointers (0,5 carats), perfect octagonal crystal structure and of G-H colour and VS clarity) is assumed. Each stone is sawn (3% weight loss), producing 4 x 24,25 pointers. Polishing them to four modern brilliant gems of 58 facets, a 42 per cent yield realises 4 x 10,2 pointers. The four stones together (weighing 0,408 carats) command a Rapaport price (retail) of \$831/carat, i.e. \$339 ($\$831 \times 0,408$). The wholesale price (the 'trading price' between dealers and cutters) is set at Rap-25 per cent, i.e. \$254/carat.

Case A demonstrates how, through traditional technology, an added value of 27X (21,3Y) per cent can be attained on a wholesale basis. Cases B and C's added values improve (due to upgrading) to 35,5X (26,2Y) per cent. The improvement in processing techniques/programmes allow cutters with similar added values to realise larger profits, i.e. Case C saves \$10/carat more than does Case B.

The crucial factor determining the eventual profitability of a cutter is the relationship between the rough diamond purchase price and the selling price of the polished diamonds. A cutter can improve the polished diamond selling prices of his goods by changes in yield (Case B) and input costs (Case C), and therefore the value added, which ultimately determines his profit. However, it is understandable why so many diamond cutters integrate both horizontally (assuming the role as rough diamond dealer), and vertically (supplying jewellery articles directly to the consumer). Naturally, the perception of the resultant value of the polished diamond through grading of the unpolished stone is crucial in assessing the profitability of the transaction. Rough diamond evaluation is a skill developed over years, and fundamental to the successful operations of a cutting firm.

Also, an aspect often overlooked is that of historical 'price disparity'. Rough diamond prices have never decreased, whilst polished diamond prices have. When diamond cutters complain about the unreasonably high level of rough diamond prices, it must be viewed in relation to this disparity. It is not so much a question of how expensive rough diamonds have become due to price increases, but rather the continued, widening gap caused through polished diamond price decreases. Since the Rapaport polished diamond price list is accepted worldwide, it is pertinent to appreciate the ever-decreasing discount margin on the Rapaport price list since its inauguration some 10-15 years ago. Whereas wholesale polished diamond prices were that of the Rapaport price when it started, today some categories trade at a discount of up to 50 per cent.

6.5 Diamond Beneficiation: South Africa

6.5.1 Commissions of Enquiry Into the Diamond Industry

The Browne Committee (Komitee van Onderzoek na Deviesebeheer- en Belastingwanpraktyke in die Diamantbedryf, 31 Julie 1980) stressed that South Africa's diamond industry does not perform satisfactorily in terms of foreign exchange and income tax earnings. The study group showed that for 1978's financial year, the diamond processing sector reported after tax deductions, i.e. cutting and polishing, administrative costs, overheads including salaries of R17,1 million, and tax allowances in respect of equipment, buildings, a tax loss of R441 191.

The main thrust of all such Commissions of Enquiry undertaken has been that of the development of an acceptable system whereby the value of polished diamonds could be ascertained, with specific focus on the adding of value between rough diamond purchases and polished diamond sales. The studies, however, did not address the two factors unique to the operations of a diamond cutting firm.

Firstly, diamonds are different to any other commodity in that they cannot be coded, i.e. with a serial number, nor accurately assessed (in the rough diamond state) with regard to its value being not homogeneous. Inventory values, therefore, fluctuate according to the current market demand. Also, neither rough nor polished diamonds can be accurately traced back to their origins. Diamond cutting firms, therefore, can control/manipulate the value of its rough diamond stocks (inventories).

Secondly, during the cutting, bruting, crossworking and brillianteering of diamonds, i.e. the whole beneficiation process, cutting firms can regulate the eventual yield from rough diamond input. Yield determines the weight of the finished product and, to a large degree, the wholesale (or retail) price of the polished stone.

With this in mind, it is important to know that most South African cutting firms (also the practise internationally) make use of the cost-plus operating system in their factories (an illustration appears in Appendix 2). The cost plus system refers to adding a uniform percentage mark-up above direct costs without careful assessment of the fixed and other costs properly attributable to each product line.

6.5.2 Value Added by RSA Cutters

From the 1990 value added statements of RSA cutters (Table 6.6) (as prescribed by the SADB) the following can be ascertained:

TABLE 6.6 - VALUE ADDED BY RSA CUTTERS, 1988-1990

YR	ACTIVITY	SIGHTHOLDERS			NON-SIGHTHOLDERS			RSA CUTTERS		
		car'000	R'000	\$/car	car'000	R'000	\$/car	car'000	R'000	\$/car
88	Rough input*	1 336	870 488	287	71	57 720	359	1 407	928 218	290
89		1 330	1 038 753	298	176	199 080	431	1 507	1 237 843	313
90		1 180	1 129 506	870	60	101 610	658	1 239	1 281 116	384
88	Yield (%)	37,8	-	-	34,6	-	-	37,6	-	-
89		38,9	-	-	41,2	-	-	39,2	-	-
90		42,2	-	-	40,7	-	-	42,7	-	-
88	Value added(X/Y)	6,0/5,7	52 222	-	-10,3/-11,5	-5 931	-	5,3/4,8	46 290	-
89	(%, R)	0,2/0,2	2 478	-	3,6/ 3,4	7 088	-	0,5/0,8	9 587	-
90		4,1/3,9	45 901	-	2,8/ 2,8	2 857	-	4,8/3,8	48 758	-
88	Polished output+	505	922 710	804	24	51 798	933	534	974 508	810
89		517	1 041 231	788	73	208 178	1 084	593	1 247 410	807
90		498	1 175 407	912	24	104 467	1 664	524	1 279 875	947

Source: The South African Diamond Board, 1992

Notes: In 1990, RSA cutters' operating expenses totalled R85 903 442

* Rough diamonds processed

+ Resultant polished diamonds processed from rough diamond input

In 1990, RSA cutters processed 1,24 million carats of rough diamonds (valued at R1,231 billion). The resultant gem-quality polished diamonds (mainly exported) weighing 524 thousand carats (yield of 42,7%) were priced at R1,280 billion. From this, the value added amounted to 4,8X (3,8Y) per cent or R49 million. However, operating expenses totalled R85,9 million, implying that processing costs amounted to R69,3/carats on rough diamonds (\$26,7/carats) or R163,9/carats diamonds polished (\$63,2/carats).

On a cost-plus basis, some R1,317 billion (R1,231 billion (rough diamond input) + R85,9 million (operating costs)) were needed to produce polished diamonds worth R1,280 billion, i.e. a net loss of R37 million (negative profit). Reasons for the anomaly could be:

(i) The SADB's method of value added data capture is inaccurate.

- (ii) The SADB's Value Added Statements allow cutters to either misinterpret the forms (and there are such technicalities that need modification; discussed in Appendix 3) thereby producing incorrect statistics.
- (iii) Cutters are blatantly manipulating their inventories at will, which affects rough and polished diamond sales' mass and value.

However, cutters interviewed have confessed that profits are made, but only reflected (if at all) by their marketing and retailing companies abroad. It has become increasingly clear, that the modus operandi of the majority of cutters prevent accurate analyses of their operations. Since this examination addresses mainly the formal diamond industry, it can not quantify the clandestine operations of the informal diamond industry, i.e. those operations that characterise the 'off-the-book' transaction structure of the entire industry.

6.5.3 Discussion of Sightholders

The value added by the five different groups of RSA sightholders is portrayed in Table 6.7.

For the three years analysed (1988-1990), the value added by sightholders totalled R100,6 million; R52,2 million (1988), R2,5 million (1989) and R45,9 million in 1990. Percentage wise, their value added amounted to 6X (5,7Y) per cent, 0,2X (0,2Y) per cent and 4,1X (3,9Y) per cent in 1988, 1989 and 1990, respectively.

Of the five sightholding groups, those cutting concerns fully foreign controlled contributed approximately 50 per cent to total value added for the three years, i.e. R49,5 million.

Three instances occurred of negative added values; the largest, that of -R15,9 million, by foreign controlled cutting concerns with minor RSA interest in 1989.

Sightholders complain about 'unreasonable' high prices that De Beers demand. As sightholders they are dependant on De Beers and therefore, are expected to take the complete parcels that are supplied at the regular sights. Should they choose to do otherwise, they may either lose their sightholder status, or in future receive 'worse' parcels. This sightholders aim to prevent as the constant supply of the right volume and quality of rough diamonds is essential to the effective operation of their cutting firms. De Beers, on the other hand, sees this form of reasoning as another way of admitting (by sightholders)

that they are incapable of competing internationally, and because of a history of being 'spoon-fed' (through Government support), incompetent in respect of productivity upgrading in their factories.

TABLE 6.7 - VALUE ADDED BY SIGHTHOLDING GROUPS, 1988-1990

SH GROUP	YEAR	ADDED VALUE		
		Added Value (R million)	Added Value (%)(X/Y)	3 Year Total (R million)
RSA controlled	1988	1,1	0,6/0,6	15,7
	1989	14,4	6,8/6,8	
	1990	0,2	0,1/0,1	
RSA nonresident Co director	1988	4,2	8,0/7,4	4,7
	1989	3,2	4,5/4,8	
	1990	-2,7	-3,4/-3,5	
RSA substantial foreign interest (40-50%)	1988	0,1	0,1/0,1	0,9
	1989	-4,1	-3,7/-3,9	
	1990	4,9	4,5/4,4	
Foreign Controlled with minor RSA interest	1988	33,9	20,4/16,9	29,9
	1989	-15,9	-7,7/-8,3	
	1990	11,9	4,9/4,7	
Foreign Controlled	1988	12,9	3,6/3,5	49,4
	1989	5,0	1,1/1,1	
	1990	31,6	6,2/5,9	
TOTAL	1988	52,2	6,0/5,7	100,6
	1989	2,5	0,2/0,2	
	1990	45,9	4,1/3,9	

Source: The South African Diamond Board, 1992

It is not possible to determine whether or not De Beers' rough diamond prices have indeed been higher locally, than in London in this study. The 'parcel-mix' in London should, however, be more attractive to local sightholders as, besides South African diamonds, the CSO in London receives rough diamonds from Botswana, Namibia, the CIS, Australia, Guinea, Zaire, and other countries and dealers.

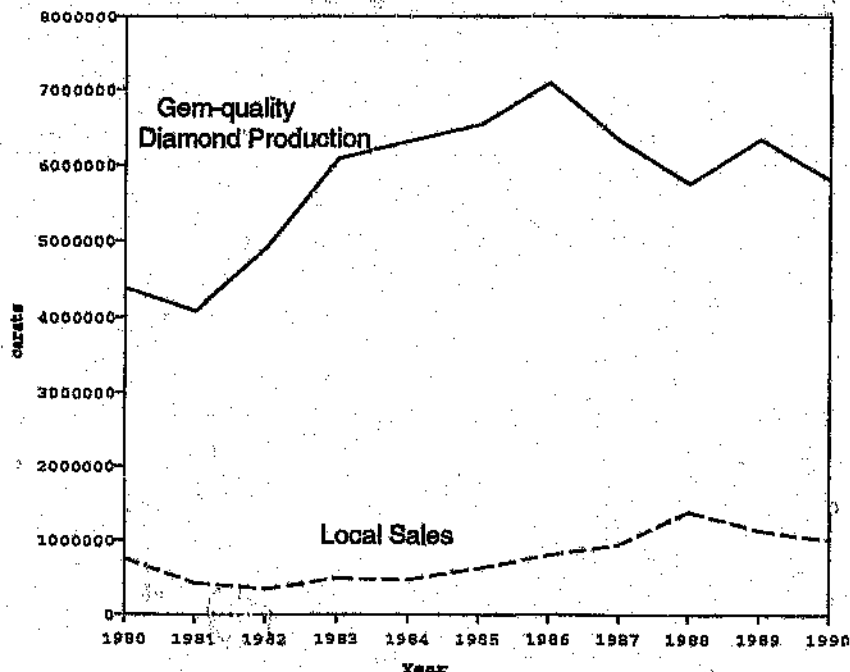
Local sightholders claim that De Beers purposely withholds top gem-quality diamonds from local cutting firms and also increases rough diamond prices locally above the international level of market prices. Conversely, De Beers holds that all diamonds produced by their South African mines are offered at local sights but that the quality and size of rough diamond output have deteriorated significantly; a situation they cannot alter.

The following graphical presentations endeavour to address aspects linked to this issue of whether local cutters could have been paying higher prices for rough diamonds mined locally than their counterparts overseas.

Figure 6.1 depicts the relationship between the estimated gem-quality diamonds produced and sold locally by De Beers in South Africa. Whilst sightholders' purchases more or less mirrored the trend of De Beers' gem-quality output, they consumed 10-20 per cent of De Beers gem-quality production annually from 1980 to 1990. In 1982, consumption was the lowest (7,1%) with the highest, that of 24,6 per cent, in 1988. Bear in mind that those gem diamonds exported are processed overseas whilst local sightholders consider them to be uneconomical to process locally.

To some degree, the crisis experienced by the international diamond industry in the late 1970's and early 1980's, is reflected in local sightholders' purchases. Locally, consumption increased from 1985 onwards, corresponding with record breaking years for CSO (in London) sales from 1985 to 1988.

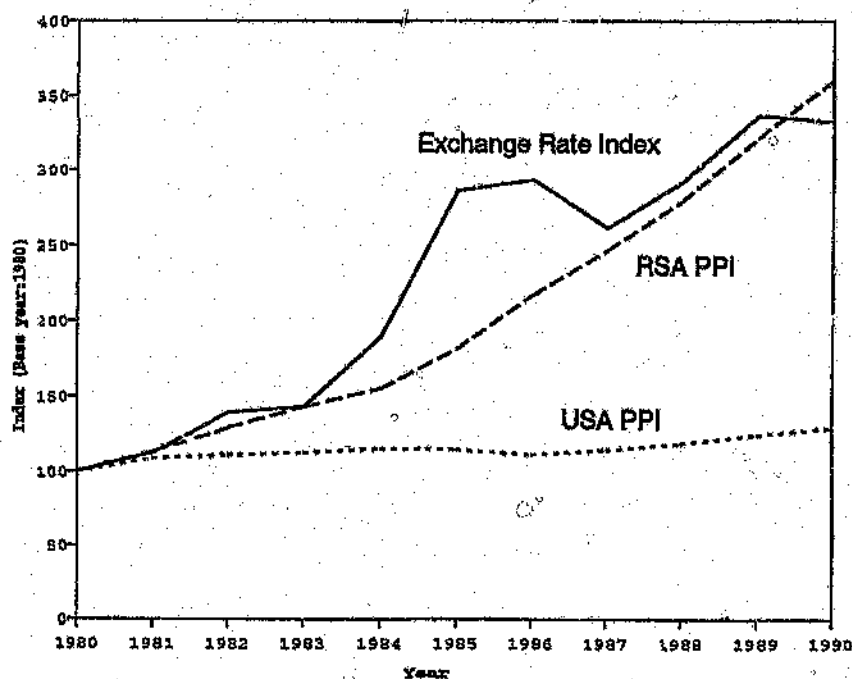
FIGURE 6.1 - DE BEERS ESTIMATED GEM DIAMOND PRODUCTION AND LOCAL SALES, 1980-1990



By using the PPI (Producer Price Index), i.e. deflating a time series (in this case the nominal R/carats and \$/carats rough diamond sales price of De Beers), the effect of price

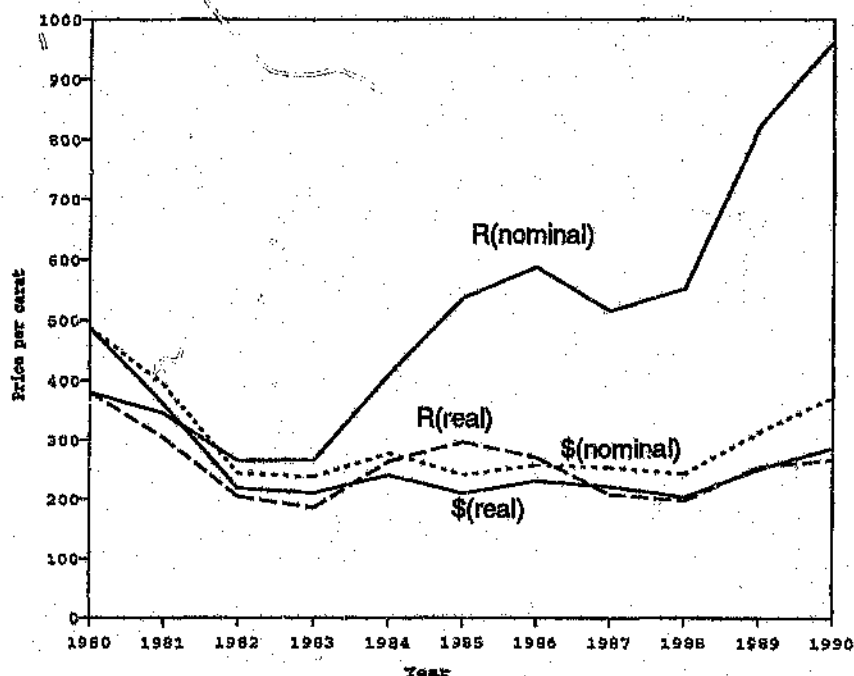
increases in the manufacturing of goods is removed. This is applicable to cutting firms who produce polished diamonds. Figure 6.2 shows the relationship between the PPI of South Africa and the PPI of the USA. It simply means that a South African cutting firm needed about R350 in 1990 to acquire the goods necessary for the processing of diamonds that cost R100 in 1980. Conversely, in the USA, the price has remained constant due to a minimal inflation rate. Figure 6.2 also includes another economic indicator, viz., the exchange rate (charted as a nominal exchange rate index). This floating exchange rate (between Rands and dollars) mirrors the RSA PPI. There is an obvious relationship between the floating exchange rate of a country and its inflation rate. From middle 1983 to 1986, a period of undervaluation occurred, i.e. the adjustment between the RSA Rand and the US dollar allowed, for instance, US investors to gain more through Rand purchases in South Africa than through dollar purchases in the USA. It was also in 1986 that the RSA Reserve Bank curtailed the use of the finrand in the diamond industry. It was believed that monies invested locally through the finrand-mechanism was abused by cutters through the purchasing of rough diamonds, i.e. effectively discounting rough diamond prices by some 40 per cent. This situation could well have discredited local sightholders and De Beers, therefore, 'retaliated' by either increasing prices or curtailing supplies.

FIGURE 6.2 - THE RELATIONSHIP OF PPI'S (RSA AND USA) AND EXCHANGE RATES, 1980-1990



In Figure 6.3, the prices per carat (in Rands and dollars) paid by RSA cutters (with De Beers the major supplier of rough diamonds in mass and value terms) are presented. With diamond prices determined internationally, the effect of inflation rates is for all practical purposes eliminated. The substantial difference between what sightholders paid for rough diamonds in Rands (nominal terms) and the corresponding values in US dollars (nominal terms) is related to exchange rate fluctuations. Local cutting firms do not own dollar accounts and are therefore subject, positively or negatively, to daily fluctuations in exchange rates. In real terms (using the PPI), no major anomalies exist between Rand and Dollar purchases. As mentioned earlier, the Rand was undervalued between 1984 to 1986, to the benefit of the local cutting industry.

FIGURE 6.3 - ESTIMATED PURCHASE PRICES PAID BY RSA CUTTERS, 1980-1990

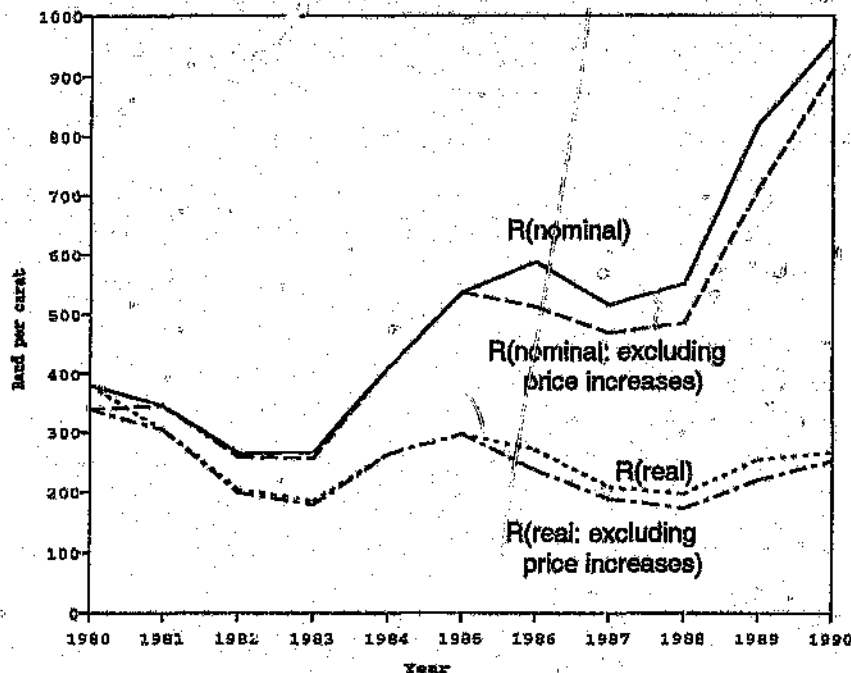


It must be emphasised again that the majority of local sightholders are foreign owned and are therefore financed from abroad. Complaints are rife that RSA's inflation and exchange rate curb local development and growth in the processing industry. However, exchange rate fluctuations allow local dealers and cutters who 'play' exchange rate fluctuations to earn extra profits.

In summary, Figure 6.4 looks at CSO average price increases from 1980 to 1990 (see Appendix 4). It is assumed that the categories in question for South Africa concur with the average price increases. The Rand purchase prices, in nominal and real terms, by RSA

cutters are shown with and without the CSO price increases. The graph shows that cutters' price increases in the R/carats local purchase price were marginal. Without the CSO price increases, local cutters probably would have paid R50/carats less on their sight parcels.

FIGURE 6.4 - THE EFFECT OF CSO PRICE INCREASES, 1980-1990



It can be concluded that the two factors largely responsible for such high R/carats rough diamond prices paid by RSA cutters are; exchange rate fluctuations, and changes in the parcel-mix of their rough diamond purchases.

It is estimated that local cutters paid (on average) \$1 096/carats (1988) and \$643/carats (1990) for imported rough diamonds, whilst De Beers' rough diamond sales locally were substantially lower.

Why need RSA cutters pay such exorbitant prices for imported rough diamonds? Reasons cited could be:

- (i) The quality of rough diamond purchases locally (mainly from De Beers) is very low, i.e. inferior to cut and polish economically in South Africa (Note: It is speculated that diamond quality deteriorates as mines proceed deeper).

However, the RSA's production in 1990 totalled 8,7 million carats (De Beers production = 8,1 million carats) with an estimated 70-75 per cent of the total output of gem and near-gem quality, i.e. 6,1-6,5 million carats (about 21% of 6,3 million carats), but only 1,3 million carats of the RSA's total output was purchased by local cutting firms.

- (ii) De Beers may also offer certain qualities, i.e. 'parcel-mixes' at their sights that only allows a small proportion thereof to be economically processed by sightholders.
- (iii) De Beers may be deliberately decreasing the quality of their rough diamond supplies in order to 'condition' sightholders with the idea that non-De Beers rough diamonds (or De Beers supplies from London, where a wider selection of goods exists) can be more profitably processed.
- (iv) Sightholders may also be so dependent on certain rough diamond qualities to keep their factories going, that since it's not available locally, rough diamonds need to be imported (at higher cost).
- (v) Sightholders may also be genuinely unproductive, i.e. unable to compete internationally, and therefore demand top, gem-quality material.
- (vi) There is the possibility that sightholders could be involved in unlawful practises. For instance, is it pure coincidence that the volume of imported rough diamonds correspond with that of the rough diamonds exported by sightholders? From 1988 to 1990, 232 thousand carats (R422,3 million) had been imported and 207 000 carats (R74 million) exported. It is possible to bring 'low-quality', overinvoiced diamonds into the country, which implies a shift in finances overseas, just to be classified as uneconomical to polish locally, and then re-exported, i.e. another form of 'schlepping' (changing rough for polished diamonds or visa versa).

6.5.4 Discussion of Non-sightholders

For the three years (1988 to 1990), the total added value realised by non-sightholding cutting firms were, -10,3X (-11,5Y), 3,6X (3,4Y) and 2,8X (2,7Y) per cent, respectively.

In terms of mass and value (for rough diamonds processed and polished diamonds produced), non-sightholders only contributed five and nine per cent, respectively to total processing in 1990.

6.5.5 Polished Diamond Exports: Quantity vs Caratage

TABLE 6.8 - POLISHED DIAMOND EXPORTS BY RSA CUTTERS, 1988-1990

YR	EXPORTS	SH	NONSH	TOTAL
88	Stones	2 537 611	538 099	3 075 710
	Carats	396 112	92 848	488 960
	Pt/stone	18	17	16
	Rand	696 701 649	179 799 827	876 501 476
89	Stones	4 019 288	512 007	4 531 295
	Carats	445 295	84 724	530 019
	Pt/stone	11	17	12
	Rand	955 558 078	214 943 108	1 170 501 186
90	Stones	3 675 317	393 361	4 068 678
	Carats	421 150	133 821	554 971
	Pt/stone	12	17	14
	Rand	1 013 954 401	179 376 427	1 193 330 828

Source: The South African Diamond Board, 1992

Notes: * Provisional data
 Pt Points; 100 points=1 carat
 SH De Beers sightholders
 NONSH Non-sightholders

Table 6.8 reflects on the quantity of polished stones that were exported by RSA sightholders and non-sightholders.

In 1990, polished stones exported by sightholders totalled 3,68 million, equating to 421 150 carats. On average, polished diamonds exported by sightholders, weighed 0,12 carats (or 12 points) per stone. DTC supplies to sightholders, same year, totalled 1,03 million carats. Processing 1,03 million carats would mean a weight loss, due to sawing of say three per cent (to 998,1 thousand carats); and a 42 per cent yield some 419,2 thousand carats of polished diamonds, which is on par with the 1990 figure of 421,2 thousand carats.

It is estimated that the DTC sold half of polished diamond quantity, i.e. 1,84 million stones to sightholders, thereby realising an average weight (of rough diamonds) of 0,56 carats/stone.

6.6 Diamond Beneficiation: Israel

Israel is recognised as the leading manufacturer of rough gem-quality diamonds internationally (first started cutting in about 1948). Its processing industry consumes six times more rough diamonds (in carats) than does South Africa's. In value terms, South Africa's local sales to cutters amounted to approximately 22 per cent of the \$2 168 million processed by Israel in 1990 (Table 6.9).

Israel's rough diamond purchases for processing dollar/carats figure for three years (1988-1990) was lower than South Africa's, the difference ranging between 22 per cent and nine per cent. The average yield between the two countries is similar; around 42 per cent.

Israeli cutters' value added totalled 7,4 per cent in 1990. South Africa's added value, at 4,1X (3,9Y) per cent amounted to a mere \$18,8 million, only 11,8 per cent of Israel's total value added.

TABLE 6.9 - VALUE ADDED BY ISRAEL'S PROCESSING INDUSTRY, 1988-1991

Year	Rough input		Polished output		Value Added		Yield
	Mcar	\$M	Mcar	\$M	\$M	%	%
1988	8,5	2 007	3,4	2 141	134	6,7	40,2
1989	7,2	2 066	3,0	2 225	159	8,5	41,7
1990	6,5	2 168	2,7	2 327	159	7,4	41,5
1991	5,5	1 871	2,3	2 076	205	10,9	41,3

Sources: Diamond International, March/April 1991, p34
Diamond International, March/April 1992, p38

Notes: car carats
M Million

6.7 Diamond Beneficiation: India

India is a typical example of a 'cottage-style' diamond processing industry. It consists of small manufacturing units (family linked industries) working near-gem qualities at very low (the lowest in the world currently) labour costs. This unique type of industry allows Indian

cutters to polish mostly cheap-gem, Australian rough diamonds.

At present, the industry boasts a workforce of about 400 000; mostly operators. However, during the past boom periods, the labourforce rocketed to some 800 000.

India's trade statistics, considered as estimates, are reflected in Table 6.10

TABLE 6.10 - VALUE ADDED BY INDIA'S PROCESSING INDUSTRY, 1987-1989

Year	Rough imports		Polished exports		Value Added*		Yield*
	Mcar	\$M	Mcar	\$M	\$M	%	%
1987	55,1	1 415	8,5	1 740	325	23,0	15,4
1988	55,4	2 064	9,9	2 622	558	27,0	17,9
1989	57,8	2 371	10,2	2 922	551	23,2	17,7

Source: Diamond International, Jan/Feb 1991, p32

Notes: car carat
M Million
* Assuming that rough diamond imports = rough diamonds locally processed = polished diamond exports

Immediately evident is the large volume of diamonds cut and polished (more than 50% of total yearly world natural diamond production). Also, the low \$/carat unit polished diamond price (1987=\$25,7/carat; 1988=\$37,3/carat; 1989=\$41/carat), as well as the very low yield; 18 per cent in 1989 on the rough diamonds processed.

However, India's polished diamond export sales, at \$2,922 billion in 1989, still betters Israel's polished diamond sales by 31 per cent, and South Africa's by 514 per cent.

Put in perspective, the value added by South African cutting firms during 1988 to 1990 amounted to about two per cent of that of India's.

CHAPTER 7

7 PERFORMANCE OF THE DIAMOND INDUSTRY

This chapter addresses the contribution made by diamond producers, dealers and cutters to the State and the country as a whole, in the form of taxes, export duties, foreign exchange, employment and the decentralisation of cutting firms. In particular, anomalies within these major sectors are highlighted.

7.1 Taxation

Direct and indirect taxation applicable to South Africa's diamond industry can be outlined as follows:

DIAMOND MINING	- 276 000 employees' income tax - Tax on mine supplies (VAT) - Mining Company income tax - Royalties - Rough diamond export duty
ROUGH DIAMOND SALES	- Company tax - Employees' income tax
PROCESSING	- Company tax - Employees' income tax
POLISHED DIAMOND SALES	- 10 per cent VAT
RETAIL JEWELLERY	- Company tax - Employees' income tax

Taxation data analysed is that of Inland Revenue's assessed direct and indirect taxes, and not tax collections.

7.1.1 Assessed Taxes of Diamond Producers

Assessed taxes for the diamond mining sector include direct income tax, i.e. mining income tax on profits, and indirect taxation, i.e. royalties (from lease considerations), tax paid by producers on the interest of their investments, and the rough diamond export duty.

Diamond mining income tax for the four years from 1987 to 1990, totalled R2,9 million (Table 7.1), and royalties paid to the State some R175,4 million. During this period Government received, from diamond mines' profits related to diamond mining, R178,3 million (excluding rough diamond export duties). Although some R70 million tax was assessed on diamond mining company's interest on investments, this can not be directly linked to only diamond activities, and is therefore discarded. The low income from mining company income taxes are due to the fact that diamond producers, like any other mining company, may deduct capital expenditure from their taxable incomes. In the case of De Beers, therefore, it is assumed that large capital requirements for mines such as Premier (mining problems due to geological setbacks, i.e. the gabbro-sill that cuts horizontally through the kimberlite pipe) and Finsch (which reverted to underground mining recently) and Venetia, have significantly decreased De Beers' taxable income, and hence its company income tax contribution. This is reported in De Beers' Annual Reports (1990, 1991), where the diamond account* totalled R2,33 billion. The Company's profit before tax of R3,17 billion (after deduction of prospecting and research of R292 million) realised a taxation contribution of R652 million in 1990, with due acknowledgement of the fact that the company has made no provision for tax on income from mining operations as it has unredeemed capital expenditure estimated to be R395 million at 31 December 1990. This figure has grown from R52 million in 1987 (De Beers Annual Report, 1988, 1989, 1990) to R174 million in 1988 and R214 million in 1989. With ring-fencing regulations in effect since 1984, i.e. mines within one group may not collectively combine tax deductions from one another, the unredeemed capex is expected to be largely due to the development of the Venetia diamond mine.

With De Beers, therefore, not contributing to taxation from their mining operations, the taxation indicated on the Annual Reports should reflect the monies paid on tax from either De Beers' non-diamond mining income or by its trading companies, i.e. the DTC, DIAMDEL, DICORP or PURTRA.

(* The diamond account reflects all of De Beers' income from its diamond mining and marketing operations and therefore includes:

- (i) The pre tax profits on the sale of diamonds produced by its own mines.
- (ii) The pre tax profits on diamond purchases, either under long term contract or on the open market.
- (iii) Dividends received from associate companies, such as Debswana.
- (iv) Dividends received from its holdings in the diamond trading companies (Bright, 1987, p2)

Following is a simple explanation of the effect of unredeemed capex on the taxable profits of a diamond mine, and shows why diamond producers contribute less than expected to taxation.

Two theoretical cases are presented. In **case A** the diamond mine is considered to be profitable with:

Diamond mine profit	= R1 000 000
(profit before capital expenditures, which excludes the purchase of land and mineral rights)	
Capex	= R800 000
(cost of machinery)	
Taxable income (R1 000 000-R800 000)	= R200 000
Pre tax profit	= R1 000 000
Taxable income	= R200 000
Mining income tax	= R101 760
(standard 50% + 0,88% (diamond mine mark-up) = 50,88%, with an effective taxation ratio of 10,2%)	
After tax profit	= R898 240

Diamond mine A, therefore, would contribute R101 760 to State coffers. In **case B**, a scenario of an unprofitable mine is portrayed:

Diamond mine profit	= R1 000 000
Capex	= R1 100 000
(cost of machinery)	
Taxable income (R1 000 000-R1 100 000)	= -R100 00 (R0)
After tax profit	= R1 000 000
Unredeemed capex	= R100 000
(carried over to the next year)	

It is very important to note that the profit margin of diamond producers probably far outstrip those of diamond dealers or cutters (excluding of course the retail trade not discussed in this

report). What must not be overlooked are the high financial risks involved in starting a diamond mine. However, when Venetia commenced production, estimates for the cost of mining operations varied between \$10-\$20/carat with an expected average price/carat (run-of-mine diamond production) of \$100-\$130/carat (Kartun, K., Brown, P., 1992, personal communication).

TABLE 7.1 - TAX ASSESSMENT OF RSA'S DIAMOND MINES, 1987-1990

YEAR	MINE INCOME TAX		ROYALTIES		TOTAL TAX*
	R	No ⁺	R	No ⁺	R
1987	675 895	4	34 399 686	10	35 075 581
1988	351 000	66	42 248 544	10	42 599 544
1989	1 693 000	55	29 746 282	4	31 439 282
1990	175 000	17	68 961 930	5	69 136 930
87-90	2 894 895	42	175 356 442	29	178 251 337

Source: Department of Finance, 1991

Notes: + Number of diamond mines assessed for tax purposes
* Excluding non-diamond related taxes

Between 1980 and 1987, RSA diamond producers paid R301 million to Government in the form of rough diamond export duties. De Beers' contribution is estimated at around 80 per cent of the total (Table 7.2).

TABLE 7.2 - EXPORT DUTIES PAID BY DIAMOND PRODUCERS, 1980-1990

YEAR	RSA (R)
1980	31 365 265
1981	24 797 439
1982	24 920 168
1983	33 328 824
1984	39 643 573
1985	41 364 741
1986	56 734 706
1987	48 381 319
1988	19 069 629
1989	15 601
1990	2 658
TOTAL	319 623 923

Source: Department of Finance, Statistical Bulletin, Inland Revenue, 1990, Nr 8, p 7

Since the finalisation of agreements between the SADB and De Beers and the SADB and Trans Hex (provided for by Article 59 of the Diamonds Act, No 56 of 1986) from 1987 and 1988 onwards, respectively, Government's revenue from export duties declined rapidly to a mere R2 658 in 1990. Levied at 15 per cent, producers view this duty as another form of a State royalty. Exports were probably 'underinvoiced' to some extent, as the market price for rough diamonds plus the export duty would have eroded any competitive edge that exporters possessed.

7.1.2 Assessed Taxes of Diamond Dealers

Of the 54 rough diamond dealers listed (Table 7.3), four are not registered at the Registrar of Companies (Pretoria). In addition, from 1987 to 1990, 92 instances of 'no income tax returns on file' exist. Of these 92, 11 companies (excluding the four not registered) have never returned any income tax forms.

Eighteen companies reported a nil tax figure, leaving 25 (which totals less than 50 per cent of the 54 dealing companies) that paid tax worth R113,7 million.

Due to the confidentiality of taxation data, it is believed that numbers 46 to 49 denote De Beers' companies, DICORP, PURTRA, DIAMDEL and the DTC, though not necessarily in that order. Also, company number five is expected to be Trans Hex's trading company. De Beers' contribution (from its subsidiaries), therefore, is estimated at 93,7 per cent of the total tax paid by RSA diamond dealers. Adding Trans Hex's share, the total increases to 99,4 per cent. This means that only five dealers contributed 99,4 per cent of total taxation from 1987 to 1990. Conversely, a mere 0,6 per cent, or R682 thousand, was paid by 49 dealers during this period.

This contribution is negligible compared to the volume of trade depicted by RSA diamond dealers (Table 5.3). From 1988 to 1990, dealers purchased 37,2 million carats of rough diamonds (excluding high-value polished diamonds) valued at R7,3 billion and sold some 36,9 million carats worth R7,2 billion. At an average price of \$78/carats, taking into consideration the volume of trade of industrial diamonds by DEBID, this average price equals that of the estimated average price of Venetia's entire production for 1992, which is considered to be an important supplier of gem-quality diamonds, not only to the local market, but also abroad (Kartun, K., 1993, personal communication).

TABLE 7.3 - ASSESSED INCOME TAX OF DIAMOND DEALERS, 1987-1990

Co	1987	1988	1989	1990	1987-1990
1	*	*	*	*	0
2	0	0	0	0	0
3	-	-	-	-	0
4	7 743	12 020	-	-	19 763
5	1 272 107	3 701 532	1 482 031	-	6 455 670
6	-	392	1 008	1 168	2 568
7	-	-	-	-	0
8	0	0	0	-	0
9	0	0	8 283	0	8 283
10	-	-	27 510	37 997	65 507
11	0	0	0	-	0
12	270 654	0	0	-	270 654
13	-	-	-	-	0
14	-	102	214	-	316
15	0	0	0	-	0
16	-	-	10 087	21 414	31 501
17	-	-	0	0	0
18	-	-	-	-	0
19	*	*	*	*	0
20	-	-	-	-	0
21	-	0	0	0	0
22	0	940	4 964	0	5 904
23	-	-	-	-	0
24	0	0	0	0	0
25	-	-	21 312	9 965	31 277
26	-	-	904	646	1 550
27	-	-	-	-	0
28	-	-	6 871	0	6 871
29	-	0	0	18 007	18 007
30	-	0	0	0	0
31	-	-	0	0	0
32	*	*	*	*	0
33	0	1 439	34 085	-	35 524
34	-	-	0	0	0
35	-	-	-	-	0
36	-	-	-	-	0
37	-	-	0	345	345
38	0	0	0	0	0
39	-	-	34 460	17 151	51 611
40	0	3 205	*	*	3 205
41	*	*	*	*	0
42	-	0	0	0	0
43	-	-	-	-	0
44	-	5 918	14 092	4 408	24 418
45	-	-	-	-	0
46	-	6 115 099	31 753 253	3 589 829	41 529 181
47	66 423	120 381	129 225	450 235	766 264
48	-	-	38 733 125	24 887 216	63 620 341
49	0	0	0	648 523	648 523
50	-	0	0	0	0
51	0	-	-	-	0
52	-	7 958	3 872	10 362	22 192
53	11 181	6 322	44 284	7 660	69 447
54	-	3 075	-	14 367	17 442
TOT	1 628 108	10 049 383	72 309 580	29 719 293	113 706 364

Source: Department of Finance, 1991

Notes: Co Company - individual company names are confidential
 - No income tax returns on file
 * Diamond dealing companies that are not registered

Broadly speaking, every sector handling rough/polished stones is intrinsically involved in dealing. More specifically, however, diamond dealers' main function (which is also another reason for their relevance in the industry) is that of supplying diamonds of specific qualities to clients.

Another valuable service a rough diamond dealer renders, is that of supplying cutting firms with the right volume (which combined with the specific quality) make up the required parcel mix (which determines also the degree of cross-subsidisation in the processing chain).

A large proportion of dealers (De Beers and Trans Hex excluded), and not implying all local dealers, are in favour of the abolition of Illegal Diamond Buying (IDB). It seems that dealers that are not involved with (or attached to) either diamond producers or cutters, believe that IDB legislation should be scrapped. This indicates their short-sightedness, or rather their desire for improved profits from the future growth of the international diamond industry. Dealers are the best positioned in terms of international trade, due to their long and detailed list of contacts (Orange West Coast Diamonds, a comparatively small diamond dealer, quote a list of 150 contacts), and have the ability to quickly clinch a profitable deal.

It has also been indicated (by dealers themselves) that dealers' profits are often the result of the financial trading of dollars and Rands (due to the fluctuations), rather than the active trading of diamonds.

In the analyses of RSA diamond cutters' trading activities, it was found that cutters have over the period between 1988 and 1990 reverted to rough diamond trading, rather than rough diamond processing. This decision could only have been made if cutters can realise higher profits through trading than processing. Since a large proportion of RSA's diamond cutters purchase their rough diamonds from local dealers, then it is obvious that those dealers should be better able to realise even higher profits. Taylor (1992, personal communication) of Orange West Coast Diamonds says the company generally lives off a minimum of two per cent markup (maximum five per cent), where one per cent goes to overheads and everything linked to the operation of the company, i.e. a one per cent profit.

Most important is the chain of events through which a rough diamond must pass from the mine to the cutter. An example of the possible price-progress (P1 to P5) of a rough diamond is given below: (Note: most producers make use of the Rapaport Diamond price list (treating polished diamond prices as an indication, and not an absolute).

- P1 A mining company recovers rough diamonds through open-cast methods at a cost of \$20/carats (Prins, F., 1992, personal communication).
- P2 The mining company estimates the selling price of the resultant polished from its rough output put out for tender, say \$300/carats (using the Rapaport Diamond Price list).
- P3 The mining company discounts the estimated polished diamond selling price by 25 per cent, i.e. $\$300 - 25\% = \$225/\text{carat}$, which is the purchase price (expressed as an average price on sorted rough diamonds) paid by a dealer or cutter.
- P4 A dealer sells this assortment to a cutter at \$225/carats plus five per cent (dealer's markup), i.e. \$236/carats.
- P5 The cutter (who purchased from the dealer) processes the rough diamond assortment and, supposedly, sell the resultant polished diamond output at \$300/carats (rough) or, having realised a yield of say 45 per cent on the assortment, at a selling price of \$667/carats (polished, i.e. $\$300/\text{carat} \times 100/45$).

Diamond dealers are the least subject to large overheads and fixed responsibilities in their businesses. What also must not be overlooked is the fact that diamond dealers have the versatility of purchasing the entire production-mix from rough diamond producers. In other words, they are far more competitive in buying power than the common cutting firm that relies on specific qualities and volumes of rough diamonds that can be economically processed.

Due to the above, diamond dealers can negotiate better prices and, as in the case of cutting firms, but even more so, make better use of cross-subsidisation in the selling of their goods.

As a rule, diamond dealers in South Africa are more competent in rough diamond price evaluation, particularly of those 'borderline' cases of economically processable stones, than the average cutter that for years has relied on a good supply of quality stones.

7.1.3 Assessed Taxes of Sightholders

RSA sightholding groups contributed a mere R2,1 million to the State Treasury during the four year period from 1987 to 1990 (Table 7.4).

TABLE 7.4 - ASSESSED INCOME TAX OF SIGHTHOLDING GROUPS, 1987-1990

GROUP	1987(R)	1988(R)	1989(R)	1990(R)	87-90(R)
Group A	24 100	172 370	166 018	0	362 488
Group B	163 234	96 095	74 217	0	333 546
Group C	0	0	0	0	0
Group D	429 589	703 495	0	0	1 133 084
Group E	162 586	55 072	40 905	4 793	263 316
TOTAL	779 509	1 026 992	281 140	4 793	2 092 434

Source: Department of Finance, 1991

Notes:

- A South African controlled; including six SH's (17 cutting firms, six trading companies)
- B South African (non-resident Co director); including two SH's (six cutting firms, one trading company)
- C South African owned with substantial foreign interest (40-50%); including three SH's (six cutting firms, one trading company)
- D Foreign controlled (Belgium) with minor South African interest; including two SH's (11 cutting firms, no trading companies)
- E Fully foreign controlled (Belgium (five SH's), Israel (one SH), Hong Kong (one SH), USA (one SH), England (one SH)); including eight SH's (16 cutting firms, four trading companies)
- * Diamond cutting firms and their trading companies that market the processed (polished) diamonds
- SH Sightholder
- (R) Rand

Group D, foreign controlled sightholding concerns with minor RSA interest, contributed R1,13 million (54% of the total) to combined income tax.

Group C, South African owned cutting firms with substantial foreign interest (40-50%) paid no income tax. This implies that from 1987 to 1990, all six cutting firms of Group C realised nil profits. Bear in mind that from 1986 to 1990 the international diamond industry boomed, with rough and polished diamond sales breaking all previous records.

The issuing of sightholders licenses has stopped for all practical purposes in 1967. This was the last date when licenses were issued; a total of 13. But in 1975/6, Krochmal and Cohen received sightholders status, an exception made by De Beers. The sightholder structure, as seen today, has been unchanged since the start of South Africa's diamond cutting industry.

7.1.4 Assessed Taxes of RSA Cutters

From 1987 to 1990, 133 diamond cutting firms' assessed income tax amounted to R2,23 million (Table 7.5).

TABLE 7.5 - ASSESSED INCOME TAX OF RSA CUTTERS 1987-1990

SECTOR	1987(R)	1988(R)	1989(R)	1990(R)	87-90(R)
SH	779 509	1 026 992	281 140	4 793	2 092 434
NON-SH	na	59 245	62 151	23 970	137 335
TOTAL*	779 509	1 086 237	350 291	28 763	2 229 769
SH %	100	95	80	17	94

Source: Department of Finance, 1991

Notes: * Diamond firms for the four year period totalled 133
 SH Assessed income tax of 21 De Beers sightholders over the four year period
 NON-SH Non-sightholders

The tax contribution of RSA diamond cutters to Government Treasury is insignificant. Put in perspective, RSA diamond cutters' share totals:

1,3 per cent of RSA diamond mines income tax and royalty contributions
 3,3 per cent of RSA's diamond producers export duty on rough diamonds (1987-1990)
 2,0 per cent of rough diamond dealers income tax contribution

Some 115 cutting firms (87% of 133) portray a nil income tax track record since 1987. In addition, the taxation data of South Africa's diamond cutters reveal the following:

(7) Out of the 133 cutting concerns investigated, 12 companies were not registered for income tax purposes.

- (ii) One firm could not be traced by the Department of Finance.
- (iii) Several cases exist where company income tax returns could not be found in the Receiver of Revenue's files. A breakdown of cutting firms' companies that did not submit income tax returns to the Receiver shows:

25 cases where companies failed to submit one year's tax returns
 36 cases where companies failed to submit two year's tax returns
 14 cases where companies failed to submit three year's tax returns
 30 cases where companies failed to submit four year's tax returns
 A total of 105 incidents.

- (iv) Seventeen (of the 133) companies were responsible for all income tax paid to Government. Of this 17, not one recorded a four year tax assessment period. Five companies' assessment periods were for three years, seven for two years, and another five for only one year.

It is worthwhile to note that from 1988 to 1990, South African cutters processed R3,46 billion of rough diamonds, only to pay taxation amounting to R1,5 million, i.e. 0,4 per cent of the rough diamond purchase value. This implies that RSA cutters only managed R3 million as taxable income (company tax rate of 50%) for the three year period.

Besides their inability to process those rough diamonds economically that are worked by other cutting centres abroad, viz., Israel, Singapore, Thailand, India and Sri Lanka, due to so-called unproductive labour, cultural conflicts between workers, the many holidays and five day/week routine, one of the major problems in South Africa's processing sector is that a large proportion of local cutters have become unprofessional in their trading practises. The years of spoon-feeding, fostered by the ever helping hand of the State, have isolated RSA cutters from international competition. The sharpness needed to survive in the cutting profession has been eroded by complacency that originated from their belief that South African diamonds would continue to be of top-quality and automatically presented at their request. It is astonishing to note that only over the past five years or so, rough diamonds have been imported (mainly by sightholders) to be polished (expected but not proved) locally. Non-sightholders have stated that rough diamonds that can be profitably cut and polished locally can be imported, identical to the local assortments but cheaper. However, to date few have embarked on this, and then only on a very limited scale. The immediate

question that arises is: Why do these cutters continue to process 'more expensive' diamonds?

From within the processing industry the message communicated, which contradicts that what is formally reported, is quite clear. Trading practises often borders on emotional sentiment of the market; only large cutting firms, i.e. sightholders have structured client lists; profits are sought from working small volume/highly profitable material. When profits materialise, it will not be reflected. As a matter of fact, a very prominent RSA sightholder confesses that all local profits are channelled overseas through means of the cost-plus system.

It can not be overemphasised that having said all of this, the fundamental reason why RSA cutters do not contribute to State coffers in the form of taxation is because of the inability of the present income tax structure to enforce payment. Cutters are only exploiting the system, legally. It would be wise to learn from the Israeli Government their taxation structure based on the value of diamonds purchased by a cutter. In other words, irrespective of whether cutter's operations are profitable or not, an X amount would be sourced from every cutter who purchased diamonds (the payment calculated on a sliding scale).

7.1.5 Combined Diamond Industry Taxation Performance

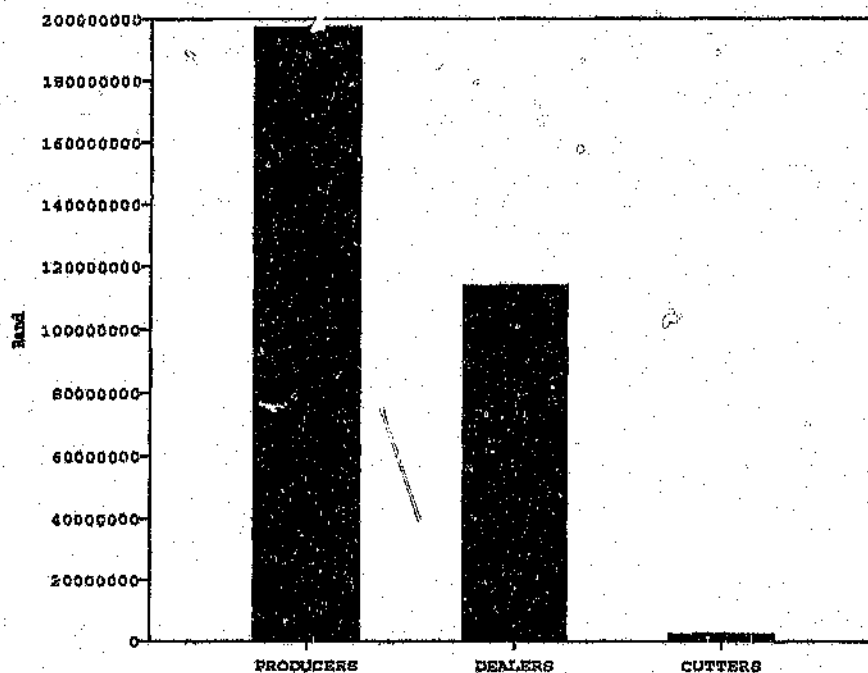
Table 7.6 and Figure 7.1 depicts the combined taxation contribution by diamond producers, dealers and cutting concerns to State Treasury from 1987 to 1990.

TABLE 7.6 - RSA'S DIAMOND INDUSTRY TAXATION CONTRIBUTION (in Rands), 1987-1990

SECTOR	1987	1988	1989	1990	TOTAL
PRODUCERS	35 123 962	61 669 173	31 454 883	69 139 588	197 387 606
Mine Income Tax	675 895	351 000	1 693 000	175 000	2 894 895
Royalties	34 399 686	42 248 544	29 746 282	68 961 930	175 356 442
Export duty	48 381	19 065 629	15 601	2 658	19 136 269
DEALERS	1 628 108	10 049 383	72 309 580	29 719 293	113 706 364
CUTTERS	779 509	1 086 237	350 291	28 763	2 244 800
Sightholders	779 509	1 026 992	281 140	4 793	2 092 434
Non-sightholders	0	59 245	69 151	23 970	152 366

Source: The Department of Finance, 1991

FIGURE 7.1 - COMPARISON OF THE ASSESSED TAXATION CONTRIBUTION BY DIAMOND PRODUCERS, DEALERS AND CUTTERS TO STATE TREASURY, 1987-1990



7.2 Foreign Exchange

Foreign exchange encompasses the revenues generated from rough and polished diamond exports.

7.2.1 Rough Diamond Export Revenue

During the period of 1988 to 1990, total RSA rough diamond exports, i.e. including all RSA producers, dealers, cutters and permit holders (those companies which, on special request, are permitted by the SADB to trade in rough diamonds) amounted to 27,3 million carats valued at R2,3 billion (Table 7.7). In mass terms, the exports were fairly consistent for 1988 and 1989; 7,3 and seven million carats, respectively. However, in 1990 some 13 million carats (almost twice the two previous years totals) were exported, due, in the main, to the stockpiled exports by De Beers' trading companies DEBID and PURTRA. The majority of these diamonds were of industrial quality.

At this point it would be appropriate to address the very complex pattern of the De Beers' trading companies. It has been explained that De Beers Consolidated Mines (Pty) Ltd (the producer company), has five trading subsidiaries viz., DEBID, PURTRA, DICORP, DTC and DIAMDEL. De Beers channels its mines' production to HOH (in Kimberley) where the rough diamonds are sorted and priced. De Beers sells diamonds, as a producer, on its own account, but to a very minor degree. PURTRA, the principal purchasing company, buys from the CSO (at HOH) and channels that purchase to the DTC (which sells mainly to the RSA sight holders) and to DIAMDEL, which supply RSA non-sight holders. DIAMDEL also sells to the RSA diamond toolmaking industry (not addressed in this report). DICORP buys also from the CSO (in HOH) and from RSA alluvial diggers and supplies to PURTRA as well as DEBID. DEBID is principally responsible for the export of industrial diamonds.

What further complicates the sale of De Beers' diamonds is the movement of the various qualities of rough diamonds between the companies. As a general rule, the DTC is similar in function to DICORP, with the difference that DTC diamonds go to local 'sights' and those of DICORP are exported to CSO London.

Continuing from Table 7.7, the following is of significance. Those rough diamonds exported only by RSA producers and their connected trading companies (only De Beers and Trans Hex, in other words) totalled, for the three year period, between 90 and 95 per cent of total rough diamond exports in mass and value terms, respectively. Only one million carats of rough diamonds valued at R198 million were exported by non-De Beers and non-Trans Hex dealers, cutters and permit holders. Though the data is insufficient to evaluate the quality of rough diamond exports by mainly cutters and permit holders, the price of some R200/carats (about \$80/carats) equates to the mass of one million carats; which is about the volume of rough diamonds absorbed by the local processing industry annually.

Somewhat unsettling in respect of Government revenues from the duty on rough diamond exports, are the discrepancies in values between those figures supplied by De Beers and the Department of Finance when compared with Minerals Bureau and SADB figures.

TABLE 7.7 - RSA ROUGH DIAMOND EXPORT REVENUES, 1988-1990

CATEGORY	Year	RSA PRODUCER EXPORTS OF ROUGH DIAMONDS				TOTAL EXPORTS+ OF ROUGH DIAMONDS			
		M car	M Rand	R/car	\$/car	M car	M Rand	R/car	\$/car
Producers	1988	2,1	444,4	212	93	2,1	444,4	212	93
	1989	0,04	7,4	185	81	0,04	7,4	185	81
	1990	0,7	131,9	188	83	0,7	131,9	188	83
(%)*		10,8	27,7			10,4	25,3		
Dealers	1988	4,9	302,8	62	24	5,2	329,5	63	24
	1989	6,7	610,4	91	35	7,0	681,9	97	37
	1990	11,9	607,9	51	19	12,3	707,7	58	22
(%)*		89,2	72,3			89,6	74,7		
Combined Totals	1988	7,0	747,2	107	41	7,3	773,9	106	41
	1989	6,74	617,8	92	35	7,04	689,3	98	36
	1990	12,6	739,8	59	23	13,0	839,6	65	25
	88-90	26,34	2 104,8	80		27,34	2 302,8	84	
Exports#						1,0	198,0	198	
		Mass	Value						
		1988	95,9	96,5	Producers and their trading companies' percentage share of total rough diamond exports				
		1989	95,7	89,6					
		1990	96,9	88,1					

Source: The South African Diamond Board, 1992

Notes: + Includes diamond producers, dealers, cutters and permit holders
 * Three year average (1988-1989) percentage share of total exports
 # Exports by dealers (excl. those of De Beers and Trans Hex),
 cutters and permit holders

The Department of Finance reported that R301 million (from 1980-1987) were paid by diamond producers (owing to the 15 per cent export duty on rough diamonds) to the State. During this period (and before) the Premier, Koffiefontein, Star, Helam and Rovic diamond mines were exempted from paying the export duty. Government introduced this practise as these mines were deemed marginal, i.e. the export duty would have eroded any profitability from the mines' operations and they would have had to shut down. Consequently, the taxable rough diamond export figure (which declined by 25% (1980

value) of 129 per cent (1987's value)) realised a calculated export duty of R447 million, i.e. an anomaly of R146 million.

Should these figures be correct, it would indicate that rough diamonds exported from the Republic have been undervalued for taxation purposes. However, it also could be that the data compared with those of the Department of Finance is incorrect.

7.2.2 Polished Diamond Export Revenue

Polished diamonds exported in 1980 totalled R302 million (278 175 carats). In 1990, this figure had increased by 297 per cent (a quadrupling in value) to R1,2 billion in nominal Rand terms (Table 7.8). Export mass had doubled to 556 244 carats.

TABLE 7.8 - RSA POLISHED DIAMOND EXPORT REVENUE, 1980-1990

YEAR	MASS	VALUE	R/car
	carats	R million	
1980*	278 175	301,7	1 085
1981*	178 441	188,3	1 055
1982*	135 880	127,0	935
1983*	186 814	161,4	864
1984*	198 258	252,8	1 275
1985*	234 034	389,8	1 666
1986*	272 524	441,6	1 620
1987*	359 652	579,8	1 612
1988*	486 949	875,6	1 798
1989*	530 033	1 171,9	2 211
1990*	556 244	1 199,6	2 157

Sources: * The South African Cutting Board, 1980-1985
 + The South African Diamond Board, 1992

Taking into consideration that rough diamond production has remained fairly constant during this period in mass (around nine million carats/annum) and in its gem : industrial rough diamond quality relationship, the increase could well be the result of the development of decentralised cutting factories such as Lappeman, Newcastle and Kim (to name but a few) since 1986.

7.3 Employment

TABLE 7.9 - EMPLOYMENT* IN RSA'S DIAMOND MINES, 1980-1990

YEAR	SECTOR	TOTAL IN SERVICE	% SHARE	TOTAL EARNINGS#	% SHARE	MINES+ %	% SHARE
1980	RSA	23 371		107 869 955		57	
	De Beers	15 327	66	87 365 222	81	11	19
	Other	8 044	34	20 504 733	19	46	81
1981	RSA	22 995		119 302 838		60	
	De Beers	14 516	63	95 519 446	80	9	15
	Other	8 479	37	23 783 392	20	51	85
1982	RSA	20 909		128 525 067		59	
	De Beers	12 678	61	102 152 240	79	9	15
	Other	8 231	39	26 372 827	21	50	85
1983	RSA	19 692		132 835 542		59	
	De Beers	14 436	74	104 846 045	79	9	15
	Other	5 156	26	27 889 497	21	50	85
1984	RSA	18 769		144 770 698		63	
	De Beers	11 867	63	115 010 994	79	11	17
	Other	6 902	37	29 759 704	21	52	83
1985	RSA	18 227		153 489 392		65	
	De Beers	11 677	64	122 779 735	80	11	17
	Other	6 550	36	30 709 657	20	54	83
1986	RSA	18 374		178 693 211		66	
	De Beers	11 566	63	140 985 550	79	10	15
	Other	6 808	37	37 707 661	21	56	85
1987	RSA	19 346		216 552 814		67	
	De Beers	12 546	65	175 516 512	81	10	15
	Other	6 800	35	41 036 302	19	57	85
1988	RSA	19 822		269 231 216		64	
	De Beers	13 180	66	223 616 008	83	10	16
	Other	6 642	34	45 615 208	17	54	84
1989	RSA	22 015		385 775 623		60	
	De Beers	15 021	68	332 722 823	86	8	13
	Other	6 994	32	53 052 800		52	87
1990	RSA	22 982		495 016 469		65	
	De Beers	16 045	70	425 538 093	86	13	20
	Other	6 937	30	69 478 376	14	52	80

Source: The Minerals Bureau of South Africa, 1992

Notes: # Salaries/wages paid out to workers (nominal Rand terms)
 * Employees on the mine that are essential to diamond production/sales, i.e. the workers on the duty list
 + Number of diamond mines operative

The employment figures discussed are those of the workers in the diamond mining, diamond dealing and processing sectors.

7.3.1 Diamond Producers

From 1980 to 1990, an average of 23 thousand workers, about 70 per cent of whom are employed by De Beers, were involved in the mining and recovering of rough, natural diamonds.

In 1990, South Africa's diamond mines employed 22 981 workers with wages/salaries totalling R495 million. Thirteen (20%) of the 65 mines operative were owned by De Beers (Table 7.9). It is estimated that about 16 000 of the 22 981 workers in service, are directly involved in the production and treatment of diamonds.

Table 7.10 shows the relationship between the workers remuneration from 1988 to 1990 in the gold, coal and diamond mining sectors and the values of the exported products.

For the three years considered, gold and coal mine workers received R18,2 and R3,9 billion in the form of wages/salaries which amounted to 31,3 per cent and 35,9 per cent, respectively, of the total export sales values, i.e. about a third of the value. In the case of diamonds, the figure is lower at about 25 per cent. As mentioned earlier, diamond mining is considered to be more profitable than all the other sectors making up the diamond industry, and for that matter, could well be more profitable than gold or coal mining.

TABLE 7.10 - MINING SECTOR COMPARISONS, 1988-1990

FACTOR	GOLD	COAL	DIAMONDS	UNIT
Export Sales Value (ESV)	58,1	10,7	4,6*	R Billion
Workers Remuneration (WR)	18,2	3,9	1,1	R Billion
Number of Mine Workers#	1 534,8	260,1	60,7	Thousand
(WR/ESV)%	31,3	35,9	24,6	

Sources: The Minerals Bureau of South Africa, 1992
The South African Diamond Board, 1992

Notes: * Total Sales Value of Rough Diamonds
Combined total for the three year period

7.3.2 Diamond Dealers

Diamond dealers are the minority by far in the South African diamond industry. This is normal as the trading practises by dealing companies normally involve only one or two buyers. In 1990, it is estimated that around 150 dealers were involved in the trading of rough and polished diamonds.

De Beers boasts the largest contingent of dealers viz., PURTRA, DIACORP, DTC, DIAMDEL and DEBID of the 54 registered dealing companies in South Africa.

7.3.3 Diamond Cutters

A decade ago (and more), South African cutters used to cut and polish rough diamonds weighing three to four carats/stone. Journeymen (also referred to as artisans) mainly finished these high value gems. These cutters, who were mostly white, underwent a five year in-house apprenticeship to acquire the necessary polishing expertise. Operators, those that did not complete the apprenticeship, worked on smaller stones, then considered to be two caraters and less down to rough diamonds of four stones to a carat (25 pointers, also referred to as meleé). These were mainly processed by black and coloured workers.

Today, smaller stones (which are increasingly flooding the industry) force cutters to improve their technical skills. The economic impetus to train highly skilled artisans has therefore diminished since operators (instead of artisans), which are paid a lower salary, can effectively process the goods, and also, cutting firms are moving towards full scale mechanisation. Workers are only needed to supervise bruting and cutting machines.

In 1990, 542 artisans and 2 650 operators (plus apprentices), totalling 3 192 cutters, comprised South Africa's entire cutting and polishing industry (Table 7.11). (Note: The cutting workforce in foreign countries totals approximately: Israel=10 000; USA=12 000; Belgium=16 000; USSR=6 000; India=400 000)

It is of importance to note that of all the sectors of the RSA diamond industry, those workers involved in the processing of diamonds are the most skilled and, quite understandably, are assumed to be highly paid due to the particular arts of diamond marking, -bruting, -cutting, -brillandeering and -crossworking. Unfortunately, diamond cutters today are in reality underpaid for the quality and quantity of work they produce. The Diamond Workers Union (DWU) (DWU) reported in 1990, that diamond operators and journeymen earned about R1000 and R3000 per month, respectively. By all standards,

this is considered to be very low compared to the value of polished diamonds produced by an individual cutter. Also, the difference in salaries earned by operators and journeymen does not take into account the quality of workmanship. Diamond operators often cut and polish diamonds of very high value, i.e. those that would normally be processed by journeymen, because of an operator's ability. However, due to the fact that an operator isn't 'academically' qualified in that he has not completed his apprenticeship, operators do not receive the same salary as a journeyman.

TABLE 7.11 - EMPLOYMENT IN RSA'S PROCESSING INDUSTRY, 1980-1990

YEAR	JOURNEYMEN (Artisans)	OPERATORS & APPRENTICES	TOTAL
1980	508	1 420	2 328
1981	659	664	1 523
1982	494	687	1 181
1983	507	847	1 354
1984	441	680	1 121
1985	463	999	1 462
1986	519	1 458	1 977
1987	510	1 800	2 310
1988	577	2 546	3 123
1989	805	3 025	3 830
1990	542	2 650	3 192

Sources: Diamond Cutting Board Annual Reports, 1980-1985
The South African Diamond Board, 1992

The following analyses (Table 7.12) shows the relationship between the workers remuneration from 1988 to 1990 in the diamond, chrome, manganese and silicon beneficiation sectors and the export values of the beneficiated products. The beneficiated products in the diamond sector would be polished diamonds, and those of the others, alloys.

The chrome, manganese and silicon beneficiation sectors combined showed that R7,3 billion of alloys were exported during the three years from 1988 to 1990, with the workers' remuneration totalling R635 million or 8,7 per cent of the exported value. In these sectors the combined workers in service totalled about 26 thousand cumulative for the three years. In the case of polished diamonds, some R3,5 billion were exported (which is the monitored value of the SADB and not necessarily the true value (as explained earlier by the cost-plus system)) processed by 10 145 cutters (cumulative) who earned salaries

amounting to R165 million, i.e. 4,7 per cent of the polished diamond export value. This is almost half that of the alloy sectors' calculation.

TABLE 7.12 - BENEFICIATION SECTOR COMPARISONS, 1988-1990

FACTOR	CHROME	COMBINED+	DIAMONDS	UNIT
Export Sales Value (ESV)	4,3	7,3	3,5*	R Billion
Workers Remuneration (WR)	395	635	165	R Million
Number of Workers#	15 513	25 717	10 145	
(WR/ESV)%	9,2	8,7	4,7	

Source: The Minerals Bureau of South Africa, 1992

Notes: * Export Sales Value of Polished Diamonds
 + Chrome, Manganese and Silicon Sectors
 # Three years combined

Obviously, the sectors need more in-depth evaluation in terms of capital or labour intensiveness. But, more than twice the number of alloy workers earned four times more in terms of salaries. Also, excluding the rough input necessary to produce the beneficiated product, alloy manufacturing is more capital intensive than diamond processing.

The point that needs to be made is that most managements of diamond cutting firms continually complain about the unreasonable high cost of labour. This is an unfounded statement. With the diamond processing industry less capital intensive than others, a very low remuneration : sales input, and also the abundance of labour available (in 1992 the DWU stated that the diamond cutting industry has a 42 per cent current-in-service record, i.e. some 1800 cutters are jobless), it seems that the heart of the problem in South Africa's processing industry is to be found with the management of cutting firms, and not only with the cutters themselves.

7.4 Decentralisation of Cutting Firms

Owing to Government's decentralisation programmes several diamond cutting firms have been erected in decentralised regions. Such cutting factories sometimes undergo structure changes, i.e. a change in company ownership, or a change in the type of operation (cutting/polishing melee's instead of large stones). Table 7.13 lists South African decentralised cutting firms.

TABLE 7.13 - FOUNDING OF DECENTRALISED CUTTING FACTORIES

Date	Cutting Firm	Ownership change	Decentralisation Region	Foreign control	New factory	Other
Nov 83	Kim	yes	Kimberley	-	yes	-
Jan 84	Lappeman	yes	Pietersburg	yes	-	-
Nov 85	Request	-	Kimberley	yes	-	-
Jan 85	Newcastle	-	Newcastle	-	-	melee+
Apr 88	Shuster	-	George	yes	-	-
Nov 88	Shevils	yes	East London	-	yes	-
Jul 88	Bronners	yes	Pietersburg	-	-	-
Feb 88	Mouw	-	Potgietersrus	-	-	-
Jan 88	Quality	yes	Bloemfontein	-	-	-

Source: The South African Diamond Board, 1992

Notes: - Not Applicable
+ Change from working larger stones to me (0,3 carat)

From 1983 to 1988, nine cutting factories were founded in various regions throughout South Africa, the largest ones being the Lappeman (Pietersburg) and Newcastle (Newcastle) cutting firms. This endeavour was successful in that additional jobs were created (Lappeman accommodates about 700-1000 women cutters), which boosted the local infrastructure, and that rough diamonds that would have otherwise been exported are now beneficiated locally.

In addition, these cutting firms could now embark on competitive jewellery manufacturing with the financial assistance provided by Government. Agreed, this form of financial support, is not solely aimed at the diamond industry but throughout all industries in South Africa.

Unfortunately, this incentive for decentralised processing units can be abused by the cutting firms in that very low wages are paid to the workers, taking into account that the State subsidises every worker. Also, cutters in decentralised areas quickly learn of their fellow cutters' salaries in cities (such as Johannesburg) and migrate to an already saturated industry. Cutting firms exploit this trend by underpaying decentralised cutters employed (with these cutters now happier with an 'increased' salary) at the expense of those already in service.

CHAPTER 8

8 GOVERNMENT SUPPORT AND REGULATION

Government involvement, by means of support and regulation in the diamond industry, purposes fundamentally the optimal utilisation of rough diamond resources.

The State bears the responsibility of creating a suitable environment wherein the country as a whole can derive maximum benefit. Owing to this, Government envisioned a diamond processing (cutting and polishing) industry to beneficiate rough diamonds, i.e. the adding of value to the primary product, in order to foster growth within the industry. Ideally, as the industry expands, Government's share of profits (through taxation) should increase, but as important, the South African community should ultimately benefit. Such expansion has occurred in South Africa's diamond industry.

However, the extent of Government's involvement and the resultant effect on the industry, has not been analysed. Has the State gained interest (so to speak) on its supporting and regulating investment in the diamond industry?

These aspects are subsequently addressed to evaluate the State's positive, or negative, role in the diamond industry.

8.1 Support

Government support include mainly taxation incentives, decentralisation subsidies and export incentives. Other, less obvious supporting measures, are also discussed in this chapter.

8.1.1 Taxation Incentives

From a taxation viewpoint, the diamond industry of South Africa is not treated differently to any other industry. Up to about 1983/1984, the diamond mining sector was taxed at 58 per cent on profits compared to 56 per cent for most other sectors (gold mining excluded). Today the tax rate is 50 per cent (plus a mark-up of 0,88%). It was argued that diamonds generally generate higher profits than other commodities.

At present, diamond mines (as with all other mines) may deduct 100 per cent of all capital goods used in its mining operations for taxation purposes, excluding capital used to purchase land and mineral rights. Since diamond trading and processing enterprises do not qualify for this 100 per cent deduction (as is the case with any company involved in trading and beneficiation), opinion has it that diamond mines are assisted by Government. Buildings erected by diamond producers, however, don't have any saleable value similar to for instance an in-town business property owned by a dealer.

8.1.2 Decentralisation Subsidies

Diamond cutting firms receive incentives under the Government's decentralisation programme. A factory needs to qualify for (subsidy A (relocation costs) and subsidy B (interest on buildings and rent thereof (15%), stocks, commercial vehicles) to receive any such provision. An allowance per worker is also part of the scheme. Decentralisation regions also dictate the share of State input. For instance, a worker at a cutting factory in Pietersburg (Lappeman receives approximately R90/worker; Rijk, R., Bindeman, G., 1992, personal communication) would receive more than one in Johannesburg.

Since 1986, nine diamond cutting factories qualified for decentralisation subsidies (in the process of being phased out) (Table 8.1). Up until 1991, R1,74 million (under subsidy A) and R10,6 million (under subsidy B) were provided by the State. Combined, total decentralisation subsidies paid out to the cutting industry amounted to R12,3 million. Notably, the analysed 133 cutting firms in RSA contributed through taxation (from 1987 to 1990) only 18 per cent of the R12,3 million, i.e. R2,21 million to State Treasury.

8.1.3 Export Incentives

Export incentives are calculated as a fixed percentage on the value of polished diamond exports under the General Export Incentive Scheme (GEIS). Government set different levels of incentives on intermediate and finished products, with the higher subsidy paid on the latter. Polished diamonds are entitled to a 2,5 per cent export subsidy.

Consideration was given in declaring polished diamonds a finished product, in which instance it might have been eligible for up to seven per cent subsidy. However, it was feared that polished diamonds would be smuggled into South Africa, only to be re-exported officially.

TABLE 8.1 - DECENTRALISATION SUBSIDIES PAID TO RSA'S PROCESSING INDUSTRY, 1986-1991

COMBINED COMPANIES*	YEAR	SUBSIDY A	SUBSIDY B
Subtotal	86-91	1 741 075	1 601 811
Total			12 342 886

Source: Department of Trade and Industry, 1991

Notes: Subsidy A: Relocation costs, i.e. the cost of disconnection, connection (Customs and Excise duties), shipment, transport, packaging and clearing of goods
 Subsidy B: Interest on the buildings, rent thereof (15%), stocks, commercial vehicles
 * Nine companies combined, i.e. Shevils (2), Shuster, Quality, Newcastle, Kim, Request and Lappeman (2) diamond cutting firms

From 1980 to April 1990, export incentives paid on exported polished diamonds totalled R47,5 million (under A and B categories) (Table 8.2).

Some R1,4 million of this total, or three per cent (which is also more than half of what diamond cutters paid in the form of income taxes), went to non-cutting firms.

TABLE 8.2 - POLISHED DIAMOND EXPORT PAYMENTS (PRE APRIL 1990)

YEAR	NON-CUTTERS CLAIMS		TOTAL CLAIMS	
	A(R)	B(R)	A(R)	B(R)
1980	0	0	297	117 668
1981	986	247 319	7 245	2 077 227
1982	576	480 510	5 956	1 961 761
1983	535	39 849	7 250	1 945 737
1984	86	341 605	6 838	3 019 014
1985	353	64 757	10 056	4 147 548
1986	721	116 933	14 715	5 427 116
1987	1 106	30 725	22 978	4 743 462
1988	227	25 196	63 820	6 519 626
1989	16 927	44 037	71 353	8 778 094
1990*	0	14 246	19 193	8 505 934
Total A + B	21 517	1 405 177 1 426 694	229 701	47 243 187 47 472 888

Source: Department of Trade and Industry, 1991

Notes: A,B Denotes the two categories of GEIS
 * From April 1990 a new GEIS system was introduced

Liaison with the Department of Trade and Industry confirmed that ineffective control in the administering of the programme exists. Firstly, no specific standards exist in respect of those companies that qualify for export incentives, and secondly, there's an obvious lack of communication between the Department of Trade and Industry and those institutions who are directly involved in the diamond industry, viz., the SADB and the Minerals Bureau (Department of Mineral and Energy Affairs). The latter point is crucial since verification of those companies requesting export incentives is imperative.

Export incentives paid under the GEIS scheme (from April 1990 onwards) amounted to R6,3 million (Table 8.3).

Only four of the 10 companies which received incentives were diamond cutting firms. Non-diamond cutting firms received R586,1 thousand from Government (9,4% of the total).

TABLE 8.3 - POLISHED DIAMOND EXPORT PAYMENTS (POST APRIL 1990)

COMBINED COMPANIES#	CLAIM PERIOD: 4/90 to 2/91	CLAIM VALUE (Rand)
TOTAL		6 262 067

Source: Department of Trade and Industry, 1991

Note: # A total of 10 companies received polished diamond export payments

Total export subsidies paid by Government since 1980 amounted to R54,7 million, of which R2,0 million (4% of the total) was absorbed by non-diamond cutting firms.

8.1.4 Other Support

Besides the direct programmes implemented by Government to assist further development of the industry the State has introduced, through the years, several additional support programmes to assist various sectors of the diamond industry, the most important being:

- (i) The 10 per cent price decrease on rough diamonds mined locally which cutters deemed profitable to process (from about 1915-1984 (10%); 1984-1988 (7,5%), abolished by Government in 1988). In effect, this meant a discount on world market prices.
- (ii) The permission and authorisation of a 'pick-and-choose' mentality by the

cutting industry. Local cutters could select and request those diamonds which they had need of.

- (iii) The introduction of the rough diamond export duty, which increased from five per cent in 1915 (to 10% from 1919-1965; from 1965 set at 15%) to its current 15 per cent. The present practise compels producers to offer their diamond first locally before allowed exportation. Should producers demand immediate exportation, the acceptable market value of the goods is determined by using the tender system on the DBSA.
- (iv) The deregulation of the secondary industry (dealers and cutters) since the inception of the SADB. Historically, rough diamonds were 'imported/exported' from Johannesburg, Kimberley and Bloemfontein and so monitored by the SAP. Also, rough diamond trading between cutters was not allowed. At present, the SADB has deregulated this sector to the extent that dealers and cutters may trade rough diamonds freely.
- (v) The use of financial rands to attract foreign investors. This incentive was abused by local sightholders in that De Beers diamonds were acquired through monies exchanged at the financial rand rate, i.e. a 40 per cent price discount.
- (vi) The continual issuing of new diamond cutting licenses.
- (vii) The establishment of the Diamond Bourse of South Africa (DBSA) in Johannesburg, to facilitate rough diamond trading locally, and its subsequent upgrading through the introduction of an open-floor trading system.
- (viii) The abolition of the ad valorem excise duty of 20 per cent on retail jewellery.
- (ix) The 25 per cent import duty on polished diamonds, which in effect 'protected' the local cutting industry.
- (x) The introduction of an 'Article 59 Committee' whereby a group of industry representatives visits a De Beers rough diamond layout (every six months) to establish the quantity and quality of De Beers rough diamond, i.e. the parcel-mix. This information is then channelled to the processing sector.

8.2 Regulation

The South African Diamond Board, a corporate body instituted by the Government of South Africa as a result of the Diamonds Act (No 56 of 1986), controls, regulates and monitors all spheres of the local diamond industry. The South African Police (through its Gold and Diamond Branch) assists the Board by enforcing Illegal Diamond Buying (IDB) legislation.

To summarise, the State demands that all rough diamond possession be controlled and monitored and that local rough diamond production be first offered locally before allowed exportation (without paying 15% export duty). Rough diamonds imported are not subject to any duty, and whilst polished diamonds may be freely traded, importation thereof (set or unset) is subject to a 25 per cent import duty.

Detailed activities of the SADB are listed in Appendix 5.

8.2.1 IDB Legislation

The laws pertaining to IDB are covered under Sections 18-25 in the Diamonds Act (No 56 of 1986). Appendix 6 portrays the illegal diamond trade in the RSA between 1980 and 1990.

The relevance of IDB legislation in South Africa is intensely debated as a point of contention between prominent diamond producers, dealers, cutters, the SAP and the Government, and arguments for and against the continuation of IDB legislation in South Africa have been propounded. Those against IDB legislation motivate their standpoint on the following:

- (i) Diamonds are not different to any other commodity and do not qualify for preferential treatment. As such, diamonds should be allowed to be traded on the free market where competition dictates prices. It remains the responsibility of the diamond owner to protect his property.
- (ii) The State carries the financial burden of enforcing IDB. In addition, the method of IDB trapping employed by the SAP is regarded as not only unethical, but unacceptable.

- (iii) The abolition of IDB would lead to expansion of the industry which is desperately needed. Foreign diamantaires would also flock to South Africa and assist industry growth.
- (iv) Contraband of rough diamonds form part of the intrinsic nature of the industry, which led to the development of the informal sector thereby creating the necessary infrastructure for further economic development.

However, the arguments requesting IDB's abolition are considered shortsighted for a variety of reasons. In effect the IDB laws are there to protect:

- (i) The diamond mining companies (producers).
- (ii) Licensed diamond diggers.
- (iii) Manufacturers of synthetic diamonds.
- (iv) Diamond licensees, dealers and cutters.
- (v) Government revenue.
- (vi) Foreign currency.

Repealing these laws would create an uncontrolled rough diamond market since it would:

- (i) Become legal to have unpolished diamonds in one's possession without having to disclose their source.
- (ii) Legalise trade in unpolished diamonds.
- (iii) Enable rough diamonds to be processed without any control.
- (iv) Enable all and sundry to export rough diamonds without any source documents and without a repatriation of foreign currency.
- (v) Encourage theft from mining areas, processing plants (synthetic) and factories.

- (vi) Attract undesirable people from abroad who would, in turn, encourage greater theft.
- (vii) Provide an acceptable international currency for illegal practices such as, the purchase of arms, trafficking of drugs, or moving currency abroad.
- (viii) Destabilise the South African diamond industry and risk rendering marginal mines unpayable.
- (ix) Result in considerable fiscal loss to the State and also reduce the flow to South Africa of much needed foreign currency that is currently being returned to the RSA.
- (x) The producers and SAP are having major problems even with the laws in place and the abrogation of the laws would rather be an incentive to increase illegal activity.

The common law alone is inadequate to protect diamond producers, as wrongful ownership must be proved which would make it difficult to apprehend a thief unless caught in the act. However, under the currently operative laws, illegal possession of a rough diamond is sufficient *prima facie* proof of guilt. The success of the international diamond industry depends largely on the control of rough diamond volumes (and their related prices). By effectively dismantling rough diamond controlling laws, an unwanted supply of polishable goods could filter unto the market and disrupt market prices for rough diamonds.

It should be noted that Sierra Leone and Angola are currently experiencing a plundering of their diamond resources (resulting in little benefit in revenue to their Governments) owing to the repeal of diamond legislation. Conversely, Botswana introduced controlling laws which coincided with the commencement of diamond mining (the opening of the Orapa mine), whilst Namibia did not abolish those laws established under the previous administration.

CHAPTER 9

9 CONCLUSIONS AND RECOMMENDATIONS

In this study titled "Government Intervention and the Resultant Sector Performance of South Africa's Diamond Industry" a two-sided approach has been attempted. Firstly, the performance of the various sectors were evaluated in terms of production and sales, taxation contribution to the State, employment, the beneficiation of rough diamonds and other, less obvious, factors. Following this, an evaluation of State support (financial and other) and regulation, historically and presently in effect, was made.

Of South Africa's six diamond sectors, viz., diamond production, -trading, -processing as well as synthetic diamond manufacturing, diamond toolmaking and the jewellery sector, only the most important, i.e. the first three, were analysed.

Before the final conclusions and recommendations of the study are considered, the following facts of the RSA's diamond industry are reviewed.

For the 1980 to 1990 period under consideration, approximately 70 diamond mining companies (excluding the 400 alluvial diggers) produced about 8-10 million carats of natural, rough diamonds annually of which 70-75 per cent were considered gem ; near-gem quality material. In terms of mass, rough diamonds from kimberlite, alluvial and marine deposits totalled 85, 14 and one per cent, respectively. De Beers Consolidated Mines alone contributed 95 per cent on average to total production.

Some 54 dealing companies are registered in South Africa which traded 35 million carats of rough diamonds, valued at R7 billion during the three years of 1988 to 1990.

Diamond cutting firms registered total 133, with some 45 cutting firms controlled by the approximately 20 De Beers sightholders (similar to those found overseas). Of these sightholders, South African owned cutting factories absorb about 25 per cent in mass and 17 per cent in value of the total rough diamonds purchased by sightholders from De Beers. In total, about 10-15 per cent of rough diamonds mined per annum locally are locally consumed by cutters.

The major conclusions and recommendations are subsequently listed.

It can be said that not only was De Beers Consolidated Mines responsible for placing South Africa on the world map as a diamond producing country, but it was De Beers who also made it possible for the establishment of a diamond trading and processing industry as is seen today. Expansion of the diamond mining sector (taking note of the fact that South Africa's primary sector, and to a far lesser degree the secondary sector are governed by laws and regulations) through the attraction of foreign investors could well occur if producers be allowed to market their rough diamonds at their own discretion. At present, producers offer their production first to the local industry to avoid paying the 15 per cent export duty on rough diamonds. Deregulation of South Africa's diamond mining sector followed, with specific emphasis on the re-evaluation of Section 59 of the Diamonds Act No 56 of 1986 (whereby diamond producers, in an agreement with the SADB, have to first offer their total production to the local cutting/dealing industry). Also, hopefully, foreign investors would be attracted to expand existing mines or start-up new mines in South Africa. In this regard, it is recommended that the current system whereby De Beers, through the CSO (in Kimberley), supplies rough diamonds to RSA sightholders should be abandoned in favour of the direct supply of rough diamonds to RSA sightholders from the CSO in London. Importantly, an agreement between the SADB (or similar controlling body) and producers (assuming that others would also partake in the agreement) should be sought, whereby effective monitoring of rough diamond exports could be made possible. This recommendation addresses the issue of 'economical processing capability' by local cutters of South African rough diamond supply. Since local cutters, particularly De Beers sightholders, largely depend on local rough diamond production, it is envisioned that a restructuring in the supply method (and therefore the so-called 'parcel-mix'), may better the RSA's entire diamond industry. Not only will the usual South African goods be on offer to the local industry, but in addition, a greater variety of rough diamonds (in size, shape and colour) sourced by the CSO (in London) from Botswana, Angola, Guinea, Namibia and the CIS. As a result, the non-De Beers sightholders should also benefit from this exercise since the current, more deregulated processing industry could expand due to higher volume's of rough diamond trading locally. This should allow the RSA's entire diamond industry to grow.

From a workforce viewpoint, the diamond mines are much more able to create jobs than either the diamond trading or diamond processing sectors. It has become obvious that the diamond industry, due to the unique properties of diamonds, should be regulated and monitored to some degree. The SADB (through the Diamonds Act) is doing exactly that, by controlling sector trade activities, by the monitoring of statistics and very importantly,

liaising with the various participants to foster growth in the diamond industry. It is recommended that this must be continued, particularly the enforcement of IDB legislation.

The continued deregulation of the secondary industry by the SADB and the subsequent increase in trade (mainly from diamond dealers), suggests that deregulation of the rough diamond trade, if done responsibly, should continue. It is the growth in trade in the entire industry that should be stimulated. Together with this, improvements in the monitoring of statistics should be made.

Concerning statistics, the study was hampered in that only limited and somewhat questionable statistics could be used. Not questionable in the sense of compilation accuracy (by either the SADB or the Minerals Bureau), but in the submitting (as the State requires) of these data. The method of data capture by the SADB allows either misinterpretation or manipulation. Also, only data from 1988 onwards for diamond dealers and cutters was available. Probably the most important conclusion reached was that statistics furnished by dealers, but particularly those from cutting firms, had probably been manipulated. This means, in effect, that these sectors are performing quite handsomely i.e. highly profitable, but it won't show on paper. In fact, what is reported formally through their statistics is often contradicted by informal communication. At the same time, it needs to be said that diamond producers should not be excluded from this charge of data manipulation.

It is recommended that the SADB upgrade their present system which evaluates prices of exported polished diamonds. Through this, the cost-plus system used by sightholders to process their diamonds can be better monitored, as well as the foreign exchange that should be realised from the export of polished diamonds.

In terms of Governmental support to the diamond industry, it was found that only the diamond processing sector was financially supported. This sector received R12,3 million in the form of decentralisation subsidies and R55,2 million under GEIS. In addition, the State's other (indirect) forms of support had been, and still are, chiefly directed at the cutting and polishing sector. The processing industry had, to date, absorbed these incentives but never performed. This is also proved by the many Commissions of Enquiry directed at the processing industry. Since GEIS is applicable to many other commodities besides polished diamonds, it is recommended that better administration, and renewed re-evaluation, of export incentive schemes and decentralisation programmes applicable to the diamond industry should be done in liaison with the SADB and the Department of

Mineral and Energy Affairs, i.e. the Minerals Bureau. In terms of administration, the authenticity of claims should be checked. In terms of re-evaluation, those requests by cutting firms to export their polished diamonds under different GEIS categories should be discussed first with the SADB and the Minerals Bureau, before finalisation. After all, the SADB monitors the activities of each and every cutter and dealer and is best equipped to evaluate such a request. In addition, since anyone is allowed to export polished diamonds and qualify for the 2.5 per cent payment on the export value, it is further recommended that the scheme be limited to diamantaires.

Historically, competitiveness as a prerequisite for future economic survival, rarely surfaced in South Africa's processing industry. With only white labour involved in the sector (this changed recently), subsidies and incentives from Government led to 'spoon-feeding', and isolation from growing cutting industries worldwide. The industry failed to respond to changing international markets. In addition, continued modernisation of equipment within the cutting industry would only further diminish the importance of the processing sector in respect of job creation (the workforce has contracted over the past five years). Conversely, diamond mines' production is far less reliant on international changes in consumer markets, and therefore more dependable in terms of job creation.

The fact that South Africa's diamond cutting industry is incapable of economically processing local rough gem-quality diamond production, implies either that local rough diamond prices are too high, or that local cutters have stagnated through 'good times' and have become technically inept to process the goods. Another factor may have been unacceptable (determined by cutters) profit margins on local output. Analysts have noted that RSA cutters have somewhat negated their role of rough diamond processing. Indeed cutters are far more involved in rough diamond trading. The three year period (1988-1990) showed that 65 per cent (value) and 15 per cent (volume) of the diamonds produced in this period were purchased by cutters and the total added value amounted to R105 million, i.e. some four per cent. In fact, after examination of RSA cutters' 1990 statistics, it was found that the cost and processing of diamonds amounted to R1,32 billion but were sold for R1,28 billion, i.e. a loss of R37 million. In terms of performance, the cost-plus system employed by cutters definitely hinders performance.

It is deduced that due to the operating structure of the cutting firms of De Beers sightholders, i.e. their policy of working on a cost-plus basis combined with the fact that the majority are foreign owned, sightholders will continue to make use of State incentives

whenever possible, whilst still underperforming in terms of tax contributions, the adding of value and job creation.

The taxation contribution to State Treasury by diamond producers, dealers and cutters differ remarkably. Taxation from producers will shortly deteriorate even further due to the implementation of the new Minerals Bill. From the end of December 1993, the State will receive no income from lease agreements, whilst producers will continue to lower their taxable incomes through unredeemed capital expenditure. De Beers' dealers are responsible for 96 per cent of all RSA dealers' taxation contribution, i.e. only four per cent of non-De Beers dealers (which amount to 50 of 54 dealers) contributed R7,1 million (from 1987-1990) to State coffers. Worse still, local cutters (the 133 analysed) contributed just over R2 million to State Treasury for the same period. A revised taxation structure for the diamond cutting industry should to be introduced. The system used by Israel (see Appendix 7) could be adapted to suit the South African industry. It is suggested that the purchase volumes/values of rough diamonds by cutters from De Beers/non-De Beers suppliers should be monitored as such statistics are the only data that can be accurately correlated by the SADB, and hence by the Department of Finance.

Though not directly addressed in this report, the lacklustre growth of South Africa's jewellery industry, from the viewpoint that a minimal amount of polished diamonds locally processed is actually absorbed by the jewellery industry (since the majority of sightholding cutting firms are foreign owned and consequently export their polished diamonds), could be assisted by means of the abolition of the import duty of 25 per cent on polished diamonds. It has been suggested in the report that the 25 per cent import duty in effect protected local cutters in that no competition to improve productivity materialised.

The recommended deregulation of the entire industry would affect IDB legislation. A study should also be undertaken on the importance and effectiveness of the SAP's role in the application of IDB legislation, as well as the moral ethics of IDB law enforcement.

It is further concluded that the DBSA has proved invaluable in determining the acceptable market price of a rough diamond parcel but it is recommended that the 'Reserve Price' system used by the DBSA should allow tenderers on the rough diamond parcels, to have insight into the price set by the seller.

To summarise, the study showed that State support favours (and has historically favoured) the processing sector at the expense of the other sectors. Given the negligible performance of the processing industry, continued State support cannot be justified.

APPENDIX 1

RSA DIAMOND PRODUCTION BY TYPE OF DEPOSIT (in carats)

YEAR	KIMBERLITE	%	ALLUVIAL	%	MARINE	%	TOTAL
1980	6 703 479	78,7	1 771 847	20,8	45 002	0,5	8 520 328
1981	7 935 411	83,3	1 550 291	16,3	40 175	0,4	9 525 877
1982	7 781 231	85,0	1 339 536	14,6	32 120	0,4	9 152 886
1983	8 957 753	86,9	1 315 987	12,8	38 039	0,4	10 311 779
1984	8 740 847	86,4	1 332 370	13,2	47 498	0,5	10 120 713
1985	8 916 321	87,4	1 241 612	12,2	48 003	0,5	10 205 936
1986	9 995 626	88,0	1 193 699	11,7	37 638	0,4	10 226 963
1987	7 686 011	84,9	1 323 868	14,6	41 113	0,5	9 050 992
1988	7 217 812	84,9	1 216 178	14,3	70 026	0,8	8 504 016
1989	7 784 571	85,4	1 264 546	13,9	66 763	0,7	9 115 880
1990	7 380 112	84,7	1 198 055	13,8	130 064	1,5	8 708 231
80-90	88 099 174	85,2	14 747 988	14,3	596 439	0,6	103 443 601

Source: Minerals Bureau of South Africa, 1991

ILLUSTRATION OF THE COST-PLUS SYSTEM

Following is an illustration of the cost-plus system, assuming a 'plus' factor of two per cent.

A purchases an ashtray at a retail price of R30 (rough input). Paint, brushes, labour, time etc, i.e. his processing cost totals R10. **A** finishes a piece of art, which he sells for R60, i.e. a markup of R20. **A**'s operating expenses total R30 (processing costs plus markup) and combined with rough input (R30) are equal to the selling price (R60) of the final product. His added value equals 100X% per cent (50Y% per cent), i.e. R30. **A**'s profit is R20 (R60-R30+R10), which in this case, is equal to his markup.

A's total cost to purchase and complete the product for final sale is R40 (R30+R10), and with an additional two per cent, which is the 'plus' factor, amounts to R40,8 (R40+2%). Assuming that **A** is financed by **B** (a principal company overseas) **A** therefore sells his product(s) to **B** and would, irrespective of his selling price, in this case R60, receive R40,8 from **B**. **A**'s profit of R20 is therefore absorbed by **B**.

Should the ashtray crack while being painted, the selling price drops, say to R35. The added value decreases now to 16,7X per cent (14,3Y), or R5. **A** realises then a profit of -R5 (R35-(R30+R10)), i.e. a loss of R5. However, the minimum amount of money he'll receive from **B**, his financial source, is still R40,8.

(Note: The relationship (and difference) between labour cost and the competitive cost of labour is vital. From above, the worker's operating cost is R10. His labour cost is, say R3 of the R10. However, should someone else complete the article (lower skilled) and waste paint, break the brushes, take more time etc, the competitive cost would increase, i.e. his competitiveness will deteriorate, and R3 could become R5, which increases the operating cost from R10 to R12)

$$X = [(SP - RI) / (RI)]\% \text{ and } Y = [(SP - RI) / (SP)]\%$$

where SP = Selling Price of the final product, and RI = Rough Input

SADB VALUE ADDED STATEMENT FORMS

The SADB monitors the value added figures by RSA cutters through SADB 'Value Added Statements (VAS)' which are completed by all local cutters (verified by a Chartered Accountant (CA)) and submitted to the SADB on a financial year basis.

The following points emphasise the 'loopholes' of the VAS (an example is attached) and how it can be exploited.

- (i) Financial year statistics, though easier for the cutting concern to compile, make correlations intricate (for entire industry). Furthermore, as in other industries, the data collation should be done monthly, not annually.
- (ii) It is unacceptable that only cutting concerns, i.e. those that make up various cutting firms, need to submit information that entail the sum of all the individual firms' activities.
- (iii) An auditors certificate is of no value. A specific assessor(s) (or group) should be tasked to validate cutting firms' valued added statistics. Also, CA's should be held accountable for irregularities.
- (iv) The four month period, after the end of a financial year, that cutting firms are allowed to finalise their statistics allows room for data manipulation. This is also unacceptable as non-diamond industries do not enjoy this convenience.
- (v) No provision is made for 'work in progress', i.e. those diamonds in the operating process that are not part of rough inventories nor finished products.
- (vi) Most importantly, the at cost factor (demanded for rough and polished) leaves wide margins for error. This could lead to all sorts of misinterpretations, which influences added values, operating expenses etc, dramatically.

VALUE ADDED STATEMENT

Financial year ended

- (i) Must reflect the combined activities of all cutting licensees (if more than one) and associated sales organisations.
 (ii) Must be accompanied by the prescribed AUDITOR'S CERTIFICATE attached hereto.
 (iii) To be rendered to the S A Diamond Board no later than 4 (FOUR) months after the end of a cutting concern's financial year.

NAME(S) OF LICENSEE(S)
 AND SALES ORGANISATION(S)

	CARATS (To nearest Carat)	VALUE (RANDS) (To nearest Rand)
A. CIRCULATION OF RAW MATERIAL INPUT		
OPENING STOCK OF UNPOLISHED DIAMONDS AT COST		
ADD: TOTAL PURCHASES OF UNPOLISHED DIAMONDS		
(i) PURCHASER FROM D T C		
(ii) PURCHASES FROM DIAMDEL		
(iii) PURCHASES FROM OTHER S A SOURCES		
(iv) IMPORTED		
LESS: TOTAL SALES OF UNPOLISHED DIAMONDS		
(i) EXPORTED		
(ii) SALES TO DEALERS		
(iii) SALES TO OTHER CUTTERS		
LESS: THEFT/OTHER REPORTED DIAMOND LOSSES		
LESS: CLOSING STOCK OF UNPOLISHED DIAMONDS AT COST		
RAW MATERIAL INPUT (A)		
B. CALCULATION OF MANUFACTURING OUTPUT		
POLISHED SALES FOR PERIOD		
(i) EXPORTS TO COUNTRIES IN COMMON MONETARY AREA (LESOTHO, SWAZILAND, TRANSKEI, VENDA, SOUTHWESTAFRICA, Ciskei & NAMIBIA)		
(ii) EXPORTS OTHER THAN (i) ABOVE		
(iii) SALES TO S A CUTTERS/DEALERS/JEWELLERS		
(iv) LOCAL SALES OTHER THAN (iii)		
ADD: CLOSING STOCK OF POLISHED AT COST		
ADD: THEFT/INSURANCE PROCEEDS		
LESS: OPENING STOCK OF POLISHED AT COST		
LESS: TOTAL POLISHED PURCHASED		
(i) FROM LOCAL CUTTERS/DEALERS		
(ii) OTHERS		
MANUFACTURING OUTPUT (B)		
C. VALUE ADDED = (B-A)		N
D. % ADDED VALUE = $\frac{C}{A} \times 100$		%
E. TOTAL OPERATING EXPENSES FOR THE FINANCIAL YEAR (WAGES, SALARIES AND OVERHEAD COSTS)		R

SIGNATURE:

NAME OF PERSON WHO SIGNED VALUE ADDED STATEMENT:

CAPACITY (ONLY A DIRECTOR, MEMBER, OWNER, OR AN AUDITOR MAY SIGN V A E):

NAME AND TELEPHONE NUMBER OF CONTACT PERSON:

CSO AVERAGE PRICE INCREASES: 1980-1990

YEAR	CSO AVERAGE PRICE INCREASES
1980	Feb-12%
1981	None
1982	Sep-2,5%
1983	Apr-3,5%
1984	None
1985	None
1986	May/Nov-14,5%
1987	Oct-10%
1988	May-13,5%
1989	Mar-15,5%
1990	Mar-5,5%

Source: De Beers Consolidated Mines, 1992

ACTIVITIES OF THE SOUTH AFRICAN DIAMOND BOARD

The Diamonds Act and/or the Regulations commissioned thereby, make provision for the following activities:

1 Control of rough diamond exports;

- (i) this entails the verification of export values,
- (ii) the physical inspection of the contents of the parcels,
- (iii) the checking of export documents to ensure that the requirements of the Reserve Bank and Customs and Excise have been complied with,
- (iv) the collecting of export taxes or the granting of exemptions or the postponing with regard to export taxes
- (v) the allocation of export permits, where such permits are demanded,
- (vi) the verification of the manner whereby rough diamonds intended for export, have been offered to the local cutting industry,
- (vii) the regulating and identification of South African diamonds which are temporarily sent out of the Republic, i.e. not exports that entail any foreign exchange.

2 Control over exports of polished diamonds;

- (i) this entails the controlling of export values,
- (ii) the physical inspection of the contents of the parcels, mainly to ensure that the diamonds have been fully polished,
- (iii) the checking of export documents to ensure that the requirements of the Reserve Bank and Customs and Excise have been complied with,
- (iv) and the verification and identification of polished diamonds that could have, if still unsold, been sent back to the Republic (re-imports).

3 Allocation and issuing of licenses that authorise holders to do business as diamond cutters, dealers in rough diamonds, diamond toolmakers or diamond researchers.

- 4 The exercising of control over the granting of permission to suitable natural persons (particularly, in respect of principals of ventures and natural persons) to trade in rough diamonds;
- 5 Allocation of miscellaneous permits (to own, to purchase, to sell, to export etc) and certificates for the registration of suitable persons and premises, in accordance with the provisions of the Act.
- 6 Administration of agreements with diamond producers, whereby such producers are committed to, in a specified manner, offer their production to the local cutting industry and whereby certain qualities (of rough diamonds) are exempted from such tender and export taxation. Stemming from these agreements, it naturally follows that the activities of those that benefit from these agreements, are closely monitored to ensure that they add a fair value to the product.
- 7 Continuous monitoring of the activities of the diamond producers, -dealers, -cutters and -toolmakers to ensure that they fulfil the requirements of the Diamonds Act, that they adhere to the prerequisites of the Board or the stipulations of agreements, that they act in the national interest and in the interest of the industry, and also to be generally informed and acquainted with the developments and needs of the industry. This entails the checking of information submitted to the SADB, and regular inspections by, and contact with, such persons.
- 8 Other activities the SADB undertakes which are not specifically advocated by the Diamonds Act are;
 - (i) the verification of the sorting and valuation of all rough diamonds that are channelled through the Government Valuator (Professional Diamond Valuations CC (PROVAL)),
 - (ii) identification and valuation of diamonds that serve as documentary evidence in court cases,
 - (iii) furnishing of recommendations/advice/information concerning diamonds and the diamond industry, to: producers and prospective producers; license holders and prospective license holders; exporters and prospective exporters; importers and prospective importers; prospective investors; State Departments and other Government organisations; the general public; and of course the Minister,

- (iv) controlling of imports of rough diamonds: Control market value of the diamonds to prevent 'transfer pricing'. Data capture of rough diamond imports,
- (v) continuous liaison with the Diamond Workers Union (DWU), in respect to aspects such as, the number of diamond employees, the standard of workmanship, the importation of foreign diamond cutters, the role of the DWU in the workforce administration of South Africa's diamond cutting firms.

A breakdown of the financial structure of the SADB is as follows:

SOUTH AFRICAN DIAMOND BOARD FINANCIAL STATISTICS

YEAR	LEVIES*		LICENSES#		STATE FUNDS		INTEREST		TOTAL
	R'000	%	R'000	%	R'000	%	R'000	%	R'000
86-87	219	91,5	2,3	1,0	0	0	18	7,5	239,3
87-88	693	85,9	15,1	1,9	50	6,2	49	6,0	807,1
88-89	2 600	93,2	10,1	0,4	120	4,3	60	2,1	2 790,1
89-90	2 600	88,1	10,1	0,3	120	4,1	220	7,5	2 950,1
90-91	2 700	90,8	7,1	0,2	0	0	266	9,0	2 973,1
86-91	8 812	90,3	44,7	0,5	290	3,0	613	6,2	9 759,7

Source: The South African Diamond Board, 1992

- Notes:
- * Current levy structure = on basis of EXPORTS of rough and polished diamonds
 - For rough diamonds: De Beers levy = 0,34 per cent of the market value
 - Non-De Beers = 0,19 per cent of the market value
 - For polished diamonds: All = 0,04 per cent market value
 - # Dealers/cutting licenses = R500 each

ILLEGAL DIAMOND TRADE IN THE RSA

ILLEGAL ACTIVITIES	PERIOD										
	7/80-6/81	7/81-6/82	7/82-6/83	7/83-6/84	7/84-6/85	7/85-6/86	1986	1987	1988	1989	1990
ILLEGAL PURCHASES OF UNPOLISHED DIAMONDS											
Number of persons arrested			468	374	490	403	817	330	370	372	340
Cash amount confiscated (Rand)				807 315	627 852	1 983 249	1 394 743	584 673	1 719 865	2 652 710	2 535 182
ILLEGAL POSSESSION AND/OR THEFT OF UNPOLISHED DIAMONDS											
Number of persons arrested			278	258	442	300	248	245	329	297	355
Mass of unpolished diamonds confiscated (carats)	3 863	2 380		4 540	2 782	1 106	1 708	1 335	26 347	3 488	13 428
Value of unpolished diamonds confiscated (Rand)	1 938 275	502 849	1 082 460	1 162 614	783 951	411 126	579 965	330 669	10 432 654	3 360 361	1 054 581
PICK UP AND/OR FOUND UNPOLISHED DIAMONDS											
Number of unpolished diamonds							22	48	8 684	682	30
Mass of unpolished diamonds (carats)							26	30	559	144	71
Value of unpolished diamonds (Rand)							14 890	2 358	582 795	216 757	54 091

Source: The Diamond and Gold Branch of the SAP (Annual Report), 1990

TAXATION OF ISRAEL'S DIAMOND INDUSTRY

The present nature of the specialized taxation treatment of the diamond industry was determined in 1981 by a public commission headed by the Deputy Attorney General of Israel. The Commission set forth special rules for the keeping of account books. The rules were designed for an industry, many of whose transactions are made by oral agreement, and in which the items of stock can prove difficult to value and yet which can easily be transported from country to country in such a manner as to make border inspections most difficult.

1 Provisions as to the Keeping of Account Books

New bookkeeping requirements were set forth in the "Provisions for the Keeping of Account Books" which require diamond merchants to maintain accounts according to the double entry system and in one of the accepted accounting systems which is suited to the size, scope, and nature of the particular business.

1.1 Book of Transactions

Such a book will be bound and will record detailed descriptions of the type and quantity of diamonds involved in each transaction. Additionally, the names of the parties involved will be listed together with the dates of receipt of payment, the amounts paid and the identifying numbers of the receipts recorded by each of the parties.

1.2 Internal Documents

Internal documents which are supplemental to invoices must include the name of the customer, the number and date of the invoice to which it relates and also a description of the size, type, quantity and individual price of the diamonds as well as the sum total of the invoice. Such documents must be signed by the assessee or a representative.

1.3 Valuation of Item in Stock

A diamond merchant is required to file a list of diamonds in stock. The list must specify the type and size of each diamond. The cost value of the stock will be valued according to documents of purchase. If it is not possible to determine the cost of the stock according to the documents then the cost will be set according to the valuation supplied by the assessee. The diamond merchant will also be required to declare the stock which he has abroad. The list must be served to the Chief Assessing Officer within 30 days from the last day of the tax year.

A diamond merchant is entitled to maintain his books in US dollars or other foreign currency should he so choose. This privilege is granted him by the income tax regulations.

2 Assessments for the Diamond Industry

In order to make possible a reasonable level of tax collection from the industry criteria were established as to levels of income which can be reasonably expected. These criteria were set out in 1985 in an agreement which was reached between the Commission and representatives of the industry.

Despite the determination of the criteria, the Chief Assessing Officer is entitled to make inspections in the workplace in cases where he has received information which indicates that an assessee's file is incorrect or where the return is unreasonable. In such cases the Chief Assessing Officer may determine the level of income based upon the findings of the inspection.

The criteria for establishing the taxable income of diamond merchants is determined on the basis of an inspection conducted by the Economic Division of the Income Tax Commission. Various factors are taken into account in arriving at the criteria, including the scope of export, the ratio of the turnover to export and expenses for the production of income including labour costs and financing costs.

3 Declarations of Wealth

Diamond merchants, as other assesseees, are required to file declarations of wealth once every four years. Such declarations will set forth the assets and liabilities of the assessee. In such cases where an unexplained difference in wealth is found between two such declarations filed by an assessee the amount of the difference will be added to the assessee's taxable income. The arrangement with representatives of the industry is

renegotiated every year so as to give expression to changes which have taken place in the industry's activity.

Tax payments are fixed (as a percentage of volume) regardless of profits or expenses incurred. It is a simple payment system, which tells cutters, in advance, what they are expected to pay (Table 1).

TABLE 1 - ISRAEL'S TAXATION REGULATIONS

1989	Tax agreements	1990
\$20 500	Minimum income level of diamantaires for taxable purposes (lowest taxable income)	\$21 500
Assessed at 1,35%	Earnings greater (or equal) to \$10M	Assessed at 1,23%
15%	Subcontractors (commision workers) estimated earnings to turnover	14%

Source: Mazal U'Bracha, no 42, Oct 91, p 61

It is estimated that for a turnover of between \$5 million and \$50 million, a manufacturer will be taxed at between 0,43 per cent and 0,53 per cent of sales turnover. Besides this, irrespective of the level of income, companies pay a flat tax rate of 43,5 per cent (1990) (Table 2).

TABLE 2 - ISRAEL'S TAXABLE INCOME RATES, 1990

Turnover (in million dollars)	>10	10-20	20-30	30+
Diamond Manufacturers (in %)	1,23	1,07	1,07	0,96
Diamond Merchants (in %)	1,10	1,05	0,92	0,92

Source: Mazal U'Bracha, No 41, Oct 91, p 64

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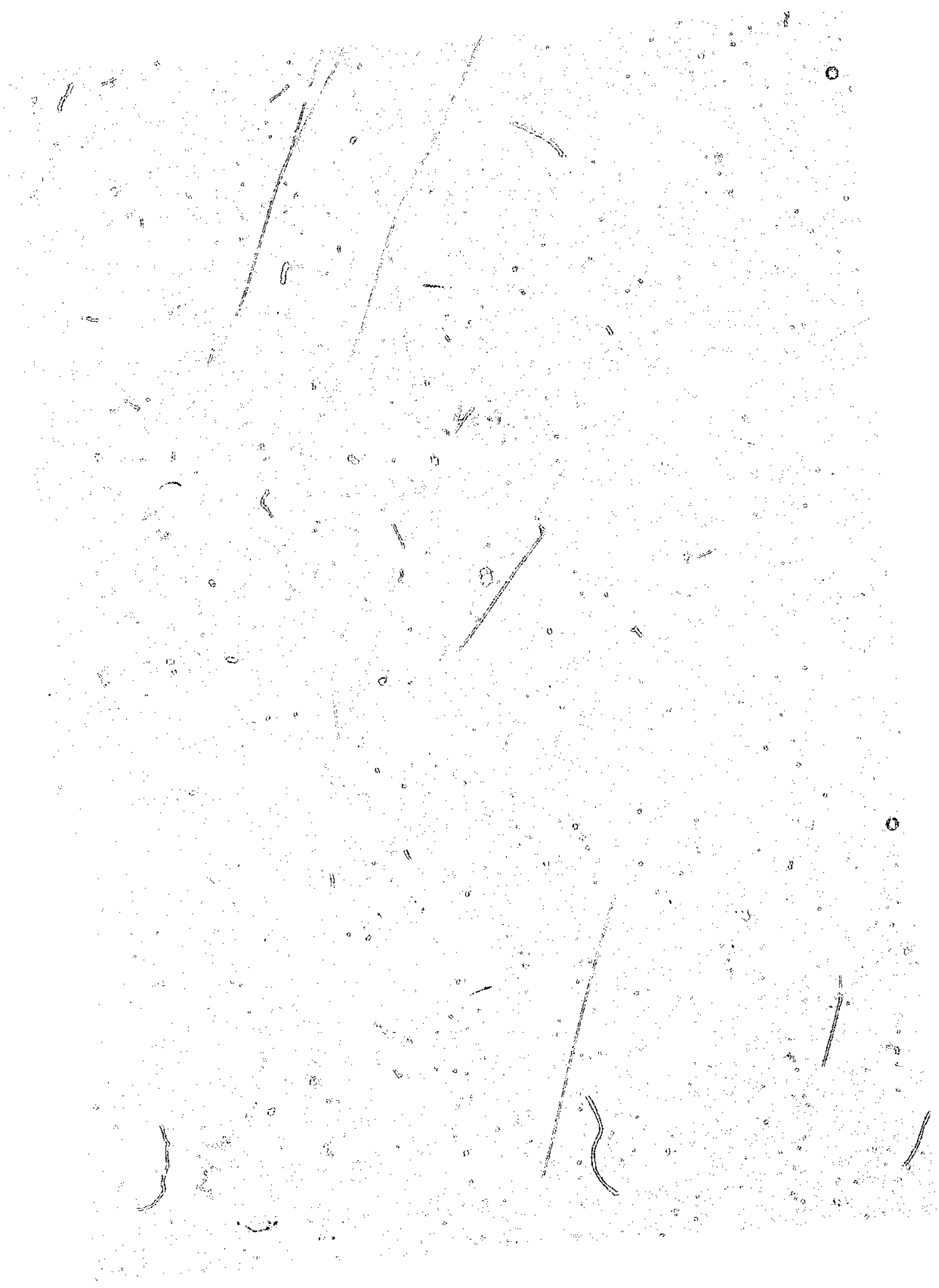
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35. Department of Trade and Industry

36. The Diamond Bourse of South Africa
37. The Diamond Cutting Board
38. The Minerals Bureau of South Africa, Statistical Subdivision
39. The South African Diamond Board
40. The South African Police

INTERVIEWS

41. Producers
42. Dealers
43. Cutters



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