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From Dynamism to Dormancy: the Jewellery Industry in Johannesburg: 1925-2003

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Thesis submitted to the Faculty of Humanities of the University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Doctor of Philosophy

Johannesburg, May 2007

Declaration

I hereby declare that this thesis ha not been submitted, either in the same or different form, to this or any other university for any degree.

Signature:

ABSTRACT

This study investigates the jewellery industry in South Africa from about the 1920s when the industry operated as a cluster in Johannesburg, to the more contemporary period of 2003. The industrial cluster approach to industrialisation forms the theoretical background for discussing the evolution of the jewellery cluster in this period. Various factors or "turning points" influenced the course of the cluster's development and ultimately culminated in the demise of the jewellery cluster in Johannesburg. The study pays specific attention to the role of government in first resisting and then promoting the growth of jewellery manufacturing in South Africa. In recent years the jewellery industry has been the focus of both government and private sector initiatives to enhance its competitiveness globally. The result of these initiatives is discussed in the context of the internal and external constraints that affected the industry in the past and continue to play a role in the present.

PREFACE

Jewellery conjures up images of glamour and wealth and is not immediately associated with its role in a country's economy and its contribution to Gross Domestic Product. Jewellery manufacturing, however, is a strategically important industry in many countries, notably the East, and jewellery consumption is one of the major driving forces behind the mining of gold, diamonds and platinum.

In South Africa the juxtaposition of the country's highly developed mining sector and its equally underdeveloped jewellery industry prompted this research study to understand the discrepancy between the two interrelated sectors. Further motivation for the study was the post-apartheid government's growing interest in the jewellery industry as a vehicle for job creation and economic growth. In the process of collecting data for the study it became evident that a 'cluster' of jewellery businesses had existed in central Johannesburg from the time of the establishment of the industry in the city. The existence of supportive archival documentation on the industry determined the historical perspective of the study within the theoretical framework of the cluster approach to industry competitiveness.

Much of the work on the thesis was facilitated by my employment in the Department of Trade and Industry (DTI) where my role encompassed formulating policy to enhance the competitiveness of the jewellery sector. Subsequent to the DTI my position in the Chamber of Mines of South Africa (COM) has enabled further insight into the relationship between mining and the jewellery sectors.

It should be noted that during the preparation of this thesis two articles have been published and a number of conference presentations have been made. The key findings concerning the rise and fall of the jewellery cluster in Johannesburg were published in the *South African Geographical Journal* in 1999. In addition, an analysis on the more contemporary issues around the jewellery industry in Johannesburg was published in *Urban Forum* in the same year.

The completion of this study has been greatly aided by the generous leave given me by the DTI to write my thesis. Thanks are also due to the Chamber of Mines of South Africa for allowing me access to their archives.

Several people deserve special mention for enabling me to complete my thesis. First and foremost I would like to thank Professor Chris Rogerson for his perseverance as a supervisor over a study that took an inordinately long time to complete. The guidance he provided and his endurance in reading several drafts of some of the chapters is gratefully acknowledged.

Special thanks go to Mrs Wendy Job of the Cartographic Unit of the Department of Geography and Environmental Sciences at Wits University for her preparation of all the photographs, diagrams and maps in the thesis. Mrs Marilyn Farquharson of the Chamber of Mines deserves special mention for her assistance in the final layout of the thesis.

I am particularly grateful to all the industry people who gave of their time and knowledge in interviews and discussions and often allowed me an insight into the manufacturing intricacies of jewellery production.

Finally, I would like to thank my family and partner for their forbearance over the period it took to complete this thesis.

Johannesburg
May 2007

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CHAPTER ONE

Introduction

The value of the jewellery industry world-wide has been estimated at over US $200bn, of which gold jewellery makes up the greatest proportion followed by diamonds, platinum and precious stones. Most of this jewellery is produced and consumed in Asia, which is not a source of the raw materials used in jewellery. South Africa is a foremost producer of the world's precious metals and minerals, but its jewellery fabrication industry accounts for less than one percent of the world production total. The discrepancy between the country's resource capacity and its level of fabrication of those resources has inspired a number of studies in the past (BTI Report; IDC, 1993), and more recently (Kaiser, 2001). This situation is an issue of major concern for government which, through policy and legislation, seeks to counteract the trend towards exporting South Africa's unwrought materials, to fully processing them in the country beforehand.

This study aims at shedding further light on the conundrum of South Africa's production of precious metal and mineral resources and its limited beneficiation thereof, through an analysis of the jewellery industry in South Africa from the early days of its establishment, to the present. In doing so the study adopts the theoretical notion of 'industrial clusters', to understand the changing dynamics of the South African jewellery industry. An industrial cluster in this context refers both to the geographical concentration of sector-specific firms, and to the broader meaning of the term denoting firms integrated into the same value chain, albeit geographically dispersed. Both types of cluster definitions are pertinent to the study in that the national jewellery industry in South Africa was, in its early days, predominantly clustered in the Johannesburg CBD. In unravelling the dynamics of the industry in this period the focus is, therefore, on Johannesburg. From about the 1970s the industry dispersed geographically and the perspective of the study shifts to encompass the jewellery cluster not only in Johannesburg but other areas of South Africa as well.

Within the context of the industrial cluster perspective, it is important to analyse clusters within an historical context. An industrial cluster is not static but evolves over time in response to different stimuli and external factors impacting upon it. How the cluster responds to the challenges or opportunities that confront it, determines its growth trajectory. Consequently, the present study examines the jewellery industry in South Africa from its early stages of development in the 1920s, to 2003, the period in which research for the study was completed. In the process the study identifies the key turning points that steered the course of the cluster's development, and the inherent factors in the cluster that shaped its response to the challenges that emerged.

The framework of industrial clusters provides a suitable platform for an examination of the jewellery industry. The industry is essentially dominated by small and medium-sized businesses, many of which are family-owned. Jewellery manufacturing initially emerged as a craft-based industry, relying on highly skilled labour to produce unique jewellery pieces for an exclusive market. Although labour-intensive craftsmanship is still a characteristic of jewellery fabrication, production now more generally entails high technology methods, with skilled and semi-skilled people supplying the mass market (Management Horizons, 1981). The industry, therefore, which used to operate on a cottage system, now includes large and medium-size businesses, and incorporates a variety of production techniques which range from producing purely hand-crafted jewellery pieces, to machine-manufactured chain. With the exception of designer jewellers who specialize in producing hand-processed, unique pieces, currently most manufacturers, regardless of size, use mass production (casting) techniques in conjunction with hand-finished work. In some instances the smaller manufacturers form part of a larger web, providing specialized, skilled work to other manufacturers. It is this factor of the industry, together with its small-scale nature and its propensity for specialization, that makes it relevant for examining from the perspective of clusters (Scott, 1994).

There are other elements of the industry that make it apt for contextualising in the cluster framework. One of these is the element of trust which is critical for the functioning of the sector. Much has been said of the importance of trust for the survival of clustered firms, and for increasing competitiveness in the face of global pressures (Sabel, 1992; Schmitz, 1993; 1999a; 1999b; Humphrey and Schmitz, 1996a; Bagachwa, 1997; Van

Dijk and Rabellotti, 1997; Nadvi, 1999a). In the case of jewellery, lack of trust and collaborative relations has been shown to weaken the effectiveness of the industry cluster, if not undermine it altogether (Scott, 1994). In the current circumstances where the incidence of large-scale, mass production firms is higher and the emphasis on new, innovative designs and marketing techniques is greater, trust is an even more imperative factor in ensuring the success of small firms. Whereas previously the market for jewellery was supply-driven, with skill, technology, and reliable delivery important factors in maintaining a competitive edge, the market is now demand-driven, with a greater focus on marketing than ever before (Kiron Consult, 2000). In the past, jewellery demand was almost assured and mainly influenced by the gold price. More recently, jewellery increasingly competes with alternative product categories, and is subject to the vagaries of fashion, which demands a higher attention to design ability and marketing proficiency from the industry.

For small firms reliant on manufacturing or design skills alone, keeping up with new demand criteria invariably means engendering or strengthening ties with other specialists in the field, for which trust is a necessary pre-condition. Trust relations are greatly facilitated by locational proximity which is achieved through clustering, but also by a common socio-cultural base. As already indicated, many jewellery businesses are family-owned and the jewellery industry clusters that exist are usually characterized by an underlying socio-cultural identity, the strength of which determines the tenacity of the cluster. In a global context, the success of an industry needs to be based on more than unity at the local level, relying also on networking ties that stretch beyond cluster or national boundaries. This is necessary not only to avoid stagnation or “regional lock-in” as defined in the literature on clusters, but also to keep abreast of, and gain access to, new developments, technology and market opportunities (Eraydin, 2002). Even clusters that demonstrated good growth performance in earlier years, may collapse if they cannot adjust to changing circumstances, whether induced by local or external dynamics. It is not always easy, or possible, however, to transform in response to different stimuli, as the case study on the jewellery cluster in South Africa will show.

The dynamics surrounding jewellery manufacturing in South Africa have been quite different to other, non-gold producing countries in the world. The strategic value of gold in the national treasury in South Africa prevented dealing with the metal like any other

ordinary commodity, and its use in jewellery was therefore stringently controlled. The jewellery cluster that arose in Johannesburg was notwithstanding government regulations that progressively intensified as the industry grew. There were a number of other challenges that the cluster had to contend with in its growth path, but it was government policy towards the industry that most affected its development. Government's significant influence on the dynamics of the industry make this an important theme in the discussion on the South African jewellery cluster. Thus far, the literature on industrial clusters has portrayed the role of government as, directly or indirectly, facilitating the growth of clusters, and not hindering their development. Indeed, considerable research attention has been devoted to debating and defining the role of public policy in promoting the clustering and networking of firms (Brusco, 1992; Julien, 1992; Humphrey and Schmitz, 1996; Tendler and Amorim, 1996; Altenburg and Meyer-Stamer,1999; Weijland, 1999; Callegati and Grandi, 2004). The emphasis on policy issues has been particularly evident in the context of less developed countries, which strive for policy lessons from the successful experiences of small firm industrial development in the more prosperous countries.

In South Africa, government's policy stance towards the jewellery industry has changed from that of controlling and resisting its growth, to encouraging and actively promoting its development. Indeed, recognition of the "wasting assets" nature of mineral resources has given rise to a new industrialization approach that favours economic diversification through alternative uses of the country's mineral endowment (Jourdan, 2005). There are three main options for achieving diversified growth based on the country's mineral riches: increasing the beneficiation of the raw material beyond a semi-processed state; extending the applicability of the capital goods and services industry that supports mining activities into other industry sectors, both nationally and internationally; and, encouraging the "lateral migration" of knowledge and technologies embodied in the mining and processing sector, into other economic activities (Walker, 2002). Of these options, that of adding value or increasing the beneficiation of the raw material before export has received the most emphasis in the case of government policy formulation. The jewellery industry, consequently, has been the focus of extensive government attention in the last few years, as part of government's strategy to increase industrial competitiveness and more judiciously exploit its mineral wealth.

In outlining the trajectory of the South African jewellery industry from the 1920s to the closing date of 2003, and identifying the salient factors that influenced its development, the material is structured into eight chapters. Chapter One presents the objectives and structure of the thesis and elaborates on the methodology and sources of information employed. Chapter Two provides the theoretical context for the study, which is rooted in the debates on industrial clusters. Starting from the industrial district perspective, which classified clusters according to set criteria, the argument advances to a depiction of clusters as dynamic entities, following trajectories of growth or decline according to internally or externally induced changes. The heterogeneity of clusters is also illustrated, especially taking into account the less developed economies where clusters range from survivalist, as in the case of many of the clusters in Africa, to export dominated, and depict varying levels of development. In most cases, the success of clusters is determined by the level of collective action and the degree of trust among entrepreneurs, all of which can be accelerated through direct or indirect government intervention. It is the themes of joint action, trust, and the role of government in particular that will be explored in the analysis of the South African jewellery industry.

Introducing the topic on jewellery, Chapter Three analyses the changing patterns of jewellery fabrication and demand in the world in the last three decades. The current leading consumer markets differ from the ones that dominated the scene 20 or 30 years ago, largely due to government and trade reforms in particular countries, and assisted by the promotional activities of the World Gold Council and Platinum Guild International. An important theme that emerges from the discussion is the strength of the jewellery industry in countries with no wealth of mineral resources. Another important issue that comes to the fore is that the demand for jewellery in these markets has not only resulted from government reforms. In many instances a thriving, albeit informal, jewellery industry existed despite repressive government regimes. On the matter of government, the chapter highlights the often contradictory and shifting role of the state, which can veer from withholding support for the industry, to introducing a changed policy environment. Each of these themes will be shown to have resonance with the South African situation.

Chapter Four opens the discussion on South Africa, starting with a review of the country's mineral wealth, and the extent of its mining and processing activities. The

institutional structure of the industry for the diamond, gold and platinum sectors is presented, before focusing attention on the current structure and status of the jewellery sector in South Africa. This chapter contrasts to Chapter Three in that it accentuates the country's enormous potential resource base, and the minor role that jewellery plays in the national economy. It is important to note that although the focus is on the jewellery industry at the national level, the industry, in its early growth stages, was largely based in Johannesburg. Accordingly, the discussion in Chapter Five is centred on Johannesburg where the jewellery cluster first emerged.

Chapter Five traces approximately the first fifty years of the cluster, from around the 1920s to the beginning of the 1970s. In this period it is argued that the industry went through two major turning points, the first of which assisted in the establishment and growth of the cluster, whereas the second brought to the fore a situation of conflict between industry and government, a situation that had defining implications for the industry. In the chapter, specific attention is given to not only these and other external factors impacting on the cluster, but also to the internal dynamics of the cluster that determined its response to the crises that occurred.

In Chapter Six the perspective on the industry broadens geographically to the national level. The discussion centres on the turning points in the industry that resulted in the decline and eventual demise of the cluster in the Johannesburg CBD, and the emergence of other clusters in different parts of the country. The Johannesburg cluster is still a core element in the broader spectrum of the industry, but it no longer comprises the industry as a whole. A principal theme that is highlighted in the chapter is the role of external agents in the development of the cluster. These agents, specifically the major mining companies and government, play an even more definitive role in Chapter Seven.

The focus in Chapters Seven and Eight is on initiatives to re-energise the jewellery cluster, in Johannesburg and more broadly. Chapter Seven analyzes the first reform measures to the jewellery industry introduced by the apartheid government towards the end of the 1980s. Under impetus of the beneficiation debate the objective of developing the jewellery industry spread to the private sector as well, and culminated in strategies to unite the industry in Johannesburg in one geographical location. These initiatives had

little effect in creating a jewellery cluster and by the end of the apartheid era the industry remained disparate, with poor growth prospects.

Chapter Eight pursues the theme of reviving the industry but in the context of the post-apartheid government. The issue of raising the competitiveness of the jewellery sector gained momentum in the post 1994 period as part of government's strategy to re-integrate South Africa's industrial sector into the global economy. Government-inspired projects for the industry drew on the cluster concept of development, albeit through strengthening the inter-firm networks in the industry rather than through geographical centrality. The chapter examines the results of these endeavours and the factors that have mitigated against their success.

The concluding section, Chapter Nine, summarises the key findings of the study, and re-examines the experience of the South African jewellery cluster in light of the theoretical studies on enterprise clusters. The early demise of the jewellery cluster in Johannesburg and the more recent response of the industry to strategies for its development based on clustering principles, raise important questions on the effectiveness of clustering as a development strategy for the industry. This has significant policy implications for the industry, and of the role of government in effecting change.

1.1 Methodology and sources of information

The material for this thesis is derived from a combination of primary, secondary and newspaper sources. Primary material is defined as archival sources, trade journals, documentation from industry and interviews. These sources of material are indicated as end-noted at the end of each chapter. Secondary material, which refers to all published information, is annotated in the text.

For the discussion on the evolutionary development of the jewellery industry, the principal source of information is archival material, which is complemented by information from early issues of the trade journal *Diamond News and SA Watchmaker and Jeweller* (which later changed in name to *Diamond News and SA Jeweller*, and, more recently, to *SA Jeweller*). The extensive archival material was primarily sourced

from the State Archive Depots in Pretoria, and mainly was comprised of government documentation, and of written correspondence that occurred between government and the jewellery industry, and between government departments. To corroborate the historical documentary evidence, efforts were made to consult some of the more long-standing members of the industry through oral histories. Unfortunately, few of these older jewellers still survive and of that group only a small number can recall details of the industry's past.

A further rich source of documentary historical evidence that was useful in understanding the role of the mining sector *vis-à-vis* government and also the jewellery industry was the archives of the Chamber of Mines in Johannesburg. This documentation was valuable in terms of shedding light on issues pertaining to the gold sector, the marketing of gold and gold jewellery, and the interaction of the mining industry with government and jewellery stakeholders. More detailed information on the marketing of gold and platinum jewellery was obtained from the Gold Fields Mineral Services (GFMS) annual gold surveys, and the Johnson Matthey platinum reviews, respectively.

In terms of the more recent developments in the industry, my position in the Department of Trade and Industry (DTI) to make policy recommendations for facilitating the growth of South Africa's jewellery sector, enabled much of my understanding of the sector. My role in the Department afforded me access to a range of internal DTI documents which relates to developments affecting the restructuring of the industry. My insight into jewellery and diamond manufacturing was enhanced by my involvement in the projects that were initiated by the DTI to increase South Africa's share of the global jewellery market. As chairman of one of the task teams for the jewellery cluster project it was possible for me to observe developments in the industry and the role of government and jewellery participants in charting the course of events. Participation in the cluster initiative necessitated frequent discussions with industry members, which has provided the basis for analyzing the industry's viewpoint on these events. Likewise, it was involvement as the DTI's representative, and project leader, in the jewellery global marketing study that enabled detailed insight into the proceedings and findings of the project, and the experience of the industry in this exercise. The marketing study entailed numerous interviews and discussions with a wide spectrum of industry representatives

and stakeholders, and my participation in many of these interactions deepened my understanding and knowledge of the jewellery industry. The same level of involvement applied to the implementation of the strategies that evolved from the marketing study, and to the investigation into the diamond industry. As head of the committees overseeing these projects, my discussion on this aspect of the thesis arises from the constant interaction with members of the industry, as well as the other stakeholders involved. The various interviews held with jewellers and diamantaires has informed Chapters Four and Eight of the thesis especially.

CHAPTER TWO

Industrial Clusters: International Debates

2.1 Introduction

Since the economic dynamism of small- and medium-sized firms in Italy first attracted international attention in the early 1980's, the literature on the clustering of enterprises has developed into a formidable body of research material. The benefits of clustering were first observed in the context of advanced, industrialised countries and later inspired research in the less developed nations (Goodman, *et al*., 1991; Pyke and Sengenberger, 1992; Nadvi and Schmitz, 1994; Cossentino, *et al*., 1996; Van Dijk and Rabellotti, 1997). Given that the successful industrial clusters which augmented the wealth of regions were largely comprised of small-scale industries, the applicability of this form of industrial organization in the developing world seemed particularly appropriate. The ensuing research which evolved in this context has revealed a rich diversity of clusters, manifesting varying characteristics and levels of development, depending on the support structure of the country or region concerned. Whether in weakly- or well-developed clusters, however, networks of firms provide, at a most basic level, opportunities for economic survival and, in advanced cases, access to foreign markets and export growth (Hansohm, 1992; McCormick, 1997, 1999, 2001; Pederson and McCormick, 1999). Either way it is generally acknowledged that clustered firms create an enabling environment that ensures the sustainability and growth of entrepreneurs and enterprises which otherwise would not have succeeded, at all or to the same extent, on their own (Schmitz, 1997; Schmitz and Nadvi, 1999).

It is the intention in this discussion to illustrate the relevance of the cluster form of industrial organization in economic development, both in advanced and less developed countries. In achieving this aim, the discussion is structured into eight sections of material: Section 2, which follows this introduction, assesses the basis for approaching industrial development from the cluster perspective. Section 3 builds on this argument by reviewing the emergence of the cluster debate, paying particular attention to the role of industrial districts in determining the profile of clusters, and in the process creating a 'model' which became the yardstick for assessing clusters in

other contexts. Section 4 highlights the limitations arising from such a 'model' of development. It is argued that whilst certain characteristics underpin the definition of clusters, ultimately it is their growth path or trajectory that distinguishes one enterprise cluster from another. It is acknowledged that the industrial district framework, albeit not a model for development, does provide valuable insights into the role of small-scale industry in the industrialisation process. Accordingly, section 5 adopts the industrial district approach in the context of less developed countries where small firms predominate in the economic landscape. Analysis of enterprise clusters in the less advanced nations brings to the fore the discrepancies that exist among clusters, testifying to a continuum of cluster categories, ranging from incipient to advanced. As it is especially the category of incipient clusters that feature overwhelmingly in Africa, the focus of Section 6 is to illustrate the critical role of enterprise agglomerations as the seed bed for industrial development. The discussion in section 7 is centred on the factors conducive to cluster development. Specific importance is placed on inter-firm relations, internal and external to the cluster, and how these change with time. Further, this section draws attention to the role of government which, directly or indirectly, has an impact on cluster development. Finally, section 8 views the jewellery industry, the sector on which the discourse over the following chapters is based, in terms of the extent to which it is organised in the form of agglomerations of firms, and the level to which it has been subjected to empirical observation.

2.2 Why the focus on clusters?

The focus on small scale industry for local economic growth has been a key area of concern for researchers and practitioners of development policy for several decades. From a starting point of general analyses and surveys covering a cross-section of economic activities in an effort to identify constraints and bottlenecks, researchers turned to more sector-specific studies as an effective means of exploring the growth potential of small-scale industry (Boomgard, *et al*, 1992). More recently, the tendency has been to not only differentiate between sectors of industry, but between clustered and dispersed firms in order to better understand the performance of small enterprises and their prospects for growth (Schmitz, 1990, 1992; Baptista and Swann, 1998). It is argued that geographically and sectorally dispersed producers face greater odds in attaining success than clustered entrepreneurs who, because of their proximity to each other, gain from the opportunity to link to and learn from each other, as well as to work together towards common goals. The emphasis, therefore,

is on clusters or groups of enterprises, denoting geographic concentration of small scale producers engaged in the same or related economic activities.

Interest in the agglomeration of firms as opposed to individual entities is premised on the realisation that clustering offers certain efficiency gains which very often elude the individual firm. This is not to say that the geographical and sectoral concentration of firms automatically results in efficiency benefits to the firms concerned (Schmitz, 1992, 1995; Gordon and McCann, 2000). It does, however, provide the enabling environment for a number of developments that may take place. These include, *inter alia*, the division of labour and specialisation amongst firms, the rapid provision of specialised products at short notice, the emergence of suppliers of related inputs and services, the emergence of agents and traders connected to outside markets, the growth of a specialised labour pool, and the formation of inter-firm linkages which are often manifested in trading relationships and in the establishment of associations and other representative industry bodies (Schmitz, 1995). These advantages which emerge from clustering are referred to in the literature as external economies and arise as an inadvertent consequence of clustering, rather than from any deliberate action on the part of firms. The concept of external economies has its genesis in the work of Alfred Marshall in his analysis of industrial districts in Britain. Marshall highlighted the importance of external economies and the inter-firm division of labour, in explaining the competitiveness of small businesses in particular localities (Schmitz, 1995). Current literature in mainstream economics has revived the notion of gains derived from the external economies of localisation, with particular emphasis on the increasing returns which accrue to clustered producers (Schmitz, 1997).

The economic viability of clustered firms is not only the outcome of incidental externalities associated with proximity. The contemporary view of industrial districts endorses the enabling role of external economies but advocates the role of inter-firm relationships as the key element in the competitiveness of clustered enterprises (Schmitz, 1990, 1992, 1995; 2000). Thus, recent theory extends the Marshallian concept of industrial districts by suggesting that, in addition to the benefits deriving from external economies, clustering provides possibilities for deliberate joint action by local agents. Such joint action can be of two types: horizontal, where competitors collaborate towards a common goal, and vertical, in the form of backward linkages to suppliers and subcontractors and forward links to buyers and traders. In addition, interaction between firms can be on an individual, bilateral basis, such as in the sharing of equipment, or multilateral, with groups of firms joining forces to establish

collective trade bodies such as local trade associations, trade fairs, and technology and producer service centres (Nadvi, 1997; Schmitz, 1997). The concept of collective efficiency has been developed by Schmitz (1995) to encapsulate the advantages derived from local external economies and joint action. Collective efficiency among firms has been identified as the critical element influencing the growth and competitiveness of industrial clusters (Schmitz, 1997).

There are varying degrees of collective efficiency depending on the level of external economies and joint action characterising a cluster, and, as will become apparent later, collective efficiency varies over time. In its basic form, however, one can distinguish between passive and active, or unplanned and planned, collective efficiency. Unplanned or passive collective efficiency is achieved through impersonal market transactions and does not require firms to enter into deliberate production arrangements with other agents. This contrasts to planned, or active, collective efficiency which results from consciously pursued joint action among competing agents (Nadvi, 1997).

It is the degree to which firms in a cluster are inter-connected and cooperate, that determines whether a cluster is an industrial district or simply a cluster of enterprises. The term “industrial district” normally implies more than a deep inter-firm division of labour and specialisation; it also presupposes a high level of collaboration among firms and sectoral representation in the form of associations. By contrast, a cluster simply denotes a sectoral and geographic concentration of enterprises, which may or may not benefit from the external economies of proximity (Humphrey and Schmitz, 1995). Therefore, whereas an industrial district is always a cluster, the reverse cannot be assumed unless specialisation and cooperation have been empirically determined as specific features of the cluster.

Yet other contributions to the industrial development literature use the term cluster without subsuming geographic proximity. According to Porter (1990), a cluster can designate a group of sectorally specific firms connected through strong inter-firm networks, but geographically scattered in the national economy. Such networks of firms may still benefit from inter-firm relations, although the advantages of proximity are lacking. It is the industrial districts of Europe, particularly Italy and Germany, that have most influenced the debate on the clustering of firms, and it is to an historical review of the emergence of this phenomenon that attention now turns.

2.3 The flexible specialisation and industrial districts debate

The main impetus for the renewed interest in small firm clusters stems from the flexible specialisation debate founded on the critique of Fordist mass production and brought to international prominence by the seminal work of Piore and Sabel (1984). At the core of the debate is the notion that the rigid organisational structure of Fordist mass production is in decline, to be superceded by a new form of industrial organisation which is characterised by flexible, small scale producers, capable of rapid and innovative response to the tastes of a highly differentiated and constantly changing market (Schmitz, 1990). The transition to a more flexible, adaptable mode of production can be achieved either through the decentralisation of large firms into semi-autonomous specialised units, vertically linked through subcontracting arrangements, or by the emergence of co-operating but independent small producers in industrial districts (Schmitz, 1990; Rasmussen *et al*, 1992). The former is known as the large firm variant of the flexible specialisation paradigm, and the latter as the small firm variant. It is the small firm variant of the flexible specialisation theory that has had most impact on the approach to small scale industry research. The empirical underpinnings for this variant of the theory lie in the successful experiences of some of Europe's foremost economic regions, especially the 'Third Italy' (North East and Central Italy) and the Baden Württemburg region in Germany (Goodman, *et al*, 1991; Herrigel, 1993; Pederson, *et al*, 1994). The principal feature of these regions is the concentration of highly specialised, small and medium sized firms in particular sectors and localities. The main tenet of the debate, however, lies not so much on the size of firms as on the relations between firms which is the key to their competitive edge (Schmitz, 1990).

The theme of cooperation among competing firms was explored further in the spate of research on industrial districts in Italy and other advanced countries that materialised in the wake of the flexible specialisation discourse (Pyke, *et al*., 1990; Pyke and Sengenberger, 1992). Such studies highlighted the emerging wealth in these industrial districts as reflected in rapidly rising per capita incomes and falling unemployment (Pyke, *et al*., 1990; Schmitz, 1990). Moreover, these networks of specialised small firms were able to establish a strong position in world markets at a time when large enterprises in Britain and Germany were in decline (Schmitz, 1990; Humphrey and Schmitz, 1996a). Noteworthy also is that the clusters operated in so-

called ‘traditional industries’ such as shoes, knitwear, furniture, or tiles, a set of activities not normally associated with international dynamism (Humphrey, 1995).

In an effort to capture the success of the industrial district experiences and turn it into a prescriptive tool for application in other contexts, the principal features of these districts were consolidated into a number of attributes. These attributes encompassed, *inter alia*, geographical and sectoral concentration of firms, predominance of small and medium sized firms, vertical disintegration at the firm level, close inter-firm collaboration, competition based on innovation, a socio-cultural identity that facilitates trust, the emergence of active self-help organizations, and an active regional and municipal government (Schmitz and Musyck, 1993; Humphrey and Schmitz, 1996a). Although these have been identified as the salient features of industrial districts, there are many variations among European industrial districts, causing the weight of these attributes to vary considerably. Nevertheless, the European experience, and especially of the Third Italy, became the main reference point in the small-scale industrialisation debates (Humphrey and Schmitz, 1996a).

2.4 From models to trajectories

The interest generated by the flexible specialisation and industrial districts debate induced a paradigm shift from a focus on large to small scale enterprises. Much of the research was centred on industrial districts as a “model” of development based on the ideal type attributes identified for successful clusters. As the research base on industrial clusters broadened, however, so broad discrepancies were revealed between the ideal type abstraction and empirical observations, prompting the industrial district concept as a “model” of development to be questioned (Schmitz, 1993; Rabellotti, 1995).

2.4.1 Shortcomings of the industrial district model

It was argued that whilst the industrial district framework provides useful insights into the competitiveness of firms derived from clustering advantages, it cannot be described as an analytical model but more as a “list of stylized facts” (Schmitz, 1993, p33). Some of the limitations of the model have become apparent as the European industrial districts themselves have undergone changes since first being used as the yardstick of successful industrial clusters.

2.4.1.1 *Changes in the European industrial districts*

It would seem that the rapid growth which typified the European industrial districts in the 1970s and 1980s was reversed in the 1990s, with some of the districts in a state of crisis and others undergoing restructuring. A major change experienced by the districts has been a consequence of the period of rapid growth, with most of the districts showing an increase in average size of enterprise and more differentiation by size (Schmitz, 1995; Humphrey and Schmitz, 1996a). As firms which were previously small and on an equal footing with others grow, so the industrial cluster becomes hierarchically differentiated, causing the larger, more powerful firms to enter into unequal relations with smaller, weaker enterprises (Dei Ottati, 1994; Schmitz, 1995; Cossentino, *et al*, 1996). Hierarchical differences may also cause the social fabric of the industrial district to weaken as larger firms seek suppliers or subcontractors outside of the district, and as multinationals make incursions into the district (Crestanello, 1996). Dei Ottati (1996) refers to the purchase of external companies by firms in the district, and the converse, of the takeover of district firms by foreign capital groups. She notes that the purchase of shares in foreign companies is often coupled to subcontracting relations with the external firms, either with the aim of reducing production costs or to gain access to new sources of supply and to final markets. Although the economic power of the industrial districts has not necessarily decreased in these instances, the social and inter-firm relations, which form part of the defining characteristics of the districts, are altered.

2.4.1.2 *Exclusion of large firms*

One of the more salient shortcomings of the industrial district model, therefore, is its focus on the role of small firms to the exclusion of large firms and their influence in districts (Schmitz and Nadvi, 1999). The literature on industrial districts is primarily centred on the deepening division of labour between firms and the resulting differentiation of enterprises by process or product, but with no recognition that firms can differ by size or performance (Rabellotti and Schmitz, 1999). Many clusters, however, are comprised of small and large firms, firstly because any cluster is comprised of dynamic and less dynamic enterprises, and secondly, because firms that may have started small in a cluster inevitably grow as reinvested profits lead to expansion and increasing differentiation by size and performance (Rabellotti and Schmitz, 1999). In a comparative study of footwear industrial districts in Italy, Brazil and Mexico, Rabellotti and Schmitz (1999) confirm the considerable differences in performance and size between the districts. Markusen (1996) replaces the notion of a traditional industrial district model with a typology of industrial districts instead. In

his typology, the hub and spoke and satellite platform variants of industrial districts are defined by the existence and predominant role of large firms around which smaller firms are clustered (Markusen, 1996).

2.4.1.3 *Interfirm cooperation versus hierarchical relations*

As events in the European industrial districts have demonstrated, the emergence of large firms in clusters is often coupled to a reorientation of linkages between firms, a consequence of large firms becoming more vertically integrated and reducing their dependency on other firms in the cluster (Humphrey and Schmitz, 1996a; Brusco, *et al*, 1996; Crestanello, 1996; Dei Ottati, 1996). This is not to say that large firms contribute less to the collective efficiency effects of the cluster; on the contrary, it has been noted that the smallest enterprises in a cluster contribute least, taking advantage of the incidental external economies and being less involved in joint action initiatives (Rabellotti and Schmitz, 1999; Nadvi, 1997). Nevertheless, the pattern of relationships between firms changes from that of competition and cooperation among equals, to more hierarchically defined networks between firms of different sizes.

2.4.1.4 *External versus internal structure of the firm*

Another aspect on which the industrial district model falls short of the reality of clusters is that it emphasizes the context within which small firms operate and the relations between them, at the expense of analysing the internal structure of the firms concerned (Humphrey and Schmitz, 1996a). It is in this respect that the discrepancies between clusters in developing countries and those in advanced regions comes to the fore. Whereas in the Italian industrial districts many of the firms are sophisticated producers and technically competent, the same cannot be assumed for entrepreneurs in developing countries. A similar situation applies to external factors which, depending on the strength of firms in the cluster and how they are organised, will have a varying impact on clusters. The ideal type Italian industrial districts exhibit a strong competitive position which enable them to maintain their characteristics in spite of market changes, in contrast to clusters in developing economies which are vulnerable to exogenous shocks (Humphrey and Schmitz, 1996a). Small producers in these countries are subject to market, production, and generalized background risks associated with weak economies and volatile political situations (McCormick, 1999; Paolo and Abdel-Kader, 2004).

2.4.1.5 *External linkages*

Rabellotti (1997) attributes the differences in the degree of collective efficiency between the Italian and Mexican footwear clusters to the external conditions implicit in trade policy. The Italian context of an open trade policy favoured the development of a highly efficient system of production based on a high degree of division of labour between specialized enterprises. In Mexico, by contrast, the long closure of the domestic market to international competition induced the development of vertically integrated firms linked to their suppliers through pure market linkages exempt of personalised relations. By ignoring the external environment of the cluster the industrial district model at the same time failed to acknowledge the links between cluster firms and traders or export agents. External agents such as buyers and retailers, however, play a critical role in enabling the cluster to export and thereby also raise its competitiveness. These agents, therefore, provide not only trading links but also act as development agents as they assist firms in reaching international quality and delivery standards (Schmitz, 1995).

2.4.2 Trajectories of development

The deficiencies of the industrial district model exposes the need to move away from a static representation of clusters at a given point in time, to a more dynamic approach emphasising changes over time (Rabellotti, 1995; 1997). According to Humphrey (1995), the experiences upon which models are constructed are always changing, with the effect that models quickly become outdated and fail to capture the forces that lead to change. For these reasons, codifying experiences into models which are then used as a blueprint for analysis and policy in another context has severe limitations. A more accurate representation of cluster dynamics is to examine trajectories of industrial organization (Humphrey, 1995).

Concern with trajectories of development encompasses not only recent change but historical development. Being competitive is not a state but a process of remaining competitive through improvement. As mentioned previously, in the 1970s and 1980s industrial districts in Europe demonstrated their competitiveness on the basis of small firms cooperating. In the 1990s, the basis for this competitiveness has changed as the industrial districts have restructured internally in response to external influences. The districts are no longer characterised by small firms only but include large and even multinational enterprises. This structural change has implications for inter-firm dynamics; collective efficiency remains critical but under a different pattern of linkages between firms (Humphrey, 1995). In the Brazilian Sinos Valley footwear

cluster (Schmitz, 1993), some of the firms which grew from supplying the export market integrated vertically, relying less on the supplier network within the cluster. Further changes in the market place towards shorter production runs and delivery times and increased quality have induced a reorientation on the part of large enterprises towards closer cooperation with other entrepreneurs in the cluster. To have examined the Sinos Valley cluster using the industrial district model on a snapshot basis would have been to overlook the different development experiences of the cluster and how these changed over time. As shown in the work of Schmitz (1993), the Sinos Valley cluster changed in response to changes in the market.

The purpose of this section has been to present the concept of enterprise clusters and how it links to the broader debates of flexible specialisation and industrial districts. The interest generated by industrial districts influenced the research agenda on industrial development, initially through a prescriptive approach by measuring enterprise clusters according to defined criteria, but more recently through an understanding of clusters as dynamic entities. There is no doubt that the industrial district literature is vital to understanding small firm growth and competitiveness, and hence the relevance of this research in the context of the developing world where small businesses are at the crux of development policy. The following section examines the role of enterprise clusters in the less developed countries.

2.5 Industrial clusters in less developed countries (LDCs)

As attention on the competitiveness of agglomerations of small scale industries gained momentum, it was inevitable that the focus would turn to the less developed countries where small businesses play an even more important role in industrialisation than in the advanced world (Schmitz, 1990). The industrial district experience is of particular interest to LDCs for a variety of reasons. Firstly, most of the European success stories are based on “traditional” sectors such as footwear, clothing, and furniture-making in which LDCs are thought to have a comparative advantage. Secondly, the clusters are of local, indigenous firms of small and medium size, occurring in regions which were rooted in small scale agriculture and which industrialised relatively late, and thirdly, the clusters competed successfully in international markets (Schmitz, 1993; Schmitz and Musyck, 1993). Other reasons are that manufacturing industries in developing countries face a number of challenges for which the Italian and other advanced country experiences appear to offer responses.

In the context of trade liberalization, where previously protected domestic markets are opening up, firms in developing countries need to improve their performance. Exports to markets in advanced countries are likely to become increasingly dependent on improved variety, reliability and speed of delivery, all of which clustered firms seem to offer (Humphrey, 1995). In addition, industrial clustering offers the capacity for the flexible response required in unpredictable and turbulent environments, which conditions often characterise developing countries. It is also a more effective and less expensive way of targeting the small firm sector than policies aimed at the individual firm. Finally, clustered firms are more likely to provide better employment and working conditions than isolated ones (Humphrey, 1995).

2.5.1 Incidence of clusters in LDCs

Investigations into the occurrence of clusters in developing countries revealed a variety of experiences, some convergent with the Italian classification but with significant deviations from it too. The principal finding is that sectorally-specific and geographically bounded clusters are a frequent feature of small scale manufacturing in LDCs (Rasmussen, *et al*, 1992; Schmitz and Musyck, 1993; Van Dijk and Rabellotti, 1997; McCormick, 1997, 1999, 2001). Some clusters in Latin America and Asia have acquired great depth and complexity in terms of concentration of specialised suppliers and support bodies. Among these are the footwear cluster in the Sinos Valley, Brazil (Schmitz, 1993), and the surgical instrument cluster in Sialkot, Pakistan (Nadvi, 1997), both of which stand out for the variety of firms involved in backward and forward activities, creating a thick web of inter-firm linkages reinforced by a strong socio-economic identity. Similar successful clusters can be found in the footwear industry of Mexico (Rabellotti, 1995), the clothing industry in Peru (Visser, 1997; 1999) and the footwear (Knorringa, 1999) and textiles (Cawthorne, 1995; Tewari, 1999) industries of India.

In contrast to such distinctive spatial clusters, where sectoral concentration is high, the opposite studies also exists in the form of relatively disaggregated and less pronounced clusters across much of the developing world (Hansohm, 1992; Rasmussen, 1992; Smyth, 1992; Wilson, 1992). Such clusters of small firms often operate in poor and unregulated work conditions in peri-urban, semi industrial- and low-income or marginalised neighbourhoods. In these cases, whilst the enterprises are localised, backward and forward linkages are less extensive and few enterprises have a prolonged or notable history (Aeroe, 1992; Dawson, 1992; Sverrisson, 1992; Van Dijk, 1992; Paolo and Abdel-Kader, 2004). Many entrepreneurs have been

forced into self-employment due to limited incomes and declining employment opportunities in the formal sector. Despite their informal nature, such clusters demonstrate resilience in the face of crises and display a growth potential that goes beyond informal survival strategies (Dawson, 1992; Nadvi and Schmitz, 1994; Sverrisson, 1997).

2.5.2 Range of clusters

An important feature emerging from the studies on LDCs is the great diversity among clusters (Smyth, 1992; Pederson 1997; Altenburg and Meyer-Stamer, 1999; McCormick, 1997; 1999; 2001). Far from being homogeneous, many of the enterprise agglomerations are distinguished by internal hierarchies, either through the presence of large firms, as in the case of Sinos Valley in Brazil, or in the varying degrees to which firms are advantaged by resources, capital investment and technical abilities (Rasmussen, et al, 1992; McCormick, 1997, 1999, 2001). Firms and groups of firms within clusters are also differentiated according to the market segments to which they are orientated, prompting researchers such as Knorringa (1999) and Tewari (1999) to advocate a market channel approach to understanding the coping mechanisms of clusters. It is access to both markets and resources that underpins Smyth's (1992) differentiation of small-scale enterprises in Indonesia. She distinguishes between firms with direct access to raw materials and consumer markets, those with no direct access to consumer markets and operating under subcontracting arrangements, and those individuals performing very specific and limited tasks with materials entirely provided by other firms (Smyth, 1992). Likewise, Pederson (1997) develops a typology of enterprise clusters to reflect the variation of clusters and explain their differing levels of efficiency. His typology ranges from the diversified industrial cluster, most similar to the European industrial districts, to the petty commodity producers, operating with few resources and under unstable conditions. The same approach is adopted by Altenburg and Meyer-Stamer (1999) for Latin America where they categorise clusters as either survivalist, advanced or dominated by transnational corporations. McCormick (1997; 1999; 2001) confirms the heterogeneity of clusters in LDCs, distinguishing clusters in Africa according to their contribution to the industrialisation process. She differentiates between three categories of clusters: those laying the groundwork for industrialization, those in the early stages of industrialization, and, the complex industrial clusters that are fully part of the industrial sector. The clusters categorized as laying the groundwork for industrialization are the least developed, whereas those at the other end, the

complex industrial clusters, have succeeded in expanding their market reach from local to national or even global.

The implications of such differentiation among firms are that production relations between firms are neither necessarily egalitarian, nor are the prospects for dynamic and sustained growth shared equally across firms within the cluster (Nadvi and Schmitz, 1994). In these clusters of unevenly advantaged firms, agglomeration may indeed result in collective efficiency, but the benefits thereof accrue differently to firms of different size and nature (Smyth, 1992).

2.5.3 Benefits of enterprise agglomeration

Research on clusters in LDCs tends to indicate that, with the exception of the more developed and complex clusters, most industrial agglomerations benefit more from passive external economies than joint action initiatives. For weak or emerging clusters the major positive external economy derived from clustering is market access and reduced cost transactions with customers (Smyth, 1992; Pederson, 1997; McCormick, 1999, Weijland, 1999; Paolo and Abdel-Kader, 2004). Clusters of similar enterprises attract buyers both from the immediate vicinity and more distant places, thereby improving access to the overall market for a firm's products or services. For the more geographically remote clusters, the ability to attract traders who carry their products to the smaller towns and rural areas is critical for their survival. Location in the cluster gives firms access to traders and other marketing agents who sell their products in small towns and rural villages that the producers would otherwise not reach (McCormick, 1997; 1999; Weijland, 1999).

Other advantages from being closely located are that it reduces the costs of using the market, including transport costs and the costs of gathering information, be it of consumer preferences in product markets or the demands of market channels (Smyth, 1992). Spatial proximity also enables easier screening, selection and monitoring of business partners, and enforcement of contracts (Visser, 1997; 1999). Easy access to intermediate inputs and services is facilitated by the emergence of specialised suppliers of raw materials and other inputs, resulting from the evolving specialisation and differentiation of the cluster (Smyth, 1992; McCormick, 1999). Nevertheless, the local availability of inputs and services has price and efficiency advantages only if there is competition, otherwise the sole benefit is transport costs which may not be sufficient to offset price diseconomies for manufacturers (Rabellotti, 1997; McCormick, 1999).

The clustering of firms, even if only providing external economies, can serve as the basis for more dynamic enterprise growth through facilitating technological change. The Indonesian copper craft cluster, highlighted by Sandee and Rietveld (2000), albeit not typified by joint action, enabled the emergence of traders and large production units on the basis of the agglomeration of small firms. A limited number of entrepreneurs took advantage of technological developments, which enabled them to increase production and gain access to more profitable markets. Such expansion, however, would not have been possible without a readily available flexible labour force. Small producers in the cluster, aside from working independently, also work as casual labour in periods of peak demand. Growth of individual enterprises has, therefore, been possible through 'embeddedness' in a cluster of small firms. Likewise, the roof tile cluster in Indonesia is an example of how leading entrepreneurs were able to introduce technical facilities on the basis of entering into collaborative arrangements with fellow participants (Sandee and Rietveld, 2000). Being located in the cluster facilitated the involvement of other producers, without whose participation adoption of the new technology would not have been possible (Morosini, 2004).

2.5.4 Inter-firm relations and shared identity

Many of the clusters in LDCs are typified by various permutations of inter-firm relations, ranging from cases where firm cooperation is virtually non-existent, to instances where extensive collaborative arrangements in production have emerged. At the most basic level, inter-firm cooperation is manifested in informal sharing of information, tools and equipment. The scope for horizontal cooperation is often limited in incipient clusters as horizontal relationships are characterised by fierce rivalry (Aeroe, 1992; Dawson, 1992). With producers vying for the same market, their major source of competition is perceived to be each other (Hansohm, 1992). Closer forms of inter-firm cooperation exist where extensive vertical production chains are developed, be it between large and small enterprises or amongst process specialised small units (Visser, 1997). In not all cases, however, do such arrangements lead to significant innovations and product development (Visser, 1997; 1999). These arrangements may sometimes result in only incremental forms of process and technological development (Sverrisson, 1997). The level of interaction among firms upstream and downstream of the value chain seems to be a function of the quality of the product being produced (Schmitz, 2000). McCormick (1997) notes that, at the predominantly low quality, low price end of the market, interrelationships

between producers and traders are generally impersonal, hierarchical, and involve little exchange of knowledge and information. Nevertheless, under conditions where quality is a determining factor for the product, the relationship between producers and traders becomes more collaborative, personalised, and involves elements of trust and stability (Rabellotti, 1997).

An important factor facilitating inter-firm relations in clusters is that of a shared identity. Nadvi and Schmitz (1994, p42), in their review of clusters in LDCs, note that "a shared identity often plays an active part in providing social sanctions that limit the boundaries of accepted competitive behaviour". There are indications that where overarching social networks are weak, inter-firm cooperation is limited. Socio-cultural elements are said to play a central role in the clustering of small and medium enterprises. Enrico and Grandi (2004), in their study of the textile and garment sector in Syria, assert that culture represents both an embedded strategic foundation for the creation of cluster dynamics, and for the growth of embryonic clusters. Social identities, however, may also have a negative influence on production relations, particularly where caste or religious divisions prevail, (Nadvi and Schmitz, 1994), and also because of the possibility of family feuds (Meyer-Stamer, 2000).

2.5.5 Technological spillovers

External economies associated with technological spillovers or the diffusion of knowledge leading to increased innovativeness has been identified as a critical element of clustering, enabling small firms to respond to ever changing demands and quality specifications (Advani, 1997; Asheim and Coenen, 2005). Multiple interactions between traders, producers, intermediary manufacturers, machinery suppliers and repair workshops are said to accelerate flows of technical information, and thereby the process of technical learning (Nadvi and Schmitz, 1994; Morosini, 2000). Given that one of the biggest constraints of developing countries is their weak technological base, such information flows within a cluster are imperative to its upgrading and ultimately to industrial development (McCormick, 1999). As with other external economy factors, the extent of technological learning seems to be related to the level of cluster development and the connections of manufacturers to quality conscious marketing agents or retailers. In poorly developed clusters, technological spillovers do not necessarily lead to growth and innovativeness as producers tend to use standard technology with little innovation either in the flow of work or the machines used. Production processes are often slow and products poor in quality (McCormick, 1999). Under these circumstances learning from each other is more

likely to perpetuate bad habits than to improve production methods. The danger of this learning has been highlighted by Visser (1999, p1555) who cautions against the risk of "lock in" or "entropic death", caused by clustering relations that do not extend beyond the confines of the cluster but rely only on local information spillovers. Clustered producers who do not maintain cooperative linkages outside of local borders only have access to local information which is often outdated and of limited market relevance, making it difficult to compete with competitors outside the cluster (Visser, 1999). Rabellotti (1997, p54), in her comparison of footwear clusters in Mexico and Italy attributes the less developed nature of the Mexican clusters to "the long closure of the domestic market which has not favoured competition based on product quality, fashion contents and design". Sources of technological learning need not only emanate from outside the cluster if the local market is demanding of new designs and improved quality. Thus, in the light engineering and metalworking cluster in Accra, Ghana, Sverrisson (1997) draws attention to the role of users in suggesting material substitution, simplification of design and other adaptations, resulting in the development of innovative capacity among producers. In similar vein, Tewari (1999) highlights the role of a demanding domestic market in giving firms in the Ludhiana (India) cluster the incentives to think in more quality conscious ways.

2.5.6 Labour market pooling

Very much linked to technological spillovers is another important external economy factor, that of labour market pooling or the concentration of specialized skills that usually develops within manufacturing clusters. The accumulation of skilled labour is both a function of upgrading within the cluster and of attracting skilled personnel from outside the cluster. The presence of skilled labour has been noted as a major locational advantage in high performing clusters such as Sialkot and the Sinos Valley. As with technological spillovers, economies associated with labour market pooling are not always positive, but can also be disabling. Labour pooling can be detrimental to the cluster when there is an oversupply of labour and skill levels are low. In these circumstances cluster firms rely on unskilled labour and trainees who establish their own businesses, filling the cluster with many tiny firms and heightening the already fierce competition (Dawson, 1992; McCormick, 1999; 2001). These conditions can give rise to competition based on low wages rather than innovation and quality improvements (Nadvi and Schmitz, 1994). Schmitz (1995) suggests that labour surplus is the principal factor accounting for low wages in clusters in LDCs, even the fast growing ones. The Sinos Valley shoe cluster, for example, despite its

extraordinary growth and presence in the international market, has produced many jobs but little improvement in real wages for the majority of the workforce.

The varying circumstances under which clusters grow and develop has motivated researchers to distinguish two contrasting growth paths for industrial clusters. At one level is the "high road" growth path, associated with strong competition such as characterises the successful industrial districts in Europe, and synonymous with innovation, high quality, functional flexibility and good working conditions. Contrasted to this is the "low road" or weak competition growth path exemplified by competition on the basis of low prices, cheap materials, lack of innovation, numerical labour flexibility and cheap labour (Nadvi and Schmitz, 1994). The research focus on LDC clusters revealed that neither growth path experience is sufficient to explain the reality of clusters in those countries. Clusters usually have a mix of firms that either follow one or other growth path, and firms that function through a combination of innovation and cheap labour factors. Rather than allocating clusters in developing countries to one or other category, they should be conceptualized instead as a continuum of growth paths between the high and low roads (Nadvi and Schmitz, 1994).

In terms of the experience of clusters in the developing world as a whole, clusters in Africa are generally the least developed. Given that the jewellery study that follows this chapter is based in South Africa, it is appropriate therefore to focus specifically on some of the features and research concerning enterprise clusters in Africa.

2.6 Industrial clusters in Africa

In distinguishing between dynamic and less developed clusters, there are indications that, as compared to Latin America and Asia, in most sub-Saharan African cases clustering has had only minimal impact in terms of enterprise growth and development (Nadvi and Schmitz, 1994). McCormick (1999) substantiates this view, arguing that there are few examples of successful industrial clusters in Africa. One of the explanations proffered for this is that clusters in Africa are relatively young, with specialisation and self-help institutions yet to develop (Nadvi and Schmitz, 1994). A more realistic explanation is that Africa has many limiting factors with respect to clusters, the main ones being the small size of product markets, the over-supply of labour, and institutional weaknesses (McCormick, 1999). Much of the research material on Africa points to the existence of enterprise clusters composed of tiny

businesses, more often relegated to the informal sector than accepted as integral to industrial development (McCormick, 1997).

2.6.1 Innovation amidst adversity

These clusters of small, unstructured businesses in Africa nevertheless exhibit networking and flexibility patterns which are formed largely in response to unstable and segmented markets. Unlike clusters in advanced regions, specialisation in African clusters is often dictated by a lack of resources such as commodity supplies and delivery services, rather than resulting from the acquisition of specialist skills and the development of competitiveness strategies (Pederson, 1994). Lack of technological resources is compensated for by relying on networks of varying technological sophistication and using multi-purpose machines which are easily repairable with locally developed materials and parts (Sverrisson, 1997). Sverrisson (1997) illustrates the capability of local producers of tools and machines in the light engineering sector in Ghana, to provide appropriate equipment to small and medium sized firms, based on cooperation among firms and the diffusion of technical experience and skills. The lack of sophisticated machinery spurs entrepreneurs in the cluster into being innovative by adopting reverse engineering methods and rehabilitating scrap machinery. Similarly, in Suame, Ghana, small firm clusters in the carpentry, vehicle repair, metalworking and engineering sectors have been able to target specialized needs locally and in neighbouring countries through diversifying and upgrading production (Dawson, 1992). On the basis of these flexible strategies, enterprise clusters in Africa display remarkable resilience and have been effective in industrialising not only the cluster concerned but also other clusters in surrounding areas (McCormick, 1997).

The tenacity and innovativeness of these clusters notwithstanding, many of the clusters in Africa, are more inclined to be less developed, with poor inter-firm division of labour and institutional support (McCormick, 1997; 1999; Pederson and McCormick, 1999). Much of the literature on spatial clusters in Africa testifies to comparatively less spatially and sectorally distinctive clusters with limited depth of numbers and range of producer firms and ancillary units (Nadvi and Schmitz, 1994). The prevalence of these features has been noted in a number of studies on various economic activities such as metalworking and furniture-making in small and intermediate towns in the Sudan (Hansohm, 1992), Kenya (McCormick, 1997; 1999; 2001), Zimbabwe (Rasmussen, 1992; Sverrisson, 1992), Tanzania (Aeroe, 1992)

Burkina Faso (Van Dijk, 1992; Dijkman and Van Dijk, 1997) and in Egypt (Paolo and Abdel-Kader, 2004).

2.6.2 High road versus low road growth path

The weak nature of the industrial clusters in Africa means that there is the propensity for them to follow the 'low road' to development, there being very few examples of 'high road' clusters. In this respect McCormick (1999, p1547) observes that "Africa has many 'groundwork' clusters, some 'industrialising' clusters, but only a few 'complex industrial' clusters". Even the few 'high road' complex industrial clusters that exist are invariably smaller and less well developed than their counterparts in other parts of the world (McCormick, 1999). The underdeveloped nature of these clusters is reflected in low levels of firm or process specialisation, limited technological upgrading and quality enhancement, and tenuous vertical and horizontal linkages (Aeroe, 1992; Dawson, 1992; Rasmussen, 1992; Sverrisson, 1992; Paolo and Abdel-Kader, 2004). Many of the industrialisation problems currently experienced stem from the legacy of colonialism and repressive governments in a number of African states, which suppressed small firm growth and empowered large firm development (Aeroe, 1992; Dawson, 1992). Although these regimes have since disappeared and structural adjustment programmes introduced to rectify some of the imbalances of the past, small firms are still having to contend with business environments which are largely dominated by large scale enterprises (Aeroe, 1992; Rasmussen, 1992; Pederson and McCormick, 1999). As large firms often have the economic, technological and political power to capture the most stable and secure parts of the market, small firms are forced to operate in the more unstable, peripheral markets or as subcontractors to the large firms (Pederson, 1997).

The insecure and often hostile environment in which clusters of small firms operate is exacerbated by the often high degree of mistrust among producers. The lack of inter-firm cooperation and trust is the outcome of a disruptive environment and the uncertainty that this engenders. Rasmussen (1992) draws attention to weak local embeddedness of skills and social networks in towns with a rapid population turnover which breeds a climate of mutual distrust among economic players. Likewise, Sverrisson (1992, p32) attributes the obstacles faced by small-scale African producers to the "cultural, political and educational fissures characteristic of African societies". The unstable environment of small entrepreneurs means that local enterprise networks tend to be aimed at reducing uncertainty rather than enhancing enterprise performance (Mitullah, 1998; McCormick, 1999).

2.6.3 Weak institutional environment

The fragmentation which characterises the African business system is largely the result of the institutional environment in which it has developed (Späth, 1992; Pederson and McCormick, 1999). Markets, legal systems, financial institutions, technology systems and social structures are often weak and divided along racial or ethnic lines. The legal framework for commercial and industrial activity is principally orientated to large enterprises and is inaccessible to the small entrepreneur. The inability of the legal system to secure enforcement of commercial contracts restricts many business transactions to known persons who can be trusted. Even personal trust, however, depends on the availability of social and state institutions, infrastructures and services such as insurance, social security systems, efficient law enforcement and access to public and private infrastructure, all of which are not within reach of the small firm (McCormick, 1999; Pederson and McCormick, 1999). The weak institutional environment encourages entrepreneurs to develop their own systems for coping, such as welfare organisations that will provide some form of assistance in emergencies (Mitullah, 1998). Coping initiatives, however, although they provide some protection during times of calamity, can do little to enhance business performance (McCormick, 1999).

2.6.4 Overabundance of labour

Another factor contributing to the frailty of African clusters is that the clustering process takes place in the context of an over-abundance of labour. This has implications for labour market pooling effects and technological diffusion. The lack of employment opportunities and low entry barriers offer few alternatives to workers but to set up their own businesses, thereby adding to the myriad of tiny, inefficient enterprises creating conditions of cut-throat competition and ultimately of creating disabling labour pooling externalities (McCormick, 1999; 2001).

2.6.5 Riskable Steps

One of the most important benefits of clustering for LDCs, and Africa in particular, is that it facilitates specialisation and effective investment in small, riskable steps (Schmitz 1997; Schmitz and Nadvi, 1999). That is, clustering enables firms to make good use of relatively small amounts of resources. Producers do not have to be equipped for an entire production process but instead can concentrate on particular stages, leaving other stages to other entrepreneurs. Specialised workshops which can repair and upgrade existing machinery further help to reduce technological

discontinuities, as evidenced in the metalworking sector of Accra (Sverrisson, 1997). Investment in specific stages of production has repercussions for working capital requirements in that localised, specialist suppliers of raw materials and components obviate the need to store inputs. Clustering also enables the less exceptional entrepreneurs to engage in business opportunities insofar as the risks required are small and calculable rather than 'wild'. The steps are smaller and more riskable due to the division of labour and enabling external economies. Producers in a cluster can often succeed with little capital and a small workforce. A rarely used piece of equipment can be borrowed or hired from another entrepreneur. In this way one enterprise creates a foothold for another and over time such incremental investment should allow more firms to grow and should result in a more diverse industrial structure (Schmitz, 1997; McCormick, 1999).

Having examined the range of enterprise clusters that exist in both advanced and less developed countries, the following section highlights some of the features that distinguish thriving from stagnant clusters, and that enable some clusters to grow and break into international markets while others decline. In line with understanding clusters as dynamic entities, the discussion elaborates on the adjustment of firms, and relations between firms, to a changing environment, be it internal or external. Particular attention is devoted to the role of government and its capacity to influence the development of clusters through direct intervention in the form of policies, and indirectly through macro economic strategies.

2.7 Factors affecting cluster competitiveness

2.7.1 Joint action

It is the capacity to respond to opportunities and crises that distinguishes one cluster from another and ensures that some grow while others decline or remain stagnant (Schmitz, 1993). Clustering increases the capacity to adapt through the combined advantages of external economies and joint action (Schmitz, 2000). These two elements of collective efficiency vary between clusters and over time. Clustering based on external economies alone will do little to advance the competitiveness of firms; indeed, such clustering may even be a hindrance to transformation of a cluster through joint action. Clustered firms reliant on the passive benefits of agglomeration, and used to maintaining "arms length" business relations with each other, will not necessarily tend towards cooperative behaviour when new opportunities arise, or in times of adversity. Firms will tend to pursue path-dependent behaviour, based on the

more intensive pursuit of established means of interaction, rather than try something unfamiliar. Only when key actors have understood and accepted the limitations of established behavioural patterns, are they likely to focus on alternative ways of making changes. Entrepreneurs may then move from relying on the passive advantages of clustering, to creating dynamic networks (Meyer-Stamer, 2000). Evert-Jan Visser (2000) corroborates this view, arguing that whether or not clustered firms cooperate depends on the perceived balance of the costs and benefits of inter-firm cooperation. The type of clustering advantages that have typified the cluster in the past is, therefore, a critical determinant of how producers will react to changed circumstances. Where clustering has been based predominantly on passive external economies, producers may initially resist inter-firm cooperation in business networks. The clothing cluster in Gamarra, Peru, investigated by Visser (2000), is illustrative of a cluster founded on the passive form of collective efficiency, that was unable to successfully adjust to external competition. In response to foreign competitors, firms in the cluster resorted to cost-cutting activities, and preferred self-reliance to cooperation with specialized traders. There was little attempt to develop cooperative linkages with suppliers, specialist producers or marketing agents, to counteract new competitive threats. Efforts at multi-lateral cooperation were also unsuccessful due to lack of experience, vested interests, and an environment not conducive to collaboration.

The capacity of a cluster to respond to opportunities and challenges in the market place goes beyond passive externalities of agglomeration, and depends overwhelmingly on intensified cooperative networks, both vertical and horizontal (Schmitz, 2000). Enrico and Grandi (2004) observe in their study of the textile cluster in Aleppo, Syria, that a principal element defining that cluster as embryonic rather than developed is the lack of entrepreneurial collaboration. The Aleppo district conforms to many of the characteristics of industrial clusters but remains stagnant due to the low level of joint action. Likewise Sandee and Rietveld (2000), in their study of two clusters in Indonesia, highlight the importance of joint action in transforming a cluster from a passive to a dynamic entity. In the roof tile cluster, entrepreneurs were able to exploit the benefit of new technology through engaging in joint action with other producers in the cluster. The indivisibility of the new technology made cooperation essential for its optimum applicability in the cluster. Additionally, adopting new innovation made it essential to strengthen horizontal ties in order to take advantage of the new market opportunities that arose. Vertical relationships in the cluster also emerged and strengthened, as limits on enterprise

expansion through technological upgrading inevitably resulted in increased levels of subcontracting.

Similarly, joint action was a critical element in ensuring the competitiveness of the Sinos Valley shoe cluster; holding trade fairs was critical to the cluster's ability to penetrate distant national markets, and it was multilateral horizontal cooperation that gave rise to these trade fairs. The same multilateral cooperation was instrumental in bringing foreign buyers to the Sinos Valley and taking local manufacturers to fairs abroad. Once channels for exporting were opened up, joint action in marketing was less critical and even declined, but was active again in other problem areas. Increased competition in world markets has enforced more stringent production methods based on faster delivery of high quality goods in smaller batches. As these requirements cannot be met by individual enterprises, vertical cooperation is necessary all along the value chain, especially between manufacturers and suppliers (Schmitz, 1997).

Even successful clusters go through crises and a measure of their success is the ability to take advantage of opportunities and cope with crises. To weather these challenges requires 'shifting of gear' from a situation of passive to active collective efficiency (Schmitz 1995; 1997). External economies are important for growth but are not sufficient to transcend major changes in product or factor markets, for which deliberate joint action is required. The need for joint action to overcome crises is illustrated by the Nile Perch fish cluster in Kenya. The cluster was characterised by the lack of cooperation and mistrust between fishermen, traders and industrial fish processors until a crisis in the form of a European Union ban on fish from the area caused the cluster to alter its inter-firm relations. The shock of the European ban opened the door for information-sharing among industrial fish processors, and a situation of intense competition gave way to cooperation (Mitullah, 1998).

Depending on the other elements of the cluster, such as the socio-cultural milieu and relations of trust, the focus, form and intensity of cooperation will vary with the challenge. Rabellotti (1997) in her study of shoe clusters in Mexico and Italy, found that external economies typified the clusters in both regions, albeit that cooperative effects were more common among the Italian than the Mexican firms. The main differences were found in the relationships with suppliers and process specialized firms, which are based on cooperation in Italy and mostly on pure market transactions in Mexico. The explicit cooperative linkages between shoe producers

and their suppliers in Italy enabled Italian producers to supply a highly diversified, quality product more rapidly to the market than shoe producers in many other countries (Rabellotti, 1997). In Mexico, the greater incidence of intra-firm vertical integration led to more "arms length" than cooperative relations with suppliers, reducing the opportunity for cooperative initiatives. There were also differences in dynamism internally in the Mexican clusters, with small firms merely surviving by relying mainly on generic external economies, whereas the more dynamic enterprises, mainly medium-sized, engaged in explicit cooperation for specific purposes. Recently, with the opening up of the Mexican market to international competition, some of the shoe firms and their suppliers have begun to realise that they belong to a system in which the success of one firm strongly depends on its interactions with other firms. Consequently, relationships are becoming more cooperative and firms are trying to build stable linkages based on a mutual self-interest in improving quality and service. The Italian clusters, too, have recognised the need to upgrade their forward links with buyers as international competition has intensified (Rabellotti, 1997).

In Pakistan, the surgical instrument cluster in Sialkot owes its ability to become a global player in a demand-led niche sector to the collective efficiency gains of clustering and of joint action (Nadvi, 1999a; 1999b). Inter-firm vertical ties are especially strong in Sialkot, reflecting the extensive interaction between producers and their buyers and subcontractors. As a result, quality standards have risen and production organization improved. Horizontal cooperation is less significant but has, nevertheless, played an important role in the competitive advantage of the cluster in the form of private and public sector initiatives for producer services. As in the Mexican clusters, large firms benefit more from strategic collaboration in that they are more pro-active, whereas small firms take advantage of the passive externalities that arise. Joint action initiatives from the larger firms also generate externality gains which can be of particular benefit to the smaller enterprises. With increasing competitive pressures, however, small businesses, too, are having to build upon the passive dimension of collective efficiency and enter into joint action with local actors (Nadvi, 1997; 1999a).

Collective action is a precondition for industrial clusters to not only attain new levels of competitiveness, but also to ensure their own survival at times. The tannery cluster in the Palar Valley in India faced a crisis when the Indian government issued a decree for stringent pollution controls on tanneries, making it obligatory for firms to

be connected to an effluent treatment plant. Firms were faced with the option of either co-operating in meeting the requirements, or of closing down operations. As an effluent treatment plant is expensive to construct and operate individually, tanners were forced to collaborate in order to construct, operate and monitor common effluent treatment plants. Tanning firms were under enormous pressure as they realised that the survival of each depended on the cooperation of others. The crisis, however, forced the cluster to shift gears by moving from passive, low level cooperation to intensive cooperation, creating in the process a structure for communication and exchange on a broader level (Kennedy, 1999).

Collaborative ties between firms, especially vertical ties, do not only enhance competitiveness in a cluster but also enable technological learning to take place (Morosini, 2000). Mention has already been made of how large firms in a cluster establish hierarchical relationships by assuming leadership and using smaller firms as subcontractors and input suppliers. Although subcontracting relationships may be (and often are), motivated by strategies to lower wage costs, there is also collaboration to ensure product quality, enabling smaller firms to gain specialized technological knowledge (Schmitz, 2000). Large manufacturers may even provide technical training for small producers in order to upgrade the quality of supplies. Product quality is the most important driving force behind technological collaboration (Advani, 1997). Nadvi (1997; 1999b) confirms that the strength and growth of the surgical instrument cluster in Sialkot is based on technically collaborative arrangements between both large and small firms. The technological learning in these arrangements is a two-way process, subcontractors provide knowledge to producers and vice versa.

Horizontal ties can be effective instruments for cluster growth and upgrading. As mentioned earlier, it was the catalyst for exposing shoe manufacturers in the Sinos Valley to trade fairs and for bringing foreign buyers to the cluster. Multilateral joint action also enhanced the participation of the surgical instruments cluster in the international market through the establishment of a dry port (Nadvi, 1999b). These examples are evidence that business associations and other forms of collective organization can actively promote cluster growth, either directly by coordinating activities which heighten technology and quality standards, or indirectly by strengthening inter-firm linkages and creating a supportive environment for clustered firms (Advani, 1997). Inter-firm cooperation in its horizontal and vertical formats is subject to change, depending on the growth trajectory of the cluster. Growth of the

cluster is usually accompanied by heterogeneity and related diversified interests, creating the potential for disunity and conflict (Asheim, *et al*, 2006). The example of the Sinos Valley cluster aptly illustrates how a phase of intense and far-reaching collective action can disintegrate into disunity and then later be re-activated to meet new needs (Schmitz, 1993). In general, collective action assumes significance in periods of crises and slows down in phases of calm.

2.7.1.1 *The effect of trade liberalization on joint action*

In recent years the biggest catalyst to cluster development has been the introduction of trade liberalization in many countries. The effect of trade liberalization has been to force sectors of industry to compete with producers worldwide without the protective measures that previously cushioned local industry from more aggressive competitors. Market liberalization has been a challenge for some clusters but a source of opportunity for others. In small, less developed clusters producing directly for the local market, liberalization has resulted in a flood of imported goods that compete strongly with cluster produced goods. This has been the case for certain clusters in Africa, such as the garment and metalworking clusters in Kenya (McCormick, 1999). For other African clusters, however, liberalization has broadened the scope for small producers, such as vehicle repairers in Kenya who have experienced increased demand for repair services due to the import of second hand vehicles. Yet in other clusters the benefits of liberalization have been mixed, resulting both in firm closures due to heightened imports of new and second-hand goods, and firm growth from entry into new export markets (McCormick, 1999). Market liberalization seems to have a greater effect on demand than supply side cooperation. The greater availability of inputs at cheaper prices has reduced the benefits accruing to supply side cooperation. At the same time, liberalization has put new competitive pressure on firms' products, and manufacturing efficiency, improved quality and marketing strategies therefore have assumed new importance (McCormick, 1999).

In the Mexican shoe cluster of Guadalajara, trade reform policy provided the incentive for introducing product and process innovation, improving quality, increasing productivity and lowering costs. These improvements were achieved through increased cooperative practices between shoe manufacturers and suppliers, and between exporting firms and international buyers. In the process, however, the structural adjustments induced by liberalization have deepened heterogeneity in the cluster as only certain firms have adapted to the requirements of the open market and others, especially the smaller ones, have introduced few improvements to their

products (Rabellotti, 1999). Structural changes were also manifested in the Agra footwear cluster under the impact of the double crisis in the 1990s, firstly, of the collapse of the cluster's main export market, the (former) Soviet Union, and secondly, of trade liberalization. The challenge posed by these crises was the need to improve quality and speed in order to compete in the more exacting export and domestic premium markets. Many of the producers were unable to adjust to the tougher requirements and went out of business but the more dynamic and innovative producers, through strengthening their vertical inter-firm relationships with buyers and suppliers, not only weathered the crisis but grew under the circumstances (Knorringa, 1999). Schmitz (1999a) also observed a strong increase in bilateral vertical cooperation between shoe makers on the one hand, and subcontractors on the other, when the Sinos Valley cluster faced tough competition from China, and more recently, from Portugal, Spain and Italy.

2.7.2 External linkages

The growth path of clusters into dynamic national and international entities is most notably influenced by external linkages. The static approach to cluster analysis focuses on the internal organization of the cluster, but it is the forward linkages with traders that defines the pace at which a cluster develops (Schmitz, 1995; 2000; Schmitz and Nadvi, 1999). In export-led economies, the firms closest to the market are the traders or export agents who act as catalysts for cluster growth by linking local artisans to central markets. Traders expose local producers to international quality and technology standards and act as conduits for marketing and technical information (Advani, 1997).

Dynamic clusters therefore are driven by the needs of customers whose demands in terms of conformance to standards, nature of products and delivery are often higher than those in domestic markets. The ability of local firms to meet new demands from outside the cluster often depends on the support received from local institutions and on the underlying bases for inter-firm cooperation. Guerrieri and Pietronelli (2004) researching the evolution of industrial districts and technological regimes in the context of Italy and Taiwan, claim that strong inter-firm and inter-institution linkages are critical to provide local SMEs with the necessary externalities to cope with the dual challenge of knowledge creation and internationalisation. If local institutions are strong, clusters can move into new market niches, extend the span of their activities within the commodity chain and develop new links to final markets (Humphrey and Schmitz, 1996a). This was the case of the Sinos Valley cluster where local

institutions were instrumental in enabling the cluster to respond to foreign interest. The emphasis on demand for fostering the growth of a cluster is evident also in the Sialkot surgical instrument cluster. Nadvi (1999a; 1999b) reports that for the export oriented enterprises, developing long term ties with reliable external buyers is critical to success. Buyers are a leading source for new knowledge on technologies and methods as well as being the key agents forcing producers to maintain and upgrade quality standards. In this instance it is mainly the larger firms that have stronger technical links with external buyers. Technical knowledge passes from buyers to manufacturers and through them to skilled artisans and subcontractors, so the small firms also benefit through the externalities of these relationships (Nadvi, 1999a). Cawthorne (1995), in her analysis of the cotton knitwear cluster of Tiruppur, India, claims that producing garments for export is the single most important factor in a process of firm differentiation within the industry, not in terms of size of industry but by the quality of the garments produced. Export markets provide the impetus to upgrade production which firms of themselves would not be able to do.

Tewari (1999) suggests that learning between small producers and foreign buyers is facilitated if the orders are low volume and low cost. This allows the learning firm greater economic latitude to afford to make mistakes and to learn from them. Furthermore, channels of feedback may be easier to develop with medium sized or smaller buyers who may have a lower ability to substitute their suppliers at will, and therefore greater incentives to provide the feedback to their suppliers that would help to develop good quality ties.

2.7.2.1 *Standards requirements*

Pressure to upgrade production methods and quality specifications does not only arise when firms first enter export markets; with the advance of globalization even established players in the international market are subject to new challenges and threats, specifically in the form of international standards. Quality assurance standards shift the focus from product- to process-quality and are an emerging feature of demand-driven pressures. New standard requirements affect a variety of areas including quality assurance, environmental standards, labour norms, and even social ethics. Indeed, such standard requirements have come to be recognized as the new non-tariff barriers to trade (Nadvi, 1999b).

Assurance standards underline the link between market conditions and joint action by demanding greater and more coordinated collaboration on the part of clustered

producers. It was through enhanced joint action, vertical and horizontal, that the surgical instrument cluster of Sialkot was able to successfully respond to the crisis caused when the United States, the cluster's principal market, restricted imports of Pakistan-made surgical instruments for failing to meet the internationally accepted quality assurance standards. Increased links with suppliers resulted in a superior quality of raw material used, and more selective subcontracting negotiations tightened control along the production value chain, albeit it also inevitably heightened differentiation among subcontractors. The most significant factor in the turnaround of the cluster, however, was the greater cooperation with external buyers who acted as conduits of information to know-how, reinforcing the fact that local sources of competitiveness are rarely sufficient to ensure continued viability in global markets (Nadvi, 1999b).

The effect of imposed standards and regulations on the Nile Perch cluster in Kenya and the tanning cluster in India's Palar Valley has already been discussed. The resultant cooperation was more pronounced in the tanning cluster but even in the case of the Nile Perch cluster in Kenya it opened up the channels of communication between suppliers and processors, albeit only to a limited extent. Cooperation in these cases is undertaken with reluctance as habits of operating individually are often deeply entrenched. It is only the threat to survival that induces cooperation among industry players who are otherwise not accustomed to working together to meet common goals. Once the benefits of cooperation are experienced, however, it can potentially encourage voluntary cooperation in other areas.

2.7.2.2 *Global buyers and the implications for local upgrading opportunities*

The contribution of global players to the learning and upgrading process of clusters has been extensively acknowledged by Schmitz (1995; 1999a) in discussions of the Sinos Valley footwear cluster. Recent experiences in the Sinos Valley cluster, however, also highlight the limitations inherent in learning by exporting. In particular there is the potential for a clash of interests to develop between local producers and global buyers when it comes to upgrading. Conflict arises where global buyers are prepared to support local producers in improving production processes, but deter them from progressing into more strategic functions along the value chain. The potential for conflict that exists between local producers and foreign buyers has inspired specific research attention on the insertion of clusters into global distribution channels, and the effect of this on local upgrading strategies (Schmitz and Knorringa, 1999; Humphrey and Schmitz, 2000; Nadvi and Halder, 2002). The research that

has emerged indicates that global buyers play a role in inducing upgrading initiatives within clusters, but the type of upgrading fostered differs according to the nature of the relationships between the buyer and producer in the global value chain (Humphrey and Schmitz, 2000; Rabellotti, 2001).

Four types of upgrading opportunities have been identified for producing firms integrated into global value chain networks. Process upgrading is evident when firms increase efficiency of production through improved techniques or the introduction of technology. Product upgrading involves the manufacturing of more sophisticated product lines. In functional upgrading, a firm acquires new functions to broaden the skill content of its activities. The final form of upgrading is inter-sectoral, where firms apply their competence to different sectors of production (Humphrey and Schmitz, 2000; 2002). The way in which the producing firm is linked into the global chain network influences the type and degree of upgrading that is facilitated. There are four ways in which supplying firms may be integrated into global buying networks. At one end of the spectrum is arms-length market relations where the buyer and supplier do not develop close relationships. Network relationships occur between firms of more-or-less equal power, which facilitates cooperation based on shared competencies. By contrast, asymmetry of competence and power between firms in quasi-hierarchical relationships results in one firm exercising a high degree of control over the others. At the opposite end of the spectrum is hierarchy or vertical integration, where the lead firm takes ownership of the external firm's operations (Humphrey and Schmitz, 2002). According to Humphrey and Schmitz (2000; 2002), these different relationships between firms have different upgrading implications for the supplying firms. Thus, in market and network based relationships, the largely egalitarian basis on which these firms operate enables functional and inter-sectoral upgrading. The firms in these chains usually have the competencies, resources and knowledge systems to develop new product lines or broaden their sector of activity. Quasi-hierarchical and hierarchical governance chains tend to promote rapid process and product upgrading, but restrict functional upgrading.

The limited upgrading possibilities of quasi-hierarchical relationships is borne out by the example of the Sinos Valley shoe cluster which, although on a par with Italy with respect to product quality, speed of response and reliability of delivery, lacks the innovative design capability which gives Italy its competitive edge (Schmitz and Knorringa, 1999). When the producing cluster does try to move into non-production activities such as marketing and design, these attempts are often blocked as they

threaten the core competence of the buyers. In the case of the Sinos Valley, export manufacturers were locked into production and any efforts to break out of this role and establish other marketing channels created antagonism with their existing buyers. The Sinos Valley cluster was at the stage where improvements in production were not sufficient to secure international competitiveness, necessitating a shift to other stages of the value chain, namely design and marketing. When, however, producers in the cluster attempted to launch a marketing programme, the initiative was resisted by some of the leading enterprises whose commitment to foreign buyers was in open conflict with local cooperative efforts (Schmitz, 1999a; Humphrey and Schmitz, 2000). Vargas' (2001) account of the tobacco cluster in the Rio Pardo Valley in Brazil is also illustrative of the upgrading limitations inherent in quasi-hierarchical relationships. The tobacco cluster has benefited from technological and process upgrading since it became linked to global firms, but it only plays a marginal role in innovation processes. The most important phases of the tobacco value chain, such as the R & D activities, marketing and international trading, are organised outside the Rio Pardo Valley, at the international level, and exclude the local players (Vargas, 2001).

Integration into global networks may, in some cases, result in the downgrading rather than upgrading of firms' activities. The shoe cluster in Brenta, Italy, is a case in point. Traditionally, the design and acquisition of inputs was controlled locally from within the firm or the district. Since becoming producers for global fashion companies, however, many of the local enterprises have relinquished design and sales activities which are now undertaken by the fashion firms under their own brand name. Although the relationship between the Brenta producers and the global firms is quasi-hierarchical, it also includes elements of networking in that the leaders in the chain co-operate with their supply partners to obtain top quality products. Integration into the global network has entailed functional downgrading of the cluster but, at the same time, it has enabled firms that were otherwise too small to invest in global distribution channels, to participate in the international luxury market (Rabellotti, 2001).

The capacity of clustered firms to upgrade into new product development or new functions depends not only on the type of relationship they have with external buyers, but also on the knowledge flows within the cluster (Asheim and Coenen, 2005). Nadvi and Halder (2002) distinguish between knowledge-using and knowledge-changing capabilities in promoting either incremental or radical upgrading. Cluster-

based knowledge flows enhance knowledge-using abilities that are central to process upgrading, but are unlikely to result in new product development. The ability to invest in new knowledge enhances the knowledge-changing capacity of a cluster, which enables the move into new product development. Knowledge-using abilities rely on both local and external knowledge flows. For radical product upgrading, however, knowledge-changing abilities are required, for which external, rather than local linkages, are critical (Nadvi and Halder, 2002).

It is important to note that the co-ordination and control of activities required within a chain network is commensurate with the perceived risk of supplier failure to meet commitments or standards. As the delivery capabilities of local suppliers improve and diffuse, so the need for obligational relationships diminishes (Humphrey and Schmitz, 2000; Humphrey and Schmitz, 2002). The extent to which producers raise their performance in the value chain is linked to the occurrence of external economies of joint action in the cluster, which leads to improved supplying and ordering practices to diffuse through inter-firm relationships (Schmitz, 1999a). Nadvi (1999b) refers to this situation in relation to the Sialkot cluster, indicating that in certain instances forward ties to foreign buyers have become weaker as quality in the cluster as a whole has improved and unit prices have dropped.

2.7.3 Socio-cultural relations and trust

In understanding the dynamics of clusters and the underpinnings of joint action that govern their growth, it is essential to consider the socio-cultural environment within which the enterprises are based, and the issue of trust. The industrial district is a system of production consisting of a multitude of formally independent actors which operate together and thus create a high density of transactions amongst them. For these to function smoothly and result in cumulative gain, trust and reciprocity are paramount, not only for the functioning of the district but also for collective action (Schmitz, 1993). According to the industrial district literature, the trust necessary to sustain collective efficiency is inherent in the cluster itself by virtue of the social embeddedness of enterprises and a common socio-cultural base (Enrico and Grandi, 2004). Thus, Dei Ottati (1994) defines the social environment of the ideal type industrial district as characterised by a common culture, frequent face-to-face relations, and norms of reciprocity accompanied by relevant social sanctions. The frequent interaction between local agents facilitates the development of trust through knowing each other, and the custom of cooperation characteristic of the districts helps to reproduce trust and make it easier to sustain, reducing the need to resort to

costly safeguards and monitoring to conclude transactions (Dei Ottati, 1994). A common social identity can form around notions of family, caste, ethnic, racial, religious, educational, political and corporate backgrounds (Nadvi, 1999a).

Nadvi (1999a) points to three ways in which social embeddedness can influence the functioning of a district and its institutional framework. One way is the religious and/ or cultural attitudes that influence the dominant work ethos. A second way is the social ties and socialized production relations that lower transaction costs by providing a basis for trust, social reputation and reciprocity in inter-firm relations. Being socially embedded allows for the social provisioning of market-related information. Local social networks, therefore, provide valuable social capital in the form of the reputation of local firms, suppliers, traders, artisans and workers. It is costly to build up personal trustworthiness and to look for agents who possess a specific trustworthiness but the social relations in a cluster mitigate these information costs (Dei Ottati, 1994). A third way in which social embeddedness affects production in a district is through the social milieu which influences and is influenced by, the process of innovation and technological change. According to this perspective, technology is a function of the social fabric in which it is located, and is founded on the tacit knowledge that exists of production and production processes. This knowledge culminates in innovation through recurring contracts between users and producers. Apart from facilitating relations between enterprises, social embeddedness generates an implicit code of behaviour, incorporating rules and sanctions, that regulate both social and production relations within the cluster. Trust, therefore, goes hand-in-hand with sanctions which set limits on socially accepted commercial behaviour within and between firms (Nadvi, 1999a).

Much of the empirical work on clusters supports the role played by socio-cultural networks. In the Sinos Valley, non-economic ties based on ethnicity (German descendency), geography or localness, and kinship were important in the initial stages of development to ensure reliability of commitments and to foster cooperation (Schmitz, 1993). Similarly, the Pakistani surgical instrument cluster rests on multiple and interwoven social identities regulating the inter-firm transactions and facilitating cooperation. In particular, three different forms of social ties influence the Sialkot cluster: caste, family ties and social networks based on being local. It is not only in the large, established clusters that social networks have a bearing; in Africa, McCormick (1997, p123), testifies to the “air” of socio-cultural identity that pervades the garment markets and the “common background that seems to create a

cohesiveness and *esprit de corps* in the markets". She also refers to the networks based on educational background which provide access to customers and market information, and, in turn, lead to higher profits and better sources of finance. These networks consist of colleagues, schoolmates, former bosses, and stable customers and suppliers from former jobs. Gender can also provide a basis for networking, albeit in Kenya women's generally disadvantaged position means that women's networks normally provide less access to power and resources than men's networks (McCormick, 1997).

In Accra, Ghana, Van Dijk (1997) claims that ethnic affiliations play a substantial role in labour networks and different forms of cooperation. Ethnic ties directly influence access to jobs and apprenticeships as well as participation in clusters. Even in rural enterprise clusters such as cottage industries in Indonesia, social networks are important for safeguarding social control and stability and ensuring low transaction costs (Weijland, 1999). In the Palar Valley in India, socio-cultural and kinship ties and a shared local identity facilitated cooperative action in implementing pollution control measures but sanctions also played an important part in regulating individual behaviour, as the implicit threat of losing reputation in the community was effective in ensuring cooperation from local producers (Kennedy, 1999).

2.7.3.1 *From ascribed to earned trust*

In keeping with the emphasis on the trajectory of clusters which unfolds as a cluster responds to challenges and opportunities, the effects of a common socio-cultural identity equally wane or strengthen with the cluster's growth path. Much as the empirical analysis of clusters has highlighted the intrinsic importance of social identity in the establishment and growth of clusters, it has, at the same time, revealed that social ties do not always operate in a uniform and unidirectional fashion to strengthen productive ties (Enrico and Grandi, 2004). The example of the Sinos Valley is illustrative of the shifting ties that accompany the growth of a cluster. The early industrialization drive in the cluster was greatly facilitated by trust based on socio-cultural ties. The influence of these ties weakened during the export boom due to the key role of outsiders and the speed at which growth and differentiation occurred. More recently, there has been an attempt to rebuild trust by consciously investing in relationships with other firms irrespective of socio-cultural characteristics. Trust has not ceased to be important for collective efficiency. On the contrary, it has become even more important as buyers have imposed ever higher standards in product quality, speed of response and reliability. The foundation of trust, however, has

changed from being ascribed or reliant on socio-cultural characteristics, to being earned through the process of repeated interactions (Schmitz and Bazan, 1997; Schmitz, 1999b; Humphrey and Schmitz, 1996b; 1998).

Likewise, the social constructs underlying the Sialkot cluster have changed with time. Initially, ties of kinship and family lineage were central to the cluster's formation and development but this diminished as social reputation based on knowing and being known locally became the deciding factors for business relationships. In the current climate of globalization even the bonds of being local are subject to change as external actors with whom local manufacturers share no social ties, gain influence. As pressure mounts to conform to international quality and assurance standards, so new ties are likely to gain in importance both in production relations and socially (Nadvi, 1999a). Similar to the case of the Sinos Valley, the relevance of local social bonds decreases and trust based on demonstrated economic and technical performance takes pre-eminence. In his argument of trust relations in Sialkot, however, Nadvi (1999a) does not dismiss the role of ascriptive ties even as earned ties are on the ascendency. Different social ties continue providing different types of support for the cluster. Thus, ascriptive ties and local social linkages continue to provide mechanisms for the regulation of inter-firm relations and to serve as information banks in the process of local knowledge flows. The argument is not that ascriptive ties cease to play a role, but that growth of the cluster cannot depend on those links alone and has to cultivate relationships based on earned trust.

Even in contexts where ascriptive ties have been sufficient for strong economic performance, earned relations start playing a role to raise firm competitiveness. In the Agra footwear cluster in India, those exporting producers who overcame the crises of economic liberalization and tougher international competition rely on earned trust not only with outside players but also with local partners who first became involved on the basis of their community or family connections. Producers have realised that to meet the demands of a more competitive environment "ascribed trust cannot shelter non-performers" (Knorringa, 1999, p1600). In the words of Humphrey and Schmitz (1996b, p30), operating in the world market has both eroded and created trust. It has undermined socio-cultural ties but created new ties based on conscious investment in inter-firm relationships. This means that the business partners do not necessarily have to change, but the basis of trust does.

2.7.4 The role of government

2.7.4.1 *Policy intervention*

The European industrial district experience has been of special interest to policy makers in developing countries in the quest to find new ways of promoting small scale enterprise and enabling them to compete in national and international markets without continuing state support. The issue of policy in the industrial district literature has centred particularly on the role of local and regional governments in providing a framework in which clusters can flourish. Prominence has been given to the role of the local state in institution building, promotion of consortia of firms, and the development of collective service centres (Pyke and Sengenberger, 1992; Schmitz and Musyck, 1993; Cossentino, *et al*, 1996; Enrico and Grandi, 2004). While it is necessary to acknowledge the role of regional and local government initiatives, it is difficult to assess how they influenced the success of industrial districts. A more important realisation is that the emergence of industrial districts was not the result of consciously pursued local or regional industrial strategy. Policy initiatives played a role in the growth process of the industrial districts but not in their establishment. Policy intervention in the original industrial districts was targeted at enabling already existing and dynamic clusters to perform better, or to respond to new challenges. This means that there was already a strong basis on which policy could work (Schmitz and Musyck, 1993; Schmitz, 1995; Humphrey and Schmitz, 1996a; 1996b). Even where public intervention did take place, it tended to work through local self-help organizations, indicating impetus from the cluster and not just from the state (Schmitz, 1997).

In many developing countries where small industries are not clustered in large, sectorally specific agglomerations or where clusters are merely at the embryonic stage, the policy challenge is to transform these systems into successful, self sustaining entities. The state can play a catalytic role in fostering trust relations in networks of enterprises by bringing firms together in networks (Advani, 1997). Already there are experiences of state intervention based on the principles underlying successful clusters. One example often referred to is the Danish Network Programme, a government subsidized initiative to promote networking between firms regardless of whether they belonged to an existing cluster. The main challenge of the programme was overcoming firms' resistance to cooperation, a practice not intrinsic to the Danish culture. To this end, a network broker was provided to identify

opportunities, bring participants together, and assist in implementing new ideas or projects (Schmitz, 1998; Humphrey and Schmitz, 1996a; 1996b).

A similar initiative based on fostering networks through a facilitator is evident in Chile where groups of firms in the same locality and sector were targeted. Brokers facilitated access to state support which broke down barriers of mistrust between producers and state and gave the programme credibility. Regular meetings of participants were organized to develop mutual understanding and create opportunities for cooperation. The Chilean programme demonstrated some positive results with most participants gaining access to new domestic and international markets, and the networks formed were potentially self-sustainable (Humphrey and Schmitz, 1996a; 1996b; 1998).

The Danish and Chilean network initiatives highlight an important factor in developing industrial policies for small enterprises, that is, the feasibility of directing support at groups of enterprises as opposed to individual firms. The collective approach lowers the transaction costs associated with enterprise assistance, and the effects are far reaching in that it helps generate cooperative relationships between enterprises, thereby creating collective efficiency benefits for the group (Humphrey and Schmitz, 1996b; 1998).

Another critical aspect to consider in formulating policies for cluster development is the demand factor or customer approach (Humphrey and Schmitz, 1996b). The formation of the networks should be market focused, just as customer orientation has been critical for the ability of clusters to break into new markets. Most support programmes in less developed countries are too supply orientated, emphasising the provision of input measures such as skills, technology and raw materials, with scant attention paid to absorption of the outputs. To create the foundations for sustainability, support programmes should start with a focus on the demand side and incorporate supply-side inputs as these are needed. The demand side approach not only ensures that there is a market for the products to enable continued production, but also forces firms to deal with their key problems of competitiveness. Only as firms learn about and from the needs of their customers can they adapt to meet those needs, thereby ensuring continued demand (Humphrey and Schmitz, 1996b). A clear example of a state-led, demand driven initiative for small business development based on the principle of clustering is the state procurement programme of the Brazilian state of Ceara. The initiative is a successful attempt by the state

government of Ceara to redirect one-third of its purchases of goods and services to small enterprises. The programme led to sustained growth among the assisted firms, sometimes with strong linkage effects throughout the area where the firms were located (Tendler and Amorim, 1996). The Ceara programme is illustrative of the potential gains from an approach to small enterprise promotion that is both collective and customer oriented.

The public sector can be instrumental in generating demand not only through procurement programmes. As evidenced in previous examples of clusters, exposure to foreign buyers is a key factor in the transformation of clusters. Public institutions can contribute in this area by organizing trade fairs. Particularly where clusters are dormant, trade fairs can have a catalytic effect by providing firms with access to new markets, giving an indication of what customers want, and how rival enterprises are meeting the customers' needs. Professionally run trade fairs can entail exorbitant costs which effectively exclude small firms from participating (Humphrey and Schmitz, 1996b; 1998). Joining forces is one way of overcoming these constraints, and public agencies can support such initiatives by contributing to the exhibition costs. State assistance may also be necessary in enabling small firms to respond to the challenges which emerge from exposure to international markets. Specific efforts may be required to promote collective learning and respond to the challenges of exporting (Humphrey and Schmitz, 1998).

Another way that the state can assist in linking firms to international markets is engendering or strengthening ties between foreign investors and local entrepreneurs. Wang and Tong (2005) draw attention to this issue in their study on industrial clusters in China, where they identify one of the obstacles to networking as the extreme difficulty in promoting local linkages among multinational companies (MNCs) and local actors in an industrial cluster. They suggest that since local communities and foreign investors do not always share the same goals in local development, it is essential for local government to help create mutually beneficial relations through the establishment of global-local ties (Wang and Tong, 2005)

2.7.4.2 The macro policy environment

The industrial district debate may give cognisance to the role of local and regional public intervention but it does not consider the effect of the macro policy environment, nor the effects of a changing macro policy environment over time (Schmitz, 1993; Schmitz and Musyck, 1993). Schmitz and Musyck (1993) attribute

this failure to the fact that industrial districts are often studied in reference to, and in comparisons with, the rest of the national economy. Another reason is that, in the case of small scale industry especially, support mechanisms are vested in dedicated institutions concerned with small firm development but excluded from participating in decisions on general economic policy. In most cases, however, it is macro economic policy that most impacts on firm development. Negative effects stemming from the macro economic environment are not necessarily linked to the implementation of particular policies, but can result from failure of the government to attend to issues impacting on small enterprise clusters. Attention has already been drawn to the weak institutional environment in Africa which precludes small firm clusters from performing and developing at the rate of other, more dynamic clusters. McCormick has written extensively on the lack of supportive financial, state and social institutions, which has the effect of inhibiting trust and accountability, and impedes access to capital, labour market flexibility and subcontracting, all of which are necessary for modern industrial development (Pederson and McCormick, 1999; McCormick, 1999; 2000). Apart from failing to provide an effective institutional framework, government is also guilty of often not providing essential infrastructure, from roads and communication structures to the specific provision of electricity to a cluster site, to enable small enterprises to operate effectively.

Failure of government to assist in the development of clustered enterprises is also evident in the example of the Sinos Valley cluster where government intervention was necessary to recover the joint marketing initiative that failed to come to fruition due to internal conflict (Schmitz, 1999a). In this case it was no specific government policy that was detrimental to the cluster, but rather, the lack of government intervention. Government may be required to mediate conflicts and help foster an upgrading consensus (Schmitz and Nadvi, 1999; Schmitz, 2000). For this, knowledge of the sector in question is required in order to be able to assess different claims and their validity and likely impact, as well as techniques in conflict management.

Government decisions at the macro level do at times have a positive impact on industry. In the case of the Palar Valley in India, government induced two crises that potentially could have crippled the tanning industry but which, instead, enabled it to survive and become more internationally competitive. The first crisis refers to the government decision to phase out the export of raw and semi-finished hides and skins to promote finished leather products in an effort to increase the value addition

in the country. Although the decision was a shock to the local industry which was mostly specialized in semi-finished leather, it met the challenge through government assistance and involvement and ultimately became more dynamic. The ability of the industry to respond to this crisis from government also stood it in good stead in rising to the second challenge, that of having to comply with pollution-controlling regulations. As noted before, the industry successfully overcame the crisis through collective action, but it would not have rallied together were it not for government policy. Macro policy also played a positive role in Mexico in the recovery of the footwear clusters. The crisis of trade reform had a devastating effect on the industry but it recovered successfully when the government first increased tariffs on imports from China, and then later on imports from the rest of the world. Analysis of the cluster has revealed that strengthened cooperation in the Guadalajara cluster greatly contributed to the cluster's recovery but government intervention was instrumental as well (Rabellotti, 1997).

In many of the industrial districts, from a variety of countries, government macro economic policy has been most acutely felt in the introduction of economic liberalization measures. For some firms this has meant the death knell, but for others, depending on the collective measures adopted, it has been an opportunity to strengthen and grow, albeit at times in a different direction.

Macro-economic policies tend to have an indirect impact on small firm development, largely as the result of a tendency to ignore small firm issues rather than from the deliberate application of strategies targeted at small firms. There are instances, however, where macro economic policies are specifically introduced to induce a particular response from industry or a sector of industry. How the industry responds is dependent on the level of collective efficiency in the industry and, especially the strength of its cooperative ties both with local and outside participants.

The next section analyses the extent to which the cluster form of industrial organization is applicable to the jewellery industry.

2.8 The jewellery industry in the industrial district literature

Scott (2004), has contextualised jewellery manufacturing activities within the framework of cultural-products industries which he describes as sectors that produce goods and services whose subjective meaning to the consumer is higher than their

utilitarian purpose. Within the ensemble of sectors that constitute cultural-product industries, jewellery is one of the industries that offers products through which consumers construct specific forms of individuality, self-affirmation, and social display. In recent years, cultural-product industries have assumed growing importance to policy makers through the employment and income generating potential of these sectors (Scott, 2004).

According to Scott (2004), cultural-product industries display a number of similarities that typify industrial clusters. They are usually comprised of a multiplicity of small producers, complemented by a few larger firms, operating on a flexible specialisation basis. Additionally, these industries tend to agglomerate to benefit from economic efficiency and the flow of innovative energies, information, opinions, etc. that enhance the effectiveness of these firms. The result of these tendencies that define the operating environment of cultural-product industries is the formation of specialised industrial districts where production activities occur within shifting networks that may range from heterarchic webs of small establishments to hierarchical structures of firms co-ordinated by a central unit (Scott, 2004).

Within the ambit of the cultural products economy, the jewellery sector in particular exhibits many of the characteristics that demarcate industrial clusters. Scott (1994, p249), in his comparative study of the gem and jewellery industry in Los Angeles and Bangkok, attests that “gem and jewellery production tends to crystallize out in geographic space in the form of localized industrial districts, and these same districts also typically function as the local points of worldwide networks of linkages”. Scott (1994, p249) maintains further that “the industry is underpinned by peculiar cultural and social institutions governing inter-firm relations and the employment of labour”. Several characteristics of the jewellery industry explain its proclivity to the formation of industrial clusters; foremost is the high-value nature of the product manufactured and the raw materials used which makes it imperative to increase security and reduce transaction risks through agglomeration. In addition, the industry comprises a great many different specialised processes and trades which result in specialisation and the consequent subdivision of labour and subcontracting tasks. Associated with this feature is the small size of the majority of firms employing only a handful of workers, although large producers do exist. Workers in the industry range from the highly skilled to the semi-skilled, depending on whether production is on a mass level, in which case it can accommodate the subdivision of labour and varying skills, or designer-oriented which requires highly trained people, proficient in the full

spectrum of production. A support network of service providers forms part of the industry, offering a range of inputs from the raw materials to jewellers findings (small parts) and machine repairs. Downstream in the industry is the retail sector which is differentiated into individual retail stores, retail chain stores, departmental stores, travelling salespeople and, more recently, media sales outlets.

Despite the incidence of jewellery industrial centres, they have not been subjected to any detailed analysis of cluster development and growth as has been the case with more "traditional" industry sectors such as footwear, clothing and metalworking. The few studies that do exist are not necessarily within the industrial district framework, although they touch on issues relevant to the functioning of industrial clusters. It is these issues that will be teased out in the ensuing discussion.

Possibly the most well known and successful jewellery industrial cluster is the district of Vicenza in Italy's Veneto region in the north east. It has been described as "undoubtedly the most important goldsmithery pole in the world" (Crestanello, 1996, p93) and three times a year hosts one of the most important international jewellery fairs. The cluster displays all of the characteristics of the traditional industrial districts as described in the literature, such as small size of firms which employ on average ten people, a high degree of specialization and vertical integration creating a tight network of inter-firm linkages, and a strong presence in the international market with 70 percent of products being exported. The cluster has also exhibited exceptional growth, having increased the number of firms by 55 percent in the decade between 1981 and 1991, which altogether accounted for an expansion of the cluster of 92 percent in the same period (Crestanello, 1996).

The Antwerp diamond district in Belgium is an example of a cluster that has retained its attributes as an industry cluster despite changes in the socio-cultural dynamics that defined the district (da Silva, 2006). The Antwerp diamond district is typical of an industry cluster, comprising 1 500 diamond companies and four diamond bourses in a one square-kilometre area. Specialist service providers contribute to the dense network of horizontal and vertical linkages that make the Antwerp diamond district the most important diamond trading centre in the world. A strong Jewish cultural identity that stems back to the 15th century supports the trust and collaborative relationships that govern business dealings in the district. In recent years the socio-cultural fabric of the district has altered to reflect the growing influence of Indian traders in Antwerp. Nevertheless, these shifting social patterns have not

compromised the internal cohesion or culture of collaboration that prevailed in the district. Trust relations that were previously culturally ascribed have evolved to earned trust between Jews and Indians based on entrepreneurial reputation and repeated interactions (da Silva, 2006).

Not all the jewellery clusters that feature in the literature demonstrate dynamism. As discussed earlier, the rate of growth of a cluster is invariably connected to the level of "active" joint action occurring in the cluster, and although inter-firm cooperation and trust is of particular importance in jewellery production by virtue of the high value of inputs and products, it nevertheless varies considerably between clusters. The *Khan al-Khalili* jewellery cluster in Egypt is an industry in jeopardy because of the low incidence of joint action which makes it difficult for the cluster to withstand the socio-economic and political pressures bearing upon it (Paolo and Abdel-Kader, 2004).

Khan Al-Khalili is the main jewellery cluster in Egypt, producing 70 percent of the country's jewellery. It is typified by a dense network of producers and traders, knitted together by strong social ties. These industrial cluster characteristics notwithstanding, the economic competitiveness of the cluster is poor and deteriorating due to the low level of inter-firm cooperation and inadequate government support. Weak horizontal ties are manifested in the lack of representative organisations and training institutions, which results in poor communication, little to no marketing, and a paucity of skilled labour. Despite a common cultural identity, there is deep mistrust among manufacturers who obstruct knowledge flows by deliberately withholding information, and resort to unethical practices such as poaching employees from rival producers. Vertical connections are also weak; although specialisation and outsourcing of work is prevalent, it does not lead to innovation. There are few original design styles as most are copied from jewellery catalogues, and production techniques are often outdated, in part due to obsolete technology. An even more important factor preventing innovation is the very limited external links to foreign markets and traders. There is therefore little impetus to upgrade product quality or design. Production is primarily directed to the local market which has a strong, cultural affinity for gold but the low purchasing power of the majority of the population may be insufficient to sustain the cluster (Paolo and Abdel-Kader, 2004).

Alongside the internal difficulties of the cluster it is under pressure from poor government support, unfavourable economic circumstances, and competition from

other Arab countries. The effect of these externally-induced problems is magnified for the *Khan Al-khalid* cluster, however, because of insubstantial cooperative networks which undermines the cluster's ability to overcome new challenges (Paolo and Abdel-Kader, 2004).

Equally illustrative of the divergence in cooperative practices between clusters of the same sector but in different contexts is Scott's (1994) comparative study of the gem and jewellery industry in Los Angeles and Bangkok. The study reveals that whilst trust dominates inter-firm transactions in both clusters, the industry in Bangkok demonstrates a higher level of collective activism that has propelled it from a national player to a global competitor. The Thai industry was initially founded on the large reserves of cheap labour in the country but "massive growth … over the 1980s has been achieved in the context of active and constant collaboration between representatives of the industry and various governmental agencies" (Scott, 1994, p255). The Los Angeles industry, lacking the dense fabric of social institutions that underpin the Thai industry, displays relative lethargy, being focused on local markets and largely represented by national associations with rather limited outlook and scope. Another feature that typifies some of the more successful industrial clusters observed thus far and is also prevalent in the industry in Bangkok is the underlying socio-cultural environment. Production and exchange within the industry is supported by complex relationships of family, ethnicity and religion. Even external business relations in the industry are partly regulated by family. Also in keeping with dynamic clusters, the Thai jewellery sector has realised the need to acquire competitiveness beyond cheap labour, in the realm of quality and innovation. To this end, the industry's representative bodies, in association with government agencies, have embarked on transforming the industry through importing skilled workers to train local manufacturers, and the establishment of a network of training and educational facilities. There is the potential for further learning by interaction with outside experts through the government sponsored Bangkok Gem and Jewellery Fair which attracts producers from all over the world (Scott, 1994)

These advances in the Thai industrial cluster notwithstanding, the overabundance of labour in the country suppresses wages in the industry and contributes to working conditions which are "frequently exceptionally bad" (Scott, 1994, p258). This supports the observation by Schmitz (1995) and Nadvi and Schmitz (1994), that excess labour in developing countries mitigates against high wages despite growth in productivity. Over-abundance of labour is also the enabling factor behind Hong

Kong's competitive position in the low end watch market segment. It is the reliance of Hong Kong's manufacturers on easily available labour that ensures low wages and precludes them from investing in technology, contributing in this way to underinvestment in the industry (Glasmeier, 1994). Unlike the Thai jewellery industry, however, the watchmaking industry in Hong Kong is not seeking to improve competitiveness through innovation and design developments. Rather, as land and skilled labour shortages become manifest in the industry, so more assembly work is occurring offshore in China where lower wages prevail. Glasmeier (1994, p239) maintains that "there is no encouragement of the design development or manufacturing knowledge needed to introduce reputable brand names and move upscale". The industry is also said to be averse to learning from retailers, a primary factor in the development of clusters into world competitiveness. Under these circumstances the industry may continue to prosper but more along the "low road" than "high road" growth path.

It was growth based on price cutting that plunged the American jewellery sector along the east coast into crisis in the early twentieth century. The industry grew rapidly in the late nineteenth century but the depression and war periods induced workers in the industry to start their own businesses, heightening competition based on price rather than design, and paving the way for unfair and destructive trade practices by distributors who sold to retailers countrywide. The industry erred in succumbing to fashion trends and price-cutting practices rather than relying on defending its prices and maintaining quality. The industry also failed to advance technologically and to secure closer ties with the consumer or retailer, all of which the machine tools sector at the time did, and survived the same crises (Scranton, 1991). It can be argued that the core of the problem is that the industry, instead of working together and uniting even more strongly under times of stress, turned against each other, thereby assuring its own downfall.

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The vibrant theoretical debates surrounding industrial clusters, and specifically industrial clusters in the developing world, provide the context for other analyses. The present study on the jewellery industry in South Africa augments the limited body of literature which exists on jewellery clusters, at the same time as it contributes to the burgeoning literature on industrial clusters in Africa. The study traces the

development of an industrial cluster from its early beginnings at the start of the twentieth century, to the end of 2003 period, illustrating the major turning points in the industry cluster and the responses of the sector to those occurrences. Attention will focus on the extent of cooperation and joint action which enabled or failed to carry the industry through critical periods. In particular the role of government will be highlighted, both through macro economic policy and deliberate interventions, for the indelible effect it had on the development of the South African industry.

CHAPTER THREE

The Jewellery Industry in an International Context

3.1 Introduction

Jewellery, a luxury product, is a multibillion dollar industry, sufficient to prompt the governments of precious metal producing countries such as South Africa, to make the beneficiation of resources a policy imperative. There is no doubt that, worldwide, the sales of precious metal jewellery have made tremendous strides over the past two decades, increasing 200 percent in the case of gold jewellery and around 400 percent for platinum jewellery. This escalation in sales has resulted largely from the efforts of the World Gold Council (WGC) and Platinum Guild International (PGI), both organisations established and funded by the major global precious metal producers to promote and sustain sales of jewellery in their respective metals. Nevertheless, the role of the WGC and PGI has been secondary to the inherent significance of precious metal jewellery in particular markets. In many of the world's leading jewellery consuming markets, specifically in Asia, demand escalated dramatically subsequent to legislative reforms of the policies governing trade in precious metals. In the majority of cases, however, the lifting of restrictions in these markets opened up and accelerated the growth of a thriving jewellery industry that had existed informally.

The pattern of jewellery demand and fabrication has changed dramatically over the past two decades. The countries that then led the world in jewellery production have made way for markets that were previously insignificant in this sector. The world's leading jewellery producers are also not necessarily the highest consumers of the product. Whereas some countries, notably Italy, export more jewellery than is consumed in the domestic market, other countries rely on imports to meet their consumption levels. This chapter highlights the changing global pattern of jewellery production and consumption over the last three decades. In so doing it is necessary to understand not only the economic factors affecting jewellery demand, but also the impact of these factors in the context of specific countries. It is the cultural specificities of a country and its propensity for jewellery that often determine its fabrication and /or consumption trends.

This discussion on the global trends of jewellery production and consumption will serve as a useful foil for the detailed examination of the evolution of the jewellery industry in South Africa which is presented in Chapters Four to Seven. The factors that have influenced the supply and demand of jewellery globally have impacted on the industry in South Africa as well. The response of the industry to these factors, and its capacity to adapt, has been affected by elements intrinsic to the country and the industry itself. It is through insight into the growth trajectories of the jewellery industry in different contexts that the evolution of South Africa's industry can be understood, and its potential for further development assessed.

The 'jewellery' referred to throughout this study describes items made of precious metal, or combinations of precious metal and precious or semi-precious stones. Gold, silver, platinum and palladium fall within the realm of precious metals, whereas diamonds, sapphires, emeralds and rubies are considered as precious stones. Semi-precious stones include, among others, quartz, opal, topaz, amethyst, and coral. The study excludes articles of base metals plated with precious metals, and also costume or 'fashion' jewellery. The main distinction between precious and fashion jewellery lies in type of material (whether precious or not), and material content. Fashion or costume jewellery may incorporate many different materials, including some precious metals and stones, but precious jewellery is characterised by the almost exclusive use of precious metals and stones (CBI, 2000).

Further to the purposes of this study, the focus is primarily on gold and platinum items which may or may not include diamonds and precious and semi-precious stones. Silver, albeit a precious metal used in jewellery, is not discussed as it is generally of lower value to either gold or platinum. Because the emphasis is on finished jewellery, the use of diamonds and other stones is subsumed in the discussion on gold or platinum jewellery and is not examined as a separate entity.

3.2 Gold jewellery trends

3.2.1 Jewellery demand factors

The world-wide finished jewellery retail market in 1999 amounted to over US$200bn, of which gold contributed $120bn, platinum $13bn, diamonds $56bn, and other stones $14bn (Kaiser Associates, 2001). Demand was relatively stable in the three years up to 2000 but by 2003 jewellery production had declined to 1993 levels due to

slow world economic growth, shifting consumer tastes, and high gold prices (Klapwijk *et al*, 2004).

Apart from global disruptions that can cause sales of jewellery and other luxury items to plummet, demand for jewellery is primarily influenced by the strength of a country's economy and, linked to this, the associated factors of US dollar exchange rate and the price of precious metals, diamonds and gems used in jewellery making. Precious metal price increases tend to discourage jewellery consumption whereas higher disposable personal income strengthens jewellery demand. In oil-producing Middle Eastern countries, crude oil prices have a marked impact on gold jewellery demand. Other factors which also influence demand are fashion, marketing and promotional expertise, and the general availability and appeal of the precious metal in a changing economic environment (Glynn, 1979). In recent years jewellery has faced increasing competition from a wider range of consumer products such as electronic appliances, mobile phones, clothing items and accessories. To counteract the lure of competing products, international organisations such as the World Gold Council (WGC) and Platinum Guild International (PGI) have renewed their efforts, through time and financial investment, in marketing campaigns to bolster jewellery sales (Kaiser Associates, 2001).

Precious metal use in jewellery is generally more price sensitive in non-western countries than in Western markets where income differentials have a more pronounced impact on fabrication volume. These differences result from the varying forms and styles of jewellery, and the role it plays in the culture and economy of each specific market. Jewellery in the Far East and Middle Eastern markets tends to be purchased not only as adornment but also as an investment, which means that the mark-ups on jewellery are extremely low, only 10 to 20 percent above the gold price of the day, and the jewellery can be sold back at any time, on a small discount to the prevailing price of gold. The jewellery in these markets is typically of high caratage (between 21 carat and 24 carat gold) and has strong cultural significance, being used as a dowry item and as an insurance policy in areas where economies are unstable and the banking system underdeveloped (World Gold Council, 1996a). By contrast, in Western markets, jewellery is mainly for adornment and retail mark-ups can range from 400 to 1000 percent on the cost of gold (Joffe, 2001).

In terms of product type, gold dominates the precious metals jewellery market (gold, platinum and silver), claiming an 82 percent share of the market. If considering only

gold and platinum items, gold's share rises to 97,2 percent (Kaiser Associates, 2001). Gold jewellery accounts for over 80 percent of annual gold offtake; in 2003 this translated into over 2500 tons of jewellery (Klapwijk *et al,* 2004). A diverse range of gold jewellery exists, based on difference in preferences between and within countries, and manifested in different caratages. In Europe the most widely used jewellery alloys are 18 and 14 carat, with the exception of Britain which is predominantly a nine carat market. The United States, too, is inclined to lower carat items of primarily 14 carat, with some 10 carat jewellery as well. By contrast, jewellery in the Middle East, India and South East Asia is traditionally 22 carat (and sometimes also 23 carat), and in China, Hong Kong and some other parts of Asia "chuk kam" or almost pure (24 carat) gold jewellery of 990 fineness, is popular (CBI, 2000).

Since 1990, jewellery demand alone has exceeded the amount of newly mined gold, the balance being filled by supplies of gold by central banks, private investors, or from the recycling of old jewellery (World Gold Council, 1996b). The 1980s saw consumer demand for gold jewellery soar, first in the developed markets of the United States, Japan and Europe (France, Germany, Italy and the United Kingdom), and then broadening geographically to include the developing countries of the Indian sub-continent, Far East, and Middle East. Several factors accounted for the rapid expansion in jewellery demand world-wide, among them the influence of the World Gold Council, and, in the case of developing countries, the cultural significance of gold and the opening up of markets previously closed to trading in gold and gold jewellery (World Gold Council, 1996b). The greater accessibility of jewellery to the consumer has also been dictated by changes in societal trends, the higher incidence of women entering the employment market, fashion dictates, and the emergence of new channels of distribution. To meet these new demand trends the industry has had to restructure and become more marketing orientated (Kiron Consult, 2000).

3.2.2 Restructuring of the industry to meet changes in demand

Until the early 1980s the jewellery industry could be described as a highly fragmented, cottage style industry with very few large manufacturing units employing modern technology and only a handful of retail chains applying modern marketing techniques (Management Horizons, 1981). One study produced in 1981 of gold jewellery marketing and distribution channels in the United States and principal European markets confirmed that speciality jewellery stores were mostly small, family

operated businesses run more on the basis of personal benefit than professional management.

The economic recession in the early 1980s had a severe impact on jewellery sales worldwide. Many of the independent jewellery businesses were unable to survive the effects of the recession in the early 1980s, but others adapted by resorting to mass production and new marketing techniques. The tighter market circumstances inspired a shift in emphasis from low volume, high mark-ups associated with exclusive retail stores to higher volume, low mark-up sales through large chain stores and catalogue showrooms (Management Horizons, 1981). In the USA, the number of retail jewellery chains increased dramatically, primarily due to the explosive growth of regional shopping malls. The independent retailer, plagued by declining sales volumes, was unable to move to the new precincts and was either forced out of business, or taken over by the chains (Du Boulay, 1984).

The trend towards consolidation in the jewellery industry was at first noticeable in North America but soon spread to Europe in the wake of the new taxes on jewellery.[1] In the UK, France and Germany, catalogue showrooms, large jewellery chains, department stores, and mail order companies made inroads into the market at the expense of the traditional retail specialists. These non-traditional retail outlets had the effect of broadening the consumer base and popularizing carat gold jewellery through an emphasis on lower prices, and lighter, more fashion oriented items (Management Horizons, 1981).

On the manufacturing side, the fight for market share, together with local economic and financial problems, also led to industry restructuring as many small and less mechanised factories closed down and others were absorbed by their larger counterparts. Inventory management became critical at all levels of business and retailers were steered into buying smaller, more frequent quantities of jewellery from fewer sources. This caused various problems for manufacturers who, unable to make long-term forecasts of demand, either had to support workers during slow periods, or face enormous pressure on limited production facilities to meet last minute orders. This had the effect of further rationalising the manufacturing side, with mergers and take-overs becoming common place and those unable to cope being forced out of business. Another effect is that the traditional roles of supplier, manufacturer and retailer became blurred, especially in the United States and Japan. Refiners and semi-fabricators whose business was to provide basic sheet, wire and

casting materials, ventured into finished jewellery, often in competition with their clients. By the same token, many retail chains acquired their own manufacturing facilities and developed direct access to sources of diamonds, pearls and coloured stones. The result of this merging of activities was to diminish the traditional role of the wholesaler, as some manufacturers opted to supply retailers directly (Du Boulay, 1984).

The growth of non-traditional jewellery outlets alerted the jewellery industry to two important elements – the importance of fashion and of marketing. Typically, the traditional stores did not deviate from the classic, conservative jewellery designs they were accustomed to, being reluctant to accept the risks associated with carrying fashion merchandise. Under the new competitive conditions, fashion became an important marketing tool for jewellery, especially as a younger, more fashion conscious audience was targeted. Non-traditional retailers whose line of lower caratage, lighter goods was specifically intended for a younger market, deliberately followed and adopted new fashion trends, as this was their key element to success. Fashion merchandise also had a faster turnover, which was consistent with non-traditional retailers' method of operation. Alongside using fashion as a determinant of jewellery designs, non-traditional retailers deviated from the norm in their aggressive approach to marketing. Traditional jewellers tended to shy away from direct marketing; most manufacturers did not have the means to support substantial advertising programmes and specialist retailers limited their advertising to special occasions and for endorsing their own individual identity (Management Horizons, 1981). Up until the 1970s, it was estimated that less than R1million was spent in Europe on the promotion of gold jewellery.[2] By contrast, the new, larger-scale retailers relied on aggressive marketing techniques to achieve their higher turnover requirements.

The role of marketing in the jewellery industry, albeit already recognized by the new breed of retailers in the sector, became more established with the advent of a new marketing organisation specific to the gold industry, namely Intergold. This was established to directly promote jewellery sales which until now had largely occurred with little to no promotional stimulation.

3.2.3 The impact of Intergold and the World Gold Council on jewellery demand

Intergold was established as the marketing arm of the gold producers in South Africa, represented by the Chamber of Mines. The need to promote gold usage to ensure

the continued development of the gold industry had been recognised as far back as 1955 when the Chamber constituted a Sub-Committee on the Disposal of Gold with the aim of promoting the monetary role of gold. The idea of a broader marketing approach to encompass other applications of the metal was not considered as the market position of gold was unknown at the time. It was not until the annual surveys of the gold market commenced in 1969 that the primary importance of gold in jewellery, and its secondary importance as an investment medium, was understood and appreciated. The more informed understanding of gold's potential in the marketplace coincided with the rising price of gold. In 1971 this prompted the decision to establish Intergold to promote gold use in all market segments but specifically jewellery. Initially, attention was focused on Europe, the region that demonstrated the highest demand for gold jewellery, but the activities of the organisation soon broadened to other markets with high gold demand potential.[3] Thus, the branch offices that were established in Europe were augmented by the opening of offices in North America and Hong Kong in 1976 and 1979 respectively. By 1982 the geographical expansion of Intergold had extended to South America, Japan, and the Middle East.[4]

Consistent with the objective of maximising gold consumption in jewellery, Intergold became involved in a variety of activities centred on interacting with and sponsoring jewellery organisations, educating the trade at manufacturing and retail levels, participation in exhibitions and trade fairs, stimulating designs, advertising for the trade, market research, and press and public relations. The ultimate concern of Intergold was to stimulate volume sales of jewellery. This objective did not necessarily accord with retailers' requirements of maximising turnover and profit in monetary terms. Whereas Intergold would encourage lower mark-ups to induce more unit sales, retailers often preferred to sell fewer items at higher prices to maintain or increase their profit levels. The organisation's intervention in the jewellery market was therefore not entirely welcomed by the trade. Although many of the jewellers and industry organisations with which Intergold established contact appreciated the organisation's role in the trade and were willing to co-operate with the organisation, there were others more suspicious and apprehensive about any outside intervention. Jewellers did not easily tolerate involvement from entities outside the industry, as noted by Intergold in its observation that "there exists a reluctance to change in the jewellery industry unparalleled in any other field of consumer marketing, brought about largely as a result of the financial success of individual operators".[5]

Intergold commenced its operations by co-operating with De Beers Consolidated Mines in an advertising campaign in North America, Europe, Australia and South Africa. Intergold and De Beers were among the first organisations to undertake extensive analysis of the jewellery market by instituting regular quantitative and qualitative research to determine the extent of the market, the structure of the trade at manufacturing, wholesale and retail levels, consumer attitudes towards jewellery and patterns of jewellery consumption, and to provide information aimed at refining marketing strategies and enhancing sales of gold and diamond jewellery. It should be noted that Intergold initially included South Africa in its target markets despite the low incidence of jewellery consumption and production in the country as compared to other markets. As will be discussed in the ensuing chapters, both Intergold and De Beers were instrumental in establishing the Jewellery Council of South Africa, and the two organisations worked closely with the local industry to ensure its development (Chapter Six).

Intergold existed until 1985/1986, when it was superceded by the World Gold Council which was established in Geneva in 1987. The World Gold Council (WGC) was to fulfill the same functions as Intergold. One difference, however, was that whilst Intergold had been supported entirely by the South African gold producers, membership of the WGC was extended to include large gold producers outside South Africa, including the USA, Canada and Australia.[6] By 1989, two years after its establishment, membership of the Council consisted of 74 gold producers from seven countries throughout the world, of which 34 producers were from South Africa. The promotional budget of the Council stemmed from the mining companies and from joint promotion initiatives with a variety of trade partners such as jewellery retailers, manufacturers, banks and mints (World Gold Council, 1993a).

The Council launched its operations in the late 1980s through nine offices in countries that, at the time, represented one-third of global gold demand, *viz*., the USA, Japan, and the major European markets. (World Gold Council, 1993a). For the next three to four years the Council concentrated its activities in these markets with notable results as, in comparison with those developed countries not covered by the Council, jewellery sales in the targeted markets grew by 35 percent in the period 1986 and 1990 versus a 14 percent growth in the remaining developed world (World Gold Council, 1990). From 1990, the Council changed its prioritisation of target markets from the developed countries to the developing countries, following the shift

in jewellery demand. By 1993 the Council's representation had expanded to 24 countries which together accounted for 75 percent of gold offtake (World Gold Council, 1993a). Given that the challenges to jewellery consumption and fabrication in many of the developing countries were rooted in state policies governing trade in precious metals, the Council broadened its activities beyond advertising and promotion to include lobbying for the removal of fiscal or legislative barriers to the distribution of gold. It is important to realise that the Council's activities in the Asian countries assisted in propelling them to the forefront of gold jewellery production and consumption, but it precipitated rather than generated their growth in this area.

3.3 Global trends in jewellery production and consumption: 1968-2003

In this section an analysis is presented of the changing international patterns of production and consumption of jewellery in the nearly forty year period from 1968-2004. Key source materials for this analysis are the annual gold market survey reports published by Gold Fields Mineral Services (GFMS), various World Gold Council market and consumer studies and conference reports, and the Platinum and Platinum Review reports published annually by Johnson Matthey. *

3.3.1 The influence of the gold price and economic factors on production and consumption trends

The current profile of the dominant jewellery producing and consuming countries differs to the situation of about 30 years ago when the greatest demand for jewellery was accounted for by a handful of markets in the developed world, namely Italy, Germany, France, the UK, USA and Japan. There was very little knowledge of the market position of gold prior to 1968/1969, given that there was no comprehensive study of world-wide gold use up until that time. Indeed, the findings of "Gold 1969", the first of a series of annual reports on the gold market by Consolidated Gold Fields, were received with skepticism and disbelief by many who were under the assumption that less than 20 percent of gold production in the "free" world was used industrially**.[7] On the contrary, the jewellery sector even then absorbed more gold than the other industrial applications for the metal; for the period 1970 to 1979, gold offtake for jewellery fabrication averaged 60 percent.[8] Since that time fabrication demand has gone through several cycles.

* The GFMS gold survey reports are the source for figs 3.1 – 3.14

** industrial applications for gold are in the jewellery, electronics, and dentistry fields

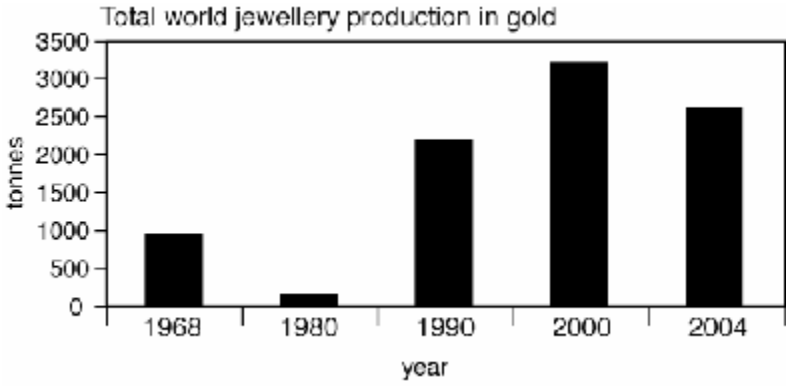


Fig.3.1 Total world gold jewellery production, 1968-2004

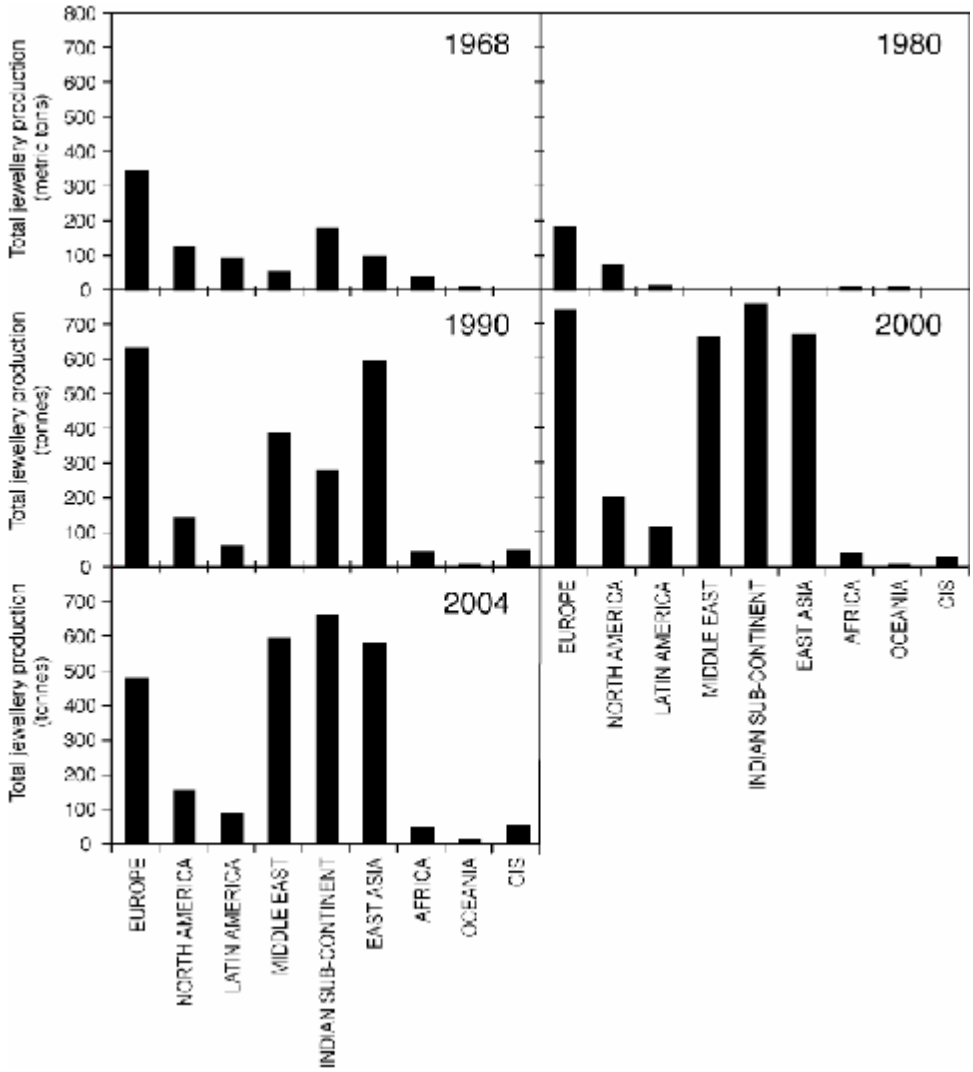


Fig.3.2 World gold jewellery production on a regional basis

Fig.3.1 shows the recorded total global production for gold jewellery from 1968 – 2004. it should be noted that gold price increases in 1973 and 1974, at a time when the major Western economies were experiencing one of the deepest recessions since World War 1, caused the production of gold jewellery to plummet (Figs. 3.1). In those two years the gold price soared to just under $200 an ounce[9], a record level in comparison to previous years when the price had vacillated between $35 and $40 an ounce.[10] The drop in jewellery fabrication in 1974 to 225 tons, from a figure of over 1000 tons in each of the years 1970, 1971 and 1972, led to bankruptcies, factory shut-downs, shortened working hours and staff lay-offs in the jewellery industry.[11] The industry quickly recovered from this slump, aided by a significant decline in the gold price, and the end of the depression. Another factor which assisted in equilibrating jewellery demand at this time was the tremendous surge in gold jewellery manufacture in the Middle East, which began around 1975 under the impact of vastly increased oil revenues. This development has been described as the single most important influence on world gold markets in the years since 1974 (Glynn, 1978).

By 1976 gold jewellery production already approximated its earlier levels prior to the price hikes, and between 1974 and 1980, consumer expenditure for gold jewellery in Europe quadrupled.[12] In 1980, however, high gold prices that reached a peak of $850, combined with severe economic recession in North America and Europe, once more plunged jewellery consumption to new depths, with repercussions for the structure of the industry in the industrialised world. New gold for jewellery fabrication, which had surpassed the thousand ton level in 1978, fell by as much as 90 percent to 128 tons by 1980 (Fig.3.1) (Du Boulay, 1983). Low disposable incomes and high unemployment occasioned by economic instability not only limited retail sales of jewellery but the strength of the US dollar pushed up the gold price, expressed in local currency terms, to extremely high levels, thereby inducing a wave of dishoarding (the selling back of old jewellery to the market), in countries such as Spain and Italy (Du Boulay, 1985).

The crisis at the beginning of the 1980s led to a contraction of the jewellery industry through company closures and downscaling, consequently slowing down the industry to below 50 percent of its operating level.[13] In the United States, the tight economic circumstances prompted a lowering of jewellery caratage, from the usual 14 carat to 10 carat (Management Horizons, 1981). As already discussed, the trend towards

lower caratage jewellery was accompanied by a change in the structure of the industry with the advent of discount stores and other, non-traditional jewellery outlets.

The changing international patterns of production of jewellery are shown on a regional basis on Figs. 3.2 and 3.3. On Figs. 3.4 – 3.8 are shown on individual country level the volume of jewellery production for the period 1968 – 2004.

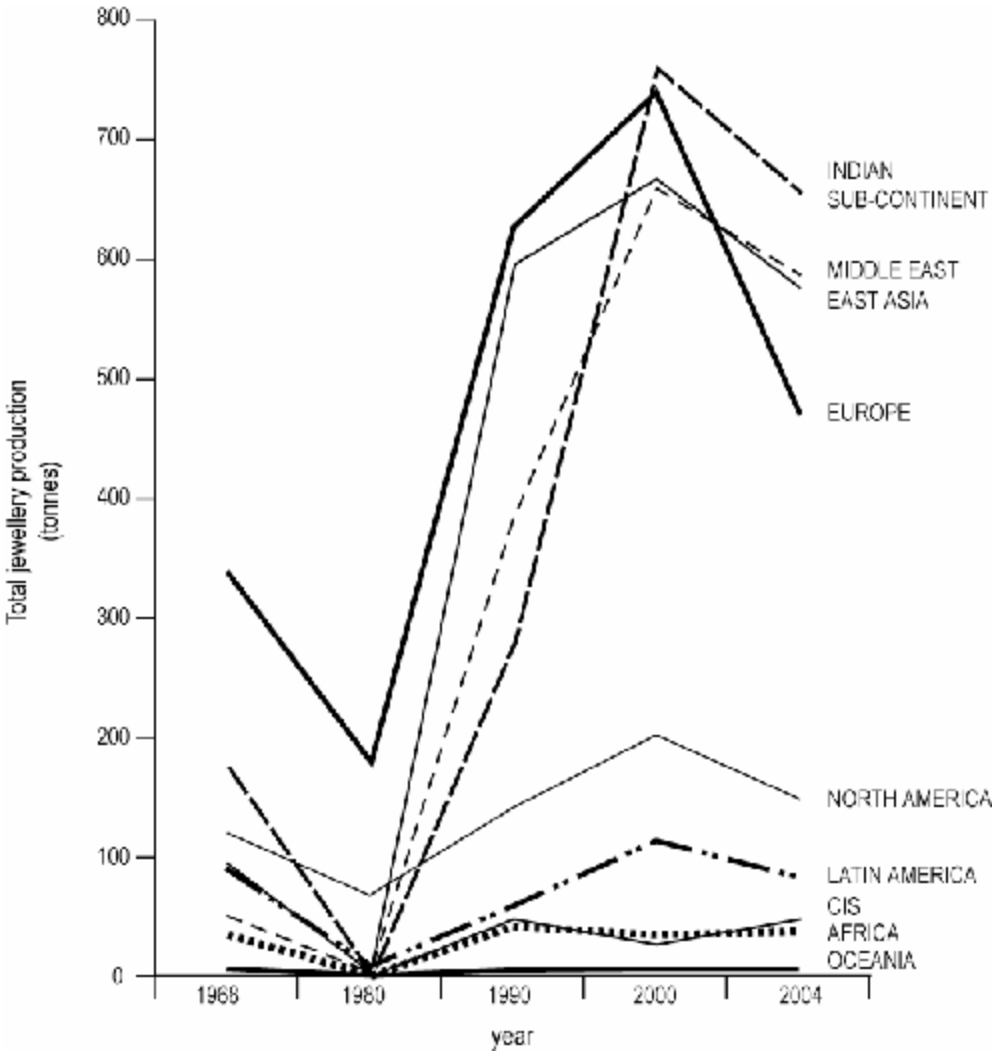


Fig. 3.3 World gold jewellery production at the regional level, 1968-2004

Taken together Figs. 3.2 – 3.8 demonstrate certain important changes or shifts as well as certain constraints in global jewellery production. Of particular significance at the regional scale is the growth of new production spaces in East Asia, India and the Middle East to challenge the traditional domain of Europe. Also of significance for this analysis is the limited potential of Africa in the global geography of jewellery manufacturing (Figs 3.2 and 3.3).

At the more fine-grained degree level of analysis, from the perspective of individual countries, Figs. 3.4 – 3.8 indicate considerable changes in patterns of global jewellery manufacture. Fig. 3.4 shows that in 1968 India, Italy and the USA were the leading centres of production. Three decades later the relative decline of production in the USA is observed with India and Italy retaining global dominance in production. Of significance is, however, the rise of new production spaces in Turkey, the United Arab Emirates (UAE) and emerging China. It is significant to observe South Africa's minor position in the global map of jewellery production.

The following discussion seeks to highlight some of the key factors that affect the changing global geography of jewellery production.

3.3.2 The changing pattern of global jewellery production

One of the main elements influencing the pattern of global jewellery production was the trend in the industry towards mass production techniques and more aggressive marketing. These trends were, to a large extent, a reflection of the industry's growing international orientation as competition for export orders intensified. Between 1980 and 1981 jewellery consumption almost doubled, mainly due to increased demand for jewellery in the Middle and Far East. In 1981 the net use of gold for jewellery in the Middle Eastern region was 100 tons, in marked contrast to the 89 tons dishoarded the previous year (Du Boulay, 1982). In both the Middle and Far East jewellery is bought as the main form of saving and investment, and the falling gold price post-1980 enabled buyers to replace the jewellery they had sold during the peak prices of 1980. Italy was by far the main supplier of exports to the developing world, but demand was also met by Japan, the United States, and other Western European countries. Throughout the 1980s, increased jewellery production in Western Europe was primarily in response to export demand, rather than for domestic sales (Du Boulay, 1983; Milling-Stanley and Green, 1986).

As demand for jewellery consolidated in Western Europe, so it increased in the South East Asian countries. From the mid-1980s India, Thailand, Taiwan and Hong Kong started emerging as important jewellery fabricating centres (Milling-Stanley and Green, 1986; Milling-Stanley, 1989; Murray, *et al*, 1990). In the period 1986 to 1992, jewellery production in the Middle and Far East increased by 120 and 250 percent respectively. By comparison, the increase in the developed countries for the same period was 50 percent (Murray, *et al*, 1993; 1994). One of the most important factors enabling the increased production in the developing world was the gradual

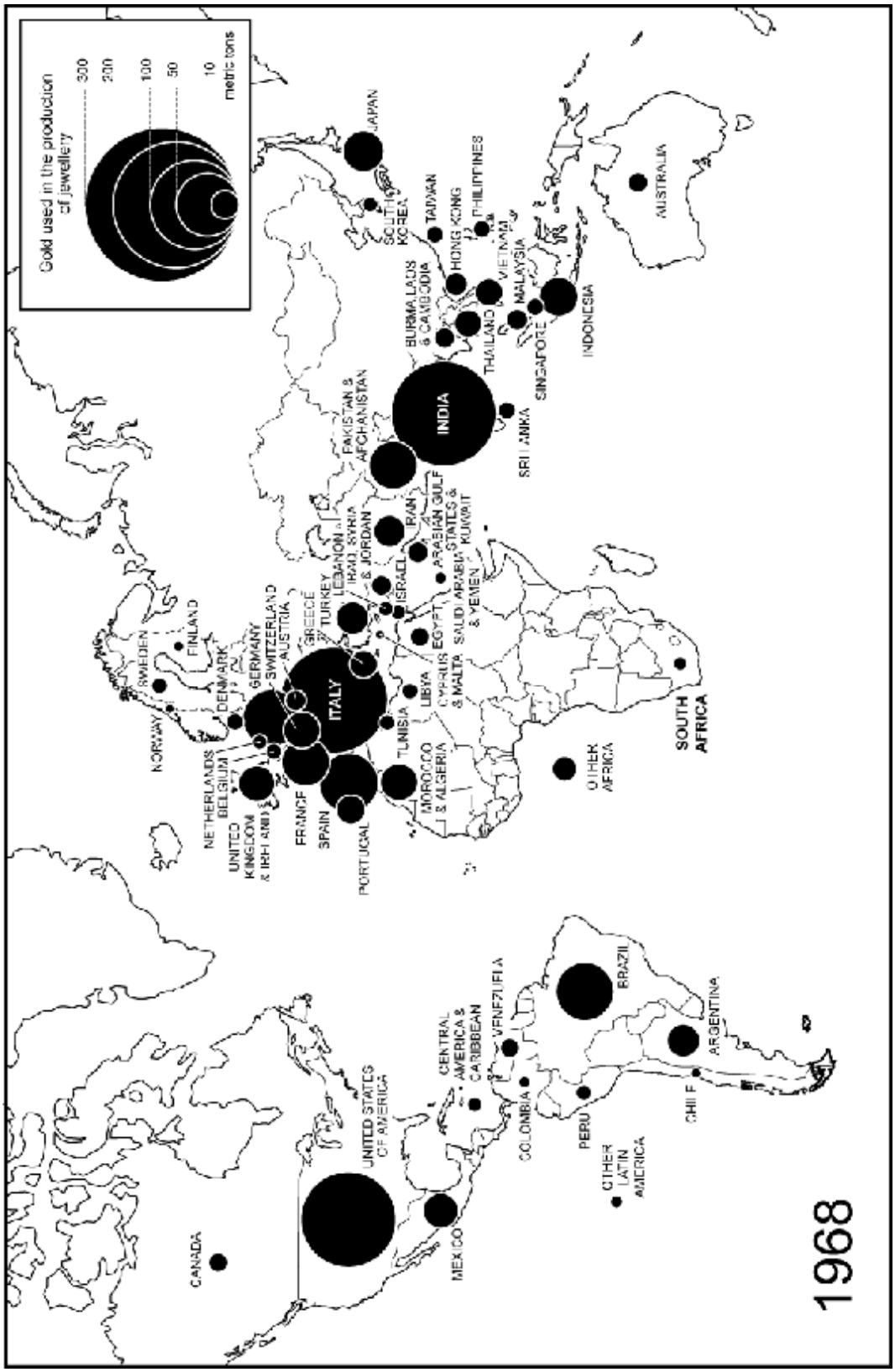


Fig. 3.4 World gold jewellery production at the country level, *1968*

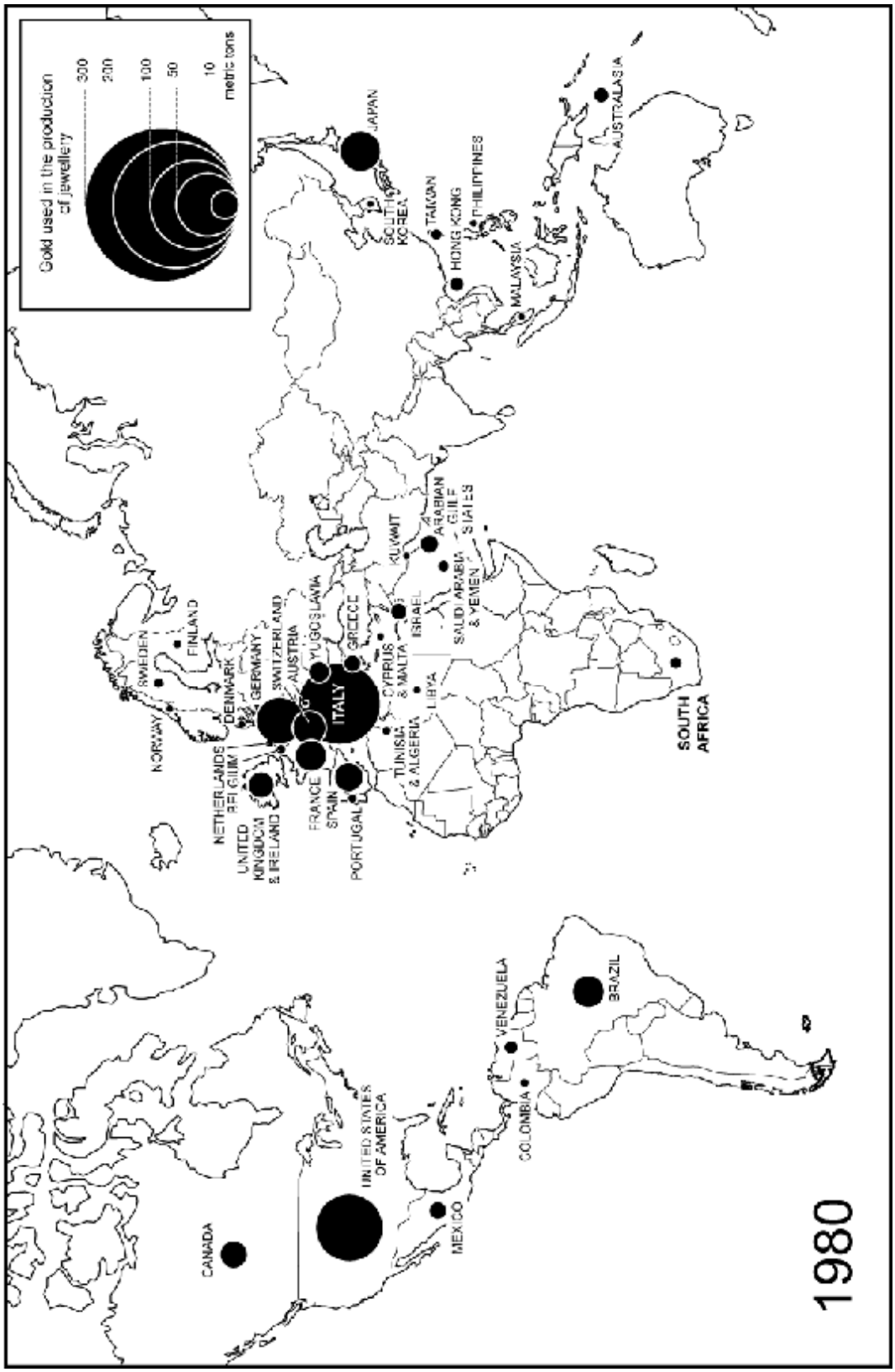


Fig. 3.5 World gold jewellery production at the country level, *1980*

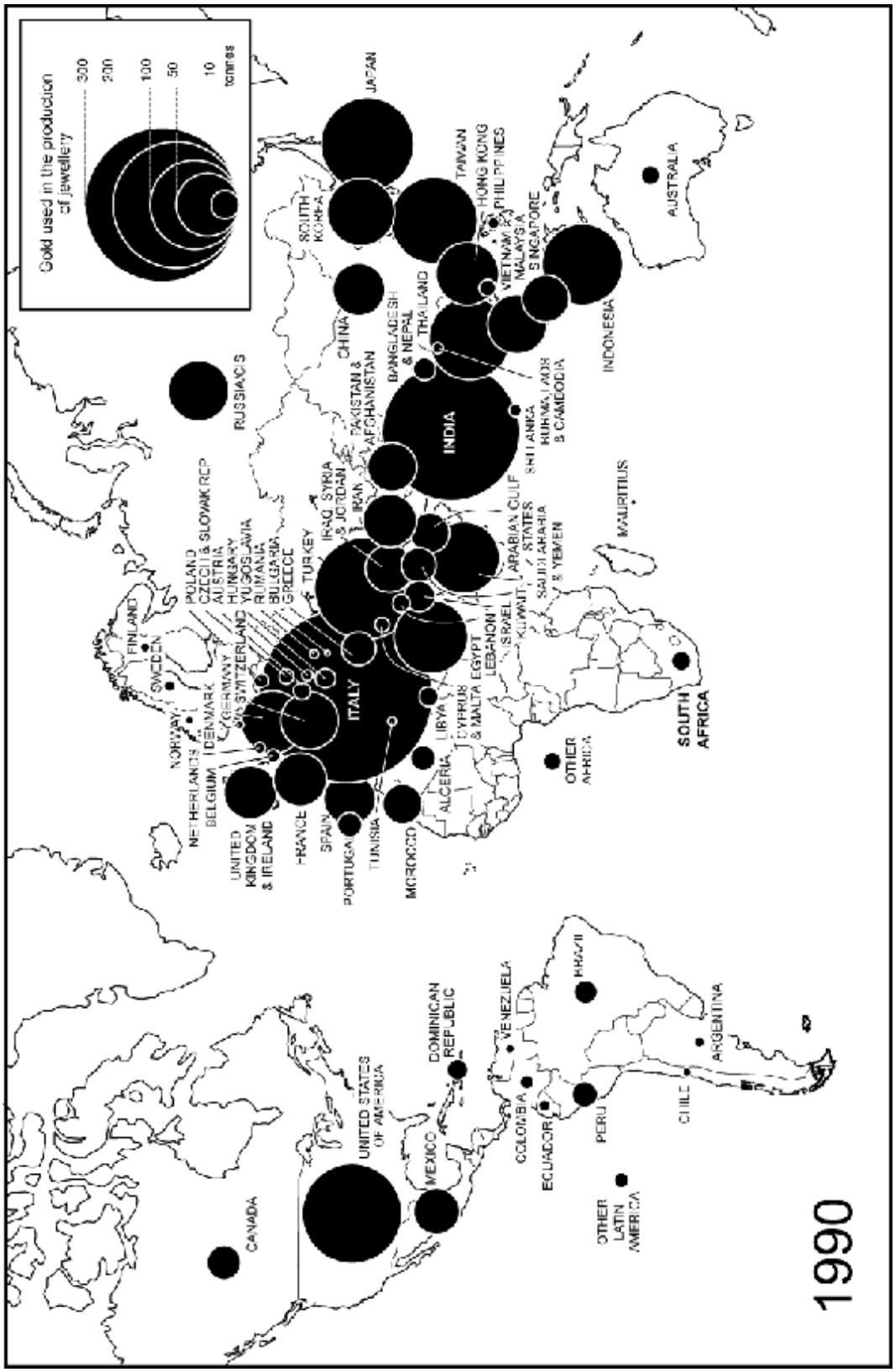


Fig. 3.6 World gold jewellery production at the country level, *1990*

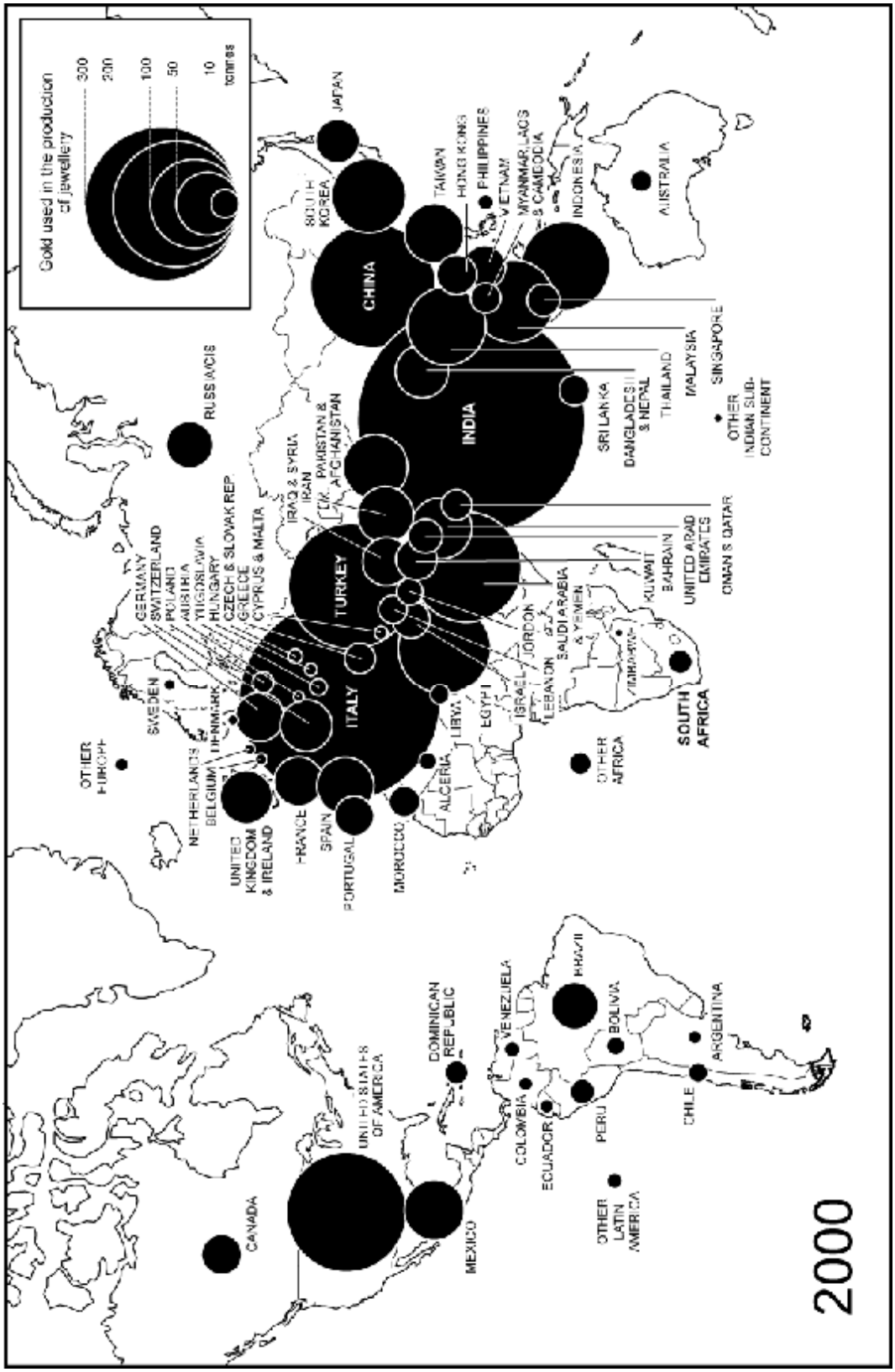


Fig. 3.7 World gold jewellery production at the country level, *2000*

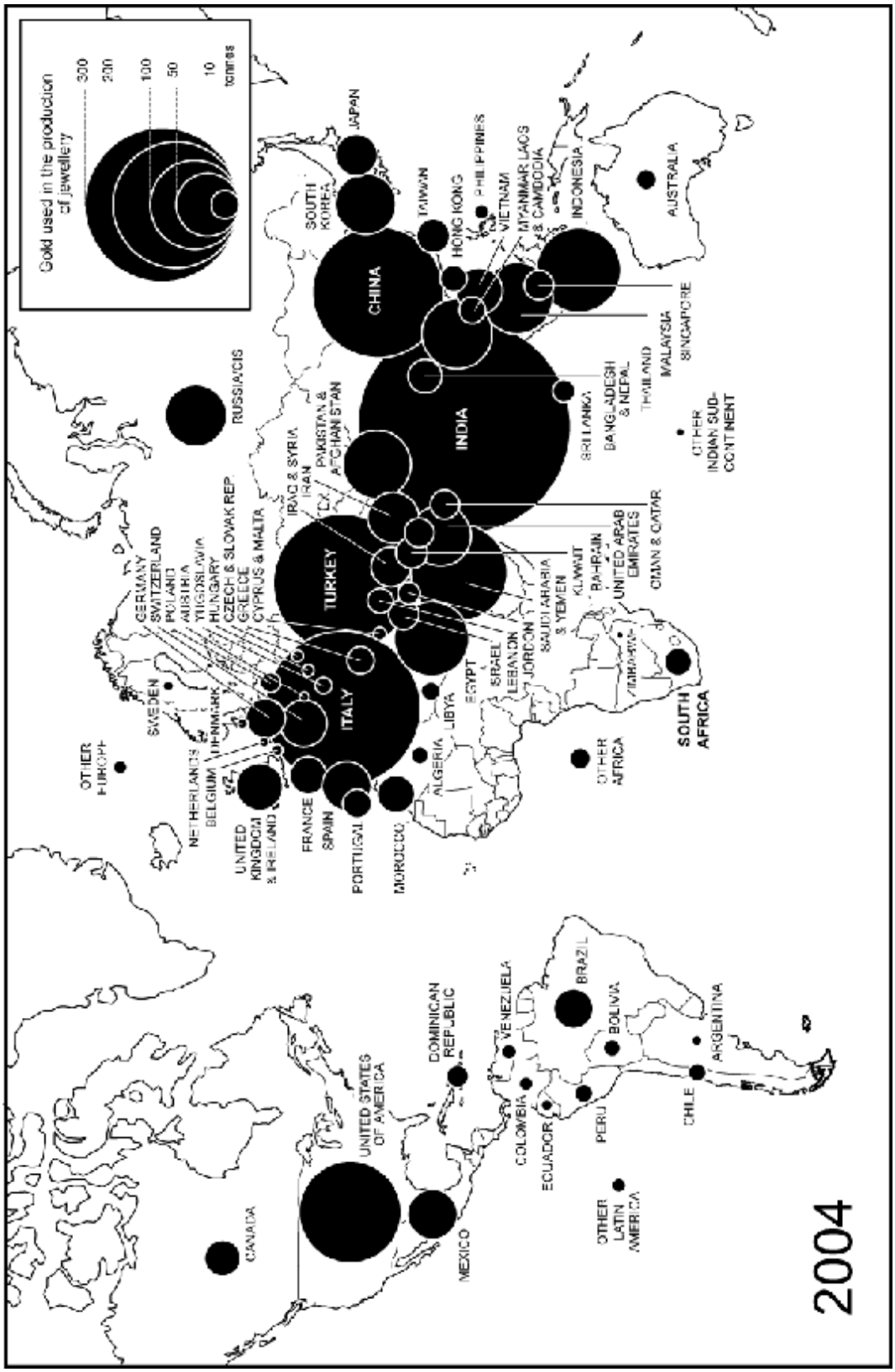


Fig. 3.8 World gold jewellery production at the country level, *2004*

dismantling of restrictive laws that governed gold ownership and trading in many of these countries, most notably Turkey and India. Together with rising personal incomes, this liberalisation made gold more accessible to a larger consumer market. The elements intrinsic to the Middle East and Asian countries that led to their growth in the jewellery trade will now be examined.

3.3.2.1 *Factors underpinning the growth of the jewellery industry in the Middle East and Asian countries*

The most important jewellery markets in the Middle East are Saudi Arabia, Turkey, and the Gulf States. As mentioned already, increased incomes from oil revenues led to a surge in jewellery manufacturing activity in this region which initially relied heavily on imported jewellery from Italy. In Saudi Arabia, manufacturing operations started in Bahrain and Dubai, where the most competitive fabrication rates applied, and these states developed as important jewellery manufacturing centres for the whole of the Gulf region (Du Boulay, 1982). High purity items of mainly 21 and 22 carat but also some of 18 carat, are preferred in this region and are purchased as a basic form of saving. As such, demand for jewellery is extremely price sensitive and, just as low gold prices encourage buying, so a high gold price leads to dishoarding, or selling back of gold on the market. The introduction of import duties in Saudi Arabia from the mid-1980s ensured the growth of local manufacturing capacity through the establishment of numerous modern jewellery factories (Murray, *et al*, 1993). Nevertheless, demand for jewellery is such that the country continues to be a net importer of jewellery, mostly through unofficial channels (Murray, *et al*, 1996).

In the Gulf States, too, jewellery production has expanded as a result of import duties. As in the case of Saudi Arabia, local manufacturing has not deterred the high level of imports which are smuggled into the country (World Gold Council, undated). A notable feature of the Gulf States is the high incidence of expatriate Indian workers who outnumber local Arab nationals. Since 1991 a number of these expatriates have set up jewellery manufacturing workshops in the Emirates, supplying the local Indian community as well as exporting to India (Murray, *et al.*, 1993). Accordingly, Dubai, aside from its manufacturing significance, has also become increasingly important as a distribution centre for jewellery.

Turkey has always played a significant role in the jewellery trade. Gold forms an integral part of Turkish culture and is highly valued as an investment medium. For all the country's propensity for accumulating gold, however, gold imports into Turkey

were illegal for many years, giving rise to a thriving underground gold market. In 1982, government took the first steps to liberalize regulations applying to the import of bullion, and the export of manufactured gold items (Du Boulay, 1992). The more relaxed gold trading conditions fuelled fabrication for domestic use and also for exports, as Turkey's location made it a natural supplier of jewellery products to Eastern European countries and other bordering nations (Murray, *et al.*, 1991). Much of these exports were via tourists and also through organised, unofficial channels which could account for as much as 50 percent of total sales (Murray, *et al.*, 1993).

Under improved conditions, the Turkish market for jewellery has moved beyond official sales to local and foreign consumers to a thriving informal trade known as "the suitcase trade". This involves Russian and, to a lesser extent, Eastern European visitors who purchase mostly chain at a semi-wholesale level and take it back to their home country for resale. It is estimated that such business can account for as much as 10 tons of domestic jewellery sales. Formal jewellery exports from Turkey are destined mainly to Germany and the United States which together account for 80 percent of Turkey's formal exports (Murray, *et al*., 1997; Murray, *et al*., 1998).

India is the world's largest producer and consumer of gold jewellery. This position was attained in the last two decades, and more specifically in the last decade (Figs.3.5-3.7). This is a remarkable feat by any standards but especially given the restrictive policy that constrained India's gold and jewellery market for many years. The high profile nature of India's jewellery sector is rooted in the role of gold in the country's culture, tradition, and religious beliefs, as well as its importance in the rural economy. Religious festivals and weddings, through their required displays of wealth and prosperity in the form of gold, buoy demand for the metal. In addition, India's agricultural economy is heavily reliant on gold as security. Farmers' profits are rarely channeled into anything other than gold or silver. For this reason, the state of the monsoon is critical to the subsequent level of demand as adequate rains ensure good crops, the profits from which are then used for gold purchases. In the same vein, government interventions to boost the rural economy also indirectly influence the gold market. Gold purchases in rural economies are for security, dowries, and religious functions and rites. Moreover, gold is even more important as an investment alternative to banks which are still sparsely represented in many agricultural districts (Mishra, 1993).

In light of the significance of gold in Indian life it is paradoxical that for almost 30 years, gold trading in India was strictly regulated by the Gold Control Act. Under this system, imports were curbed and exorbitant duties and tariffs were applied to luxury goods, including gold. Trading in gold was severely restricted and the only recourse to owning gold, therefore, was as jewellery. Hence, investment in gold became synonymous with the purchase of the traditional 22 carat hand-made jewellery for which India is renowned (Milling-Stanley, 1989). The curbs on gold trading did little to stem the demand for gold which was met through unofficial supplies (Mishra, 1993). It was not until 1990 that the government's attitude to gold changed, with the gradual introduction of reformist policies.

The deregulation of the gold market, which included the removal of restrictions on the issue of licences to goldsmiths, led to a sudden mushrooming of the jewellery trade. The flood of new producers in the market brought the number of gold dealers in the country to 20 000, in addition to about 2 million goldsmiths (Murray, *et al*., 1993). Over and above these numbers, it was estimated that there existed an additional three million goldsmiths at the village level, producing both gold and silver jewellery (World Gold Council, 1993a). Most of the goldsmiths worked independently and even the larger units were said to employ no more than ten workers. Only 100 units could be considered as organised industries (Murray, *et al*., 1993). Successive reform measures in 1997, which accelerated the flow of gold into the country, led to a number of initiatives to set up large, machine-based factories for making more Western-styled jewellery. Large scale factory production is more a feature, however, of India's export oriented diamond jewellery sector, linked to the country's diamond polishing business which is the largest in the world (Murray, *et al*., 1997).

As with countries in the Middle East and India, the Far East has a strong affinity for gold jewellery, mostly of 22 and 24 carat purity, which is bound to cultural traditions and valued for its investment potential. The operating conditions in these countries was often very difficult due to legislative restrictions and high taxes, and thus highly efficient parallel channels of jewellery trading developed (Du Boulay, 1993; Murray, *et al*, 1992). It was the demand for 'chuk kam" jewellery in China that ensured the rise to prominence of the countries in the Far East.

"Chuk kam" is of virtually 24 carat gold with low value added and therefore a low fabrication cost to the gold price, sold at a nominal mark up as essentially an investment item (Du Boulay, 1995). Demand for the jewellery was originally met

through Hong Kong but as demand exceeded Hong Kong's own capacity, "chuk kam" was made in Singapore, Malaysia, Thailand and Indonesia, and distributed through Hong Kong (Murray, *et al*, 1991). Subsequently, demand for traditional "chuk kam" jewellery has declined and the South East Asian countries have broadened their export base. Lower labour costs and the expansion of industry towards mass production of machine-made chains and cast jewellery enabled penetration into markets formerly the preserve of other exporting countries, such as Italy. Although Italy still had a competitive edge in terms of design and product quality, countries in the Far East are gradually eroding this advantage, especially with respect to those markets in which price is emphasised over quality, such as the United States (Murray, *et al*., 1996) (Figs. 3.7-3.8).

Of all the countries in Asia, China has emerged as one of the most important markets for jewellery production and consumption. The rise in Chinese jewellery demand not only boosted the manufacturing industries of surrounding countries but also altered the pattern of international jewellery consumption and fabrication. Statistics for gold consumption and production in China did not feature in the Gold Fields Mineral Services gold surveys until 1993, in part because of China's exclusion from the global economy which made it difficult to obtain statistics, but also because its participation in the gold market was minimal; in 1990 gold fabrication in China amounted to only 35 tons (Murray, *et al*., 1993) (Fig.3.5). By 1992 China was the world's largest gold-consuming nation, absorbing over 300 tons of gold (Murray, *et al*., 1993) (Fig.3.10). The unprecedented gold demand in China stimulated local production, encouraging the emergence of many small workshops, and also large factories, which were established with the backing of entrepreneurs in Hong Kong, Singapore, Malaysia and Taiwan. Additionally, as already discussed, increased consumption had spin-off effects for production in neighbouring territories as wholesalers in the mainland and Hong Kong established low cost, secure sources of supply (Murray, *et al*, 1993).

Several factors account for the growth of jewellery fabrication in China over the last ten years. The key factor is the easing of the restrictions on the gold market which have been in force since 1949. Gold is an important strategic resource in China and the basis for foreign currency reserves, so ownership and trading in gold was rigidly controlled by the state. With economic reform measures introduced in 1993, the People's Bank of China lifted some of the restrictions on the jewellery market and released more gold than usually allowed in the form of official allocations (Klapwijk, *et*

al., 1989). Under these influences, jewellery fabrication in China has grown to encompass around 600 jewellery factories, with an additional 24 000 enterprises, both state-owned and private, involved in the industry which is located mainly in Shenzhen and Guangdong Province (Mu, 2000). Since 1998, jewellery production in China has contracted, the result of economic factors and changing consumer preferences (Klapwijk, *et al*, 1999; 2004) (Figs.3.13; 3.14).

Of the developed countries that previously used to lead the world in jewellery production, Italy still remains as one of the foremost jewellery producers (Fig.3.2). Italy's production of over 300 tons of jewellery in 2003 is, however, not destined for local consumption but for the export market which absorbs more than 75 percent of Italian output. The United States is by far the most important market for Italy, accounting for about one-third of the total, with the other export destinations being the United Arab Emirates, neighbouring countries in Europe, Latin America and East Asia (Klapwijk, *et al*., 2002). Aside from official exports, there has been a huge growth in 'unrecorded trade', which is said to have nearly doubled since 1992, and surpasses even the growth in recorded exports (Klapwijk, *et al*., 1999). The advent of the single market in Europe has meant that an increasing percentage of the business conducted with other European countries is not reflected in the official export statistics. In addition to Europe, Latin America and the former CIS (Commonwealth of Independent States) are also destinations for unofficial jewellery exports (Murray, *et al*., 1998).

With the growing importance of developing countries in the jewellery arena, Italy has been losing market share to competing producers with lower production costs and the added competitive advantage of duty free access to the United States. In response to this challenge, some Italian wholesalers have been importing their supplies from outside Italy, usually from countries with General System of Preference (GSP) status to the United States, for re-export to that market. Large manufacturers too, in an effort to retain their international competitiveness, have relocated offshore to exploit lower labour costs and duty free access to the United States. This tendency for geographical relocation is manifested in a growing divergence between fabrication by Italian companies, and fabrication within Italy (Klapwijk, *et al*, 2002).

It is significant that throughout the period of jewellery fabrication under examination, South Africa, despite its mineral resources, does not feature as a major jewellery

producer or consumer. On the contrary, Gold Survey statistics indicate production in South Africa to have been below ten tons for the whole period under review (Figs.3.4-3.8). Although unofficial figures of jewellery production in the country are higher than those depicted by the Gold Surveys, total production is still less than 20 tons. In marked contrast to South Africa, the world's principal jewellery markets, whether those that featured in the 1970s and 1980s or those that currently demonstrate the highest demand for jewellery, are not renowned for their mineral wealth. Other factors, such as the affinity of a country for jewellery consumption and its manufacturing environment, are more important in determining its potential for jewellery production or consumption. The factors that have constrained South Africa from becoming a competitive jewellery producer are discussed in Chapters Five to Seven.

3.3.3 Global patterns in jewellery consumption

The shifting global geography of production must be linked to patterns of changing international geography of jewellery consumption. Detailed data on global jewellery consumption is available only for the period 1989-2004. On fig.3.9 is shown the recorded total world jewellery consumption during that period.

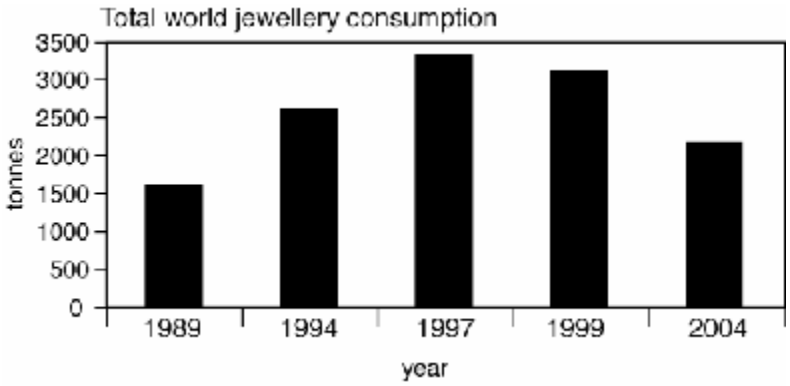


Fig.3.9 Total world jewellery consumption

Figures 3.10-3.14 show the recorded growth of jewellery consumption on an individual country basis for the period 1989-2004. Several key findings emerge from an examination of the changing international spatial patterns of consumption. The most salient feature in 1989 is the importance of the USA and Japan followed by India and Italy as centres o consumption. Of note also is the prominence of several other countries in the league tables of consumption. By 2004 it is apparent that certain shifts have occurred in the global geography of consumption. Of significance is that India remains the most dominant centre of consumption, followed closely by the USA. Between 1989 and 2004 the other trends that can be observed are the

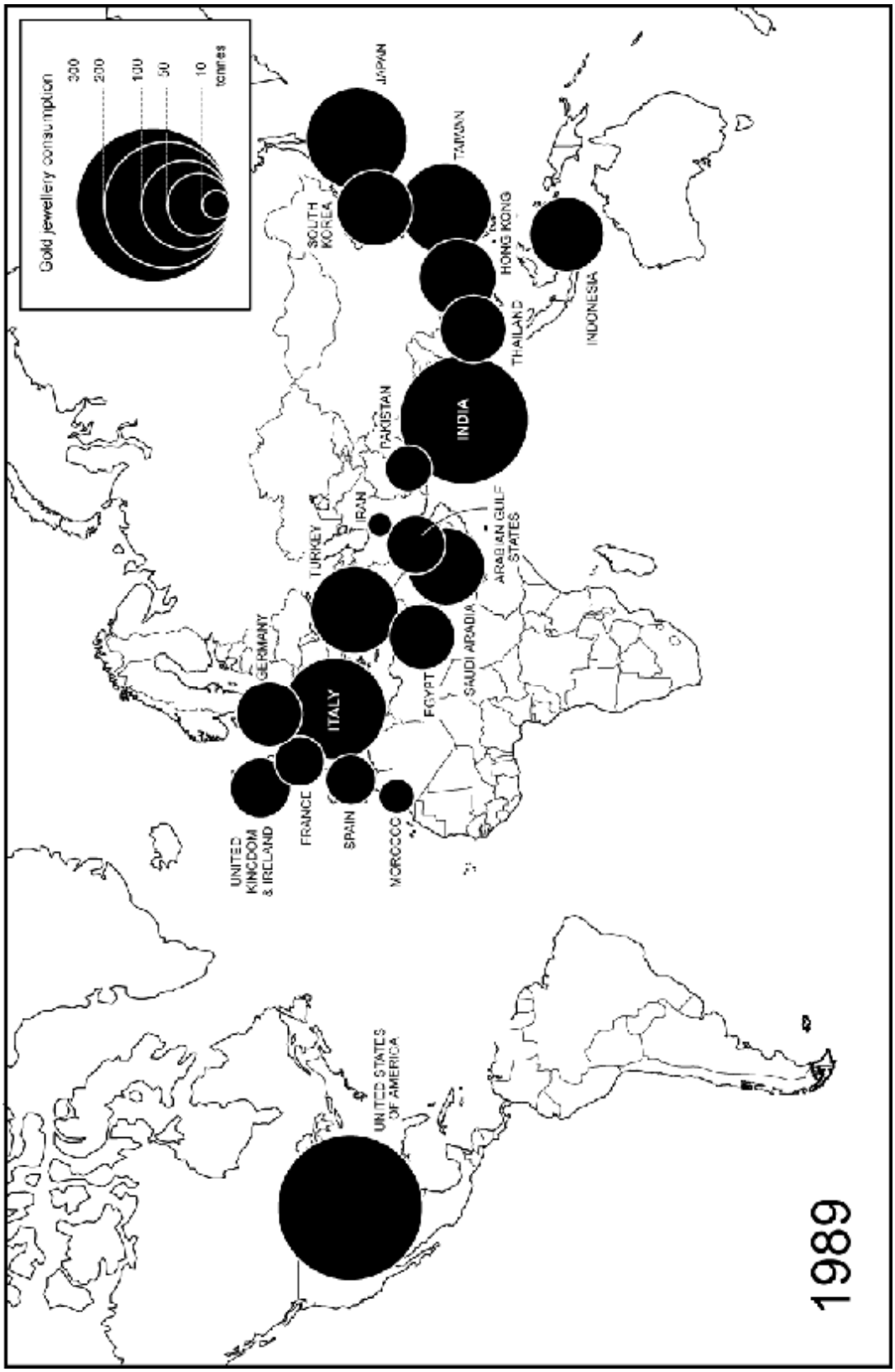


Fig. 3.10 World gold jewellery consumption on an individual country basis, *1989*

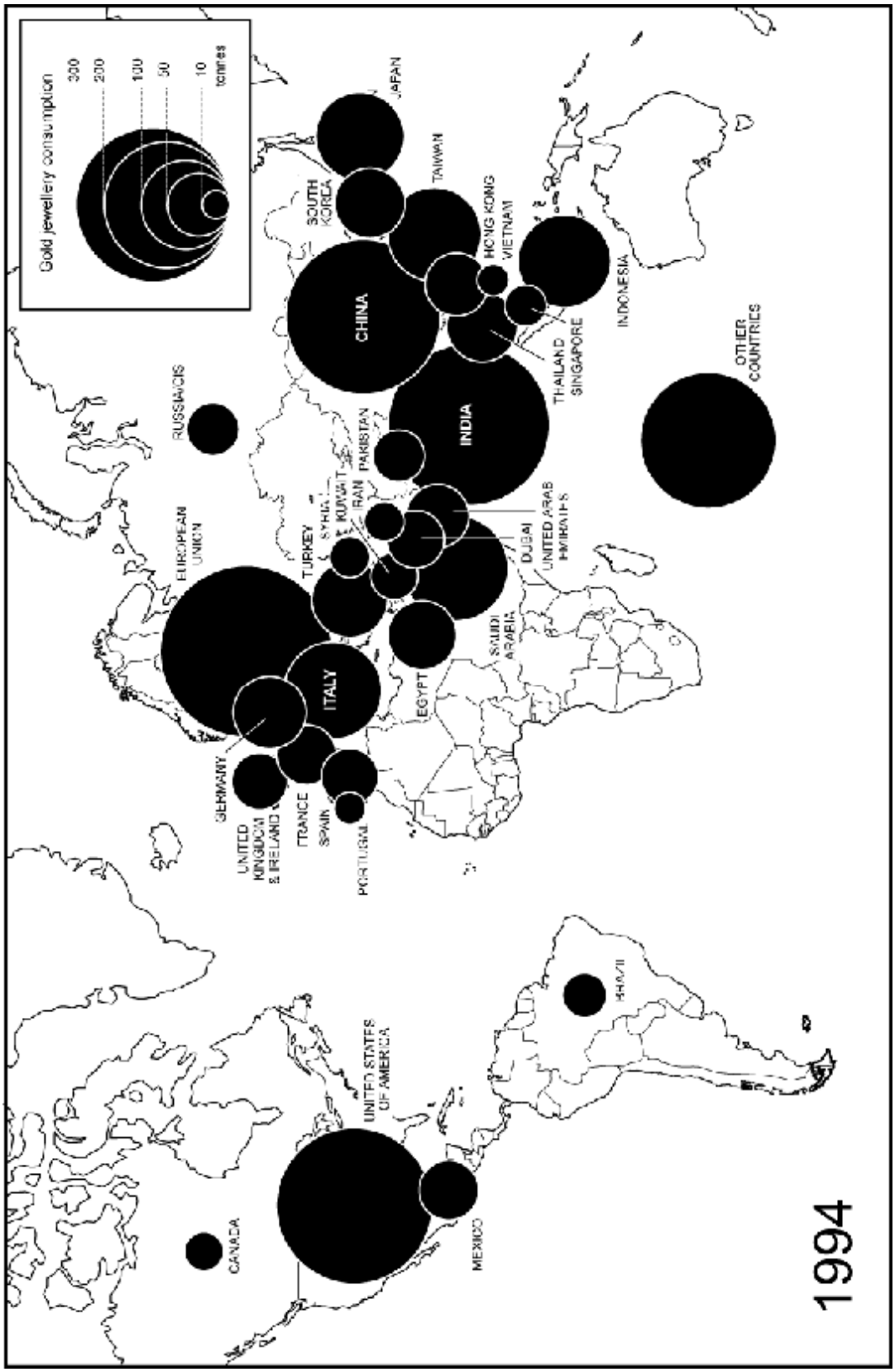


Fig.3.11 World gold jewellery consumption on an individual country basis, *1994*

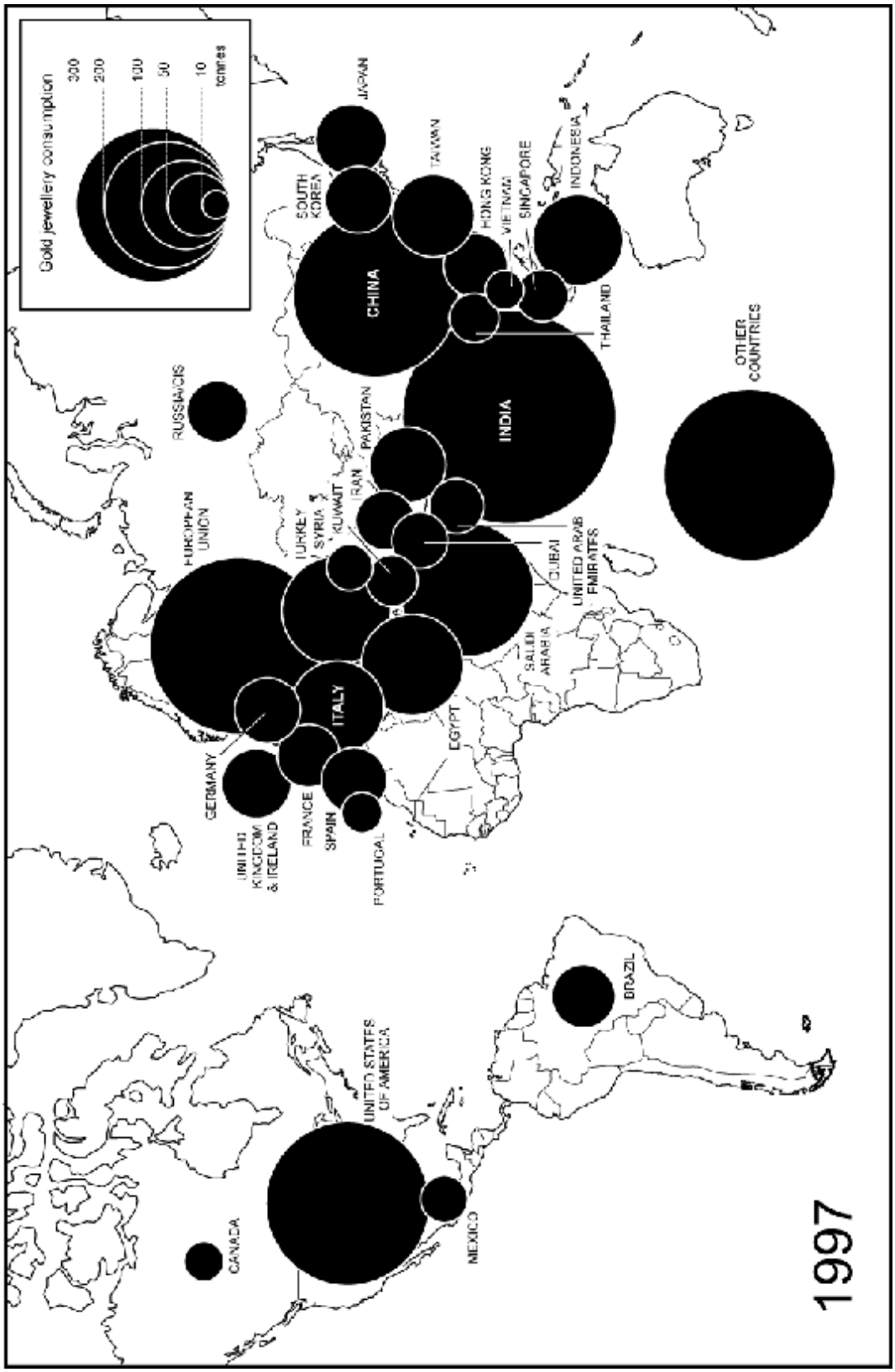


Fig.3.12 World gold jewellery consumption on an individual country basis, *1997*

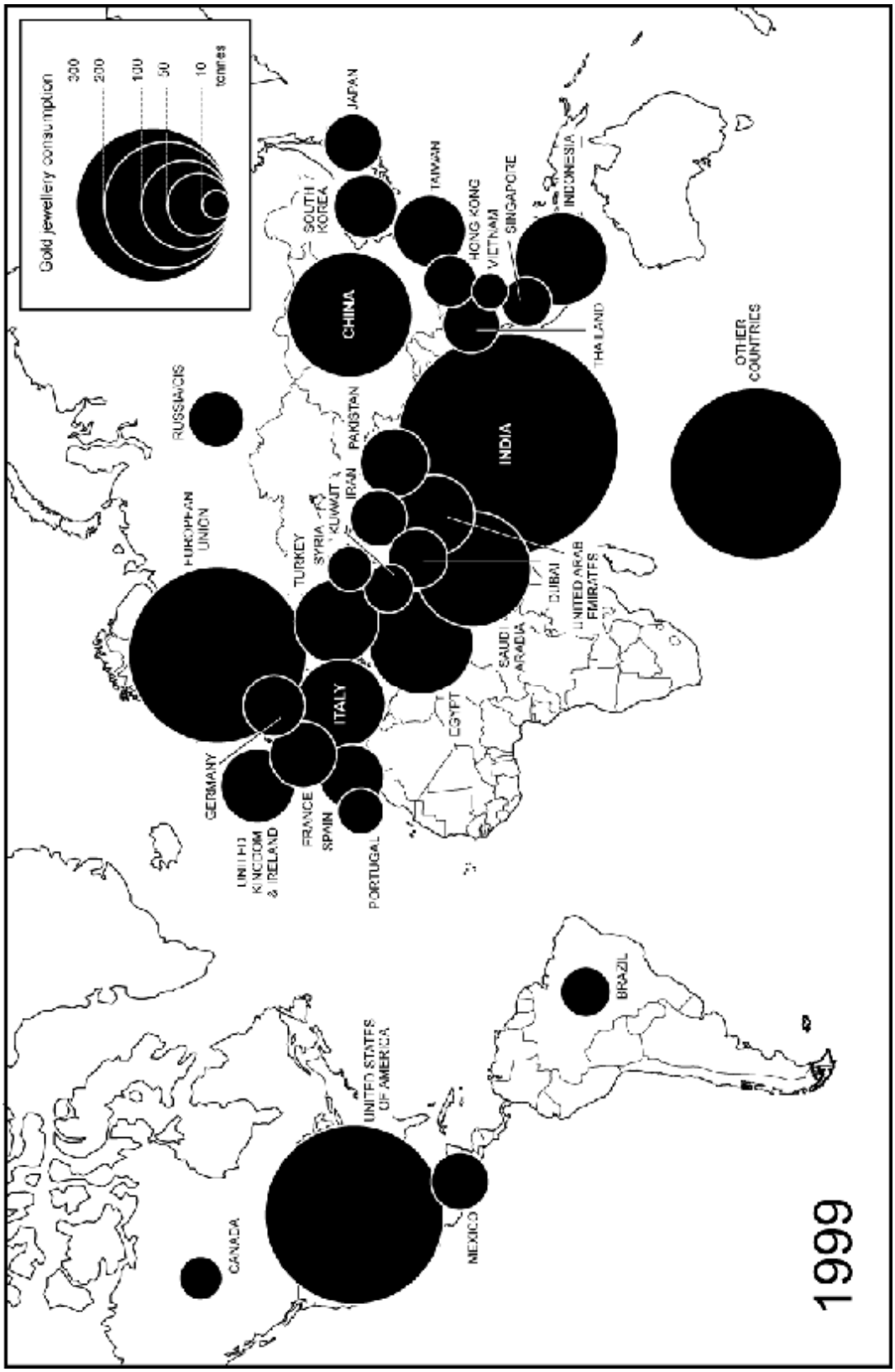


Fig.3.13 World gold jewellery consumption on an individual country basis, *1999*

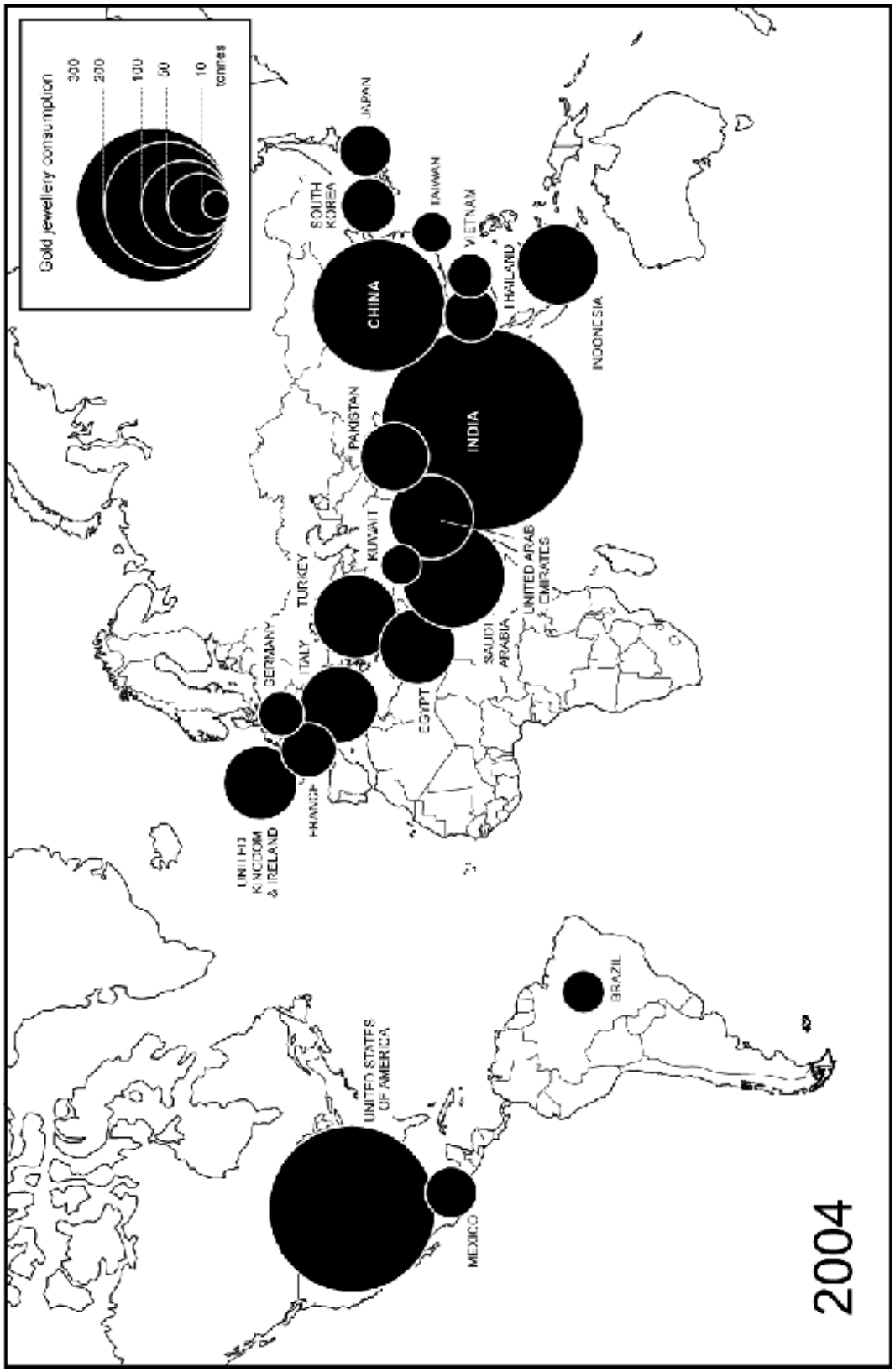


Fig.3.14 World gold jewellery consumption on an individual country basis, *2004*

relative decline of Japan in terms of the consumption of gold jewellery, the dramatic growth of China, the UAE and Saudi Arabia, and the continuing importance of the group of European Union countries.

In terms of jewellery consumption patterns, consumption figures for individual countries did not emerge until the end of the 1980s. One of the reasons for this is that most countries in the past were self-sufficient, with demand satisfied by domestic production (Murray, *et al*, 1993; 1996). This situation began to change in the 1970s when Italian manufacturers of machine-made chain sought growth through exports to foreign markets, especially the United States. Since then, international trade in jewellery steadily increased as new factories were established in countries such as Thailand, Peru and Israel, dedicated to producing for export. Cheaper and more efficient distribution channels also facilitated the rapid growth in international jewellery trade. The result has been a marked distinction between jewellery fabrication and consumption at the individual country level (Murray, *et al*, 1996).

Consumption figures for 2003 reveal the high concentration of demand in few countries. Almost two-thirds of world gold jewellery consumption in 2003 was accounted for by five countries. Since 1994 India has been the world's largest gold consumer. The United States, as the world's largest jewellery importer, ranks second in jewellery consumption, followed by China in third place. The Middle East and Far East are the other major jewellery consuming regions (Figs.3.11-3.14).

As with global production patterns which have altered over time, consumption trends have also diverged from the situation three decades ago. As already discussed, the dominant players in the jewellery market in the early 1970s were the developed countries of Western Europe, Japan and the United States. Of these countries, The United States and Italy are still ranked as principal consumers of jewellery. With local fabrication meeting less than half of the country's demand, the United States is also the world's foremost import market for jewellery.

Gold has a long tradition in the United States, dating back to 1700 when jewellery manufacturing originated in the North-East part of the country, especially the Providence-Attleboro area and New York (Baldridge, 1992). This region still accounts for nearly half of America's carat jewellery manufacturers. Other centres such as Los Angeles, Miami and, more recently, Texas and Louisiana, have developed as important manufacturing nodes. The large and medium-sized manufacturers based

in these centres predominantly serve the national market and are complemented by smaller companies, often with a particular ethnic focus, producing at the local level (Klapwijk*, et al*., 1997).

Jewellery imports to the US assumed growing significance in the 1980s. In world terms, the US share of total imports doubled, from 21 percent to 41 percent by 1985 (United States International Trade Commission, 1987). By 1989, the volume of imports had overtaken local fabrication (Murray, *et al*., 1990). The increased penetration by foreign suppliers was attributable to a decline in the gold price which favoured foreign suppliers with lower labour costs, the appreciation of the dollar, and the emergence of non-traditional foreign suppliers, many of them with the advantage of GSP preferential tariff treatment. Thus, whereas in the early 1980s Italy, Switzerland and Germany had been the principal suppliers to the American market, by the middle of the decade Thailand, Hong Kong and Israel had increased their share of jewellery exports (Murray, *et al*., 1997). Italy is still the pre-eminent supplier but with a diminished share of the market as other, lower cost competitors have asserted their presence in the trade. The extent of the interest in the US market is evident in the number of countries exporting more than one ton of gold jewellery into the region, these having increased from 13 in 1991 to 21 in 1997 (Murray, *et al*., 1998). The more prominent importers, however, number less than 10, these being Italy, India, Turkey and certain of the Far Eastern countries.

More recently there has also been a significant rise in imports from Latin America, reflecting a tendency by US manufacturers to relocate their businesses to countries such as the Dominican Republic, Bolivia, Costa Rica, and Mexico, where they can produce more competitively. Higher US exports are also indicative of the trend towards offshore activity as jewellery parts and semi-manufactured articles are shipped out for re-export as finished pieces back to the US (Murray, *et al*., 1994; 1996). The relocation of industries to outside the US is likely to continue.

Japan was one of the foremost jewellery producing and consuming countries throughout the 1970s and 1980s (Fig.3.10). It ranked as the fourth largest gold jewellery consuming country by the end of the 1980s. With the collapse of the 'bubble economy' at the beginning of the 1990s, sales of high priced products fell precipitously and by 2003 Japan produced only one-third of its jewellery production in 1989, with a concomitant drop in consumption[14] (Fig.3.14). One of the effects of the recession was to cause some manufacturers in Japan to geographically shift

production to offshore locations such as Thailand and China (Murray, *et al*, 1996). The problem for manufacturers was compounded by the strengthening of the yen, which made imported jewellery cheaper than the locally produced items and pushed even more manufacturers out of business. Likewise, trading companies who traditionally supplied gold loans to jewellers, have since ceased this side of the business (Murray, *et al*., 1998). Altogether, consumption and fabrication in Japan have both fallen by over 60 percent in the 1990s (Klapwijk, *et al*., 1999).

Apart from Italy, the countries of Western Europe that were noted for their fabrication and consumption of jewellery were Germany, France and the UK. Germany used to be second to Italy in jewellery production and consumption (Figs.3.6; 3.10). German jewellery, produced mainly in Pforzheim and Idar-Oberstein, was renowned for its quality. From the early 1990s, however, economic recession in the country with the attendant problems of rising unemployment and declining consumer demand, ensured a progressive contraction of both jewellery production and consumption. Pressure on local manufacturers also mounted amidst increasing competition from the import market (Murray, *et al*., 1992).

The combined effect of a weak economy and rising imports led to restructuring of the jewellery industry in Germany, entailing the closure of some companies and the streamlining of others which were forced into short-time work (Murray, *et al*., 1994). By 1997 contraction of the industry had resulted in ten percent levels of unemployment in Pforzheim, the traditional centre of German jewellery fabrication, in the wake of growing bankruptcies and lay-offs (Murray, *et al*., 1997) (Figs.3.7; 3.8). As manufacturers struggled to cope with the high salary levels that typify the industry, some companies withdrew from labour-intensive operations and invested instead in new, automated production which was designed to enable them to compete with lower cost producers (Murray, *et al*., 1992). Another tendency was for companies to establish facilities in Asian countries, especially Thailand. The offshore operations were initiated variously to finish semi-manufactured German articles, to produce low-cost finished jewellery with high labour input, or to complement the firm's products made in Germany. This trend towards relocation and offshore production has been reflected in increasing German imports, a growing share of which is from Thailand and Hong Kong (Murray, *et al*., 1993;1994) (Figs.3.12-3.14). Currently, in addition to official imports, unrecorded jewellery, especially from Italy, plays an increasing role in the German import trade, not so much for consumption in Germany, but destined for Eastern European and the former CIS countries (Murray, *et al*., 1997).

As with other European markets since the 1990s, jewellery production in France has declined, albeit not to the same extent as in markets such as Germany, and its consumption has strengthened over the same period (Klapwijk, *et al*., 2002) (Figs.3.11-3.14). The country's jewellery sector has remained resilient despite sluggish economic growth and rising unemployment. A major factor behind the stability of the sector is the unprecedented growth of outlets in hypermarkets and other mass market channels selling products at lower prices than traditional stores (Murray, *et al*., 1994). Jewellery fabrication in France has dropped but consumption has increased due to increasing imports of cheaper, Italian made jewellery (Murray, *et al*., 1996). A substantial portion of jewellery sold as 'locally manufactured' is actually of Italian origin, being semi-finished articles imported into France and finished locally. In addition to this hidden trade, direct official imports from Italy into France are said to have increased by 70 percent since 1991 (Murray, *et al*., 1997).

The United Kingdom (including Ireland) was, in 2003, the second largest jewellery market in Europe, with consumption of over 70 tons. Fabrication of gold jewellery in the UK grew in the 1990s but subsequently has declined in favour of lower cost imports (Klapwijk, et al, 2004). Imports into the UK account for over 50 percent of consumption, making the country the highest European importer of precious jewellery (Kaiser Associates., 2001). Because of the strength of the currency and the high labour costs, manufacturing in the UK tends to be focused on the high end of the market where better margins can be realised, leaving importers from primarily East and South Asia and Italy, to meet the demand for lower priced goods. Although gold jewellery of nine carat dominates 80 percent of the market, more expensive jewellery in 18 carat gold, and platinum and diamond-set pieces is capturing increasing market share (Kaiser Associates, 2001). In addition to catering for the mainstream nine carat market, the UK jewellery industry takes cognisance of the large Indian and Pakistani local communities in the manufacture and import of 22 carat jewellery, sold at relatively low mark-ups over the bullion price. Much of the trade in 22 carat gold is conducted unofficially by local manufacturers. This unregulated sector is under threat, however, not from the authorities but from informal imports from lower cost producers based in India and Dubai (Murray, *et al*., 1996; 1997; 1998).

3.3.3.1 *The effect of changing consumer tastes on jewellery consumption*

A major factor that has affected gold jewellery consumption in recent years is consumer taste changes. In the medium to long term, changes in fashions can have

a significant impact on gold consumption levels. The slump in Italian consumption since the mid-1990s, for example, has been attributed not only to economic factors but to a lack of consumer interest in plain, heavy pieces of jewellery which are perceived to be outdated. In addition, there has been growing competition for gold from other forms of jewellery, including non-precious items. Often designs include a high use of materials such as glass, wood and leather, which contain gold but only as small accents. Such items are not classified as costume jewellery as they command prices on a par with precious metal jewellery. Indeed, it is claimed that retailers are keen to promote this jewellery as markups tend to be higher than on plain gold items (Klapwijk, *et al*, 2003; 2004).

Another aspect of consumer tastes that impacts on gold jewellery consumption is the preference for precious metals other than gold. The fashion preference since the late 1990s has been for white metal, hence the emphasis on silver, platinum, and even steel and palladium jewellery. Silver, for example, has been the metal of choice for fashion brands seeking diversification in jewellery and higher sales markups (Klapwijk, et al, 2004). The interest in silver and other mixed material jewellery also stems from jewellery's changing status as less of a quasi-investment item and more of an accessory to be discarded according to fashion dictates (Klapwijk, et al, 2003).

One of the main contenders for jewellery market share in the middle to upper price ranges is platinum, a metal that has caused some disturbance to gold's established domain in the international jewellery market. Nowhere has this been more apparent than in the case of Japan and China in the Far East, and the USA in the Western world. The significance of this precious metal in the jewellery sector, and the factors influencing its impact on the market, is discussed in the following section.

3.4 Platinum Jewellery

In comparison to gold, platinum accounts for a relatively small share of the jewellery market worldwide, platinum jewellery consumption amounting to less than 80 tons in 2001, compared to demand for gold jewellery that exceeded 3000 tons the same year (Kaiser Associates, 2001). It is because of the more limited occurrence of platinum, relative to gold, that supply and demand figures for the metal are generally expressed in ounces rather than in tons. It takes ten tons of mined ore to produce one ounce of platinum, as compared to three tons of ore to produce the same amount of gold. In addition to platinum's smaller share of the jewellery market, its

use in this sector is significant in only six major markets, *viz*, China, Japan, the USA, Italy, Germany and the UK, compared to gold's domination of the precious metals jewellery market in most of the world's countries. Although platinum accounts for lower volumes of jewellery, it retails at a higher price point than gold and consequently assures retailers better profit margins.

Platinum has only come to the fore in the jewellery sector during the last 20 years, and most prominently in the last decade. As in the case of gold, the markets that currently reflect the greatest consumption of platinum jewellery are not the same as two decades ago. Historically, the leading market for platinum jewellery was Japan which in the 1980s was responsible for more than 80 percent of total Western world consumption of platinum jewellery (Robson, 1986), and absorbed about a quarter of all Western world demand for platinum (Robson, 1985). Currently, China dominates the platinum jewellery market, with Japan in second place and the USA as the third largest consumer. In Europe, the foremost platinum jewellery markets are Germany, Italy and the UK, of which only Germany featured in this sector 20 years ago. Platinum jewellery has traditionally held most sway in the bridal section of the jewellery market. More recently, it has diversified not only geographically but also in product range, to capture a wider target group through a greater variety of items and prices.[15]From being a metal with greatest offtake in industrial applications in the 1960s, demand from the jewellery sector grew to absorb 50 percent of production in 2000. Since 2000 this level of platinum demand has declined due to a widening platinum/gold price differential and a slackening of demand in the jewellery market overall due to economic circumstances. The background to platinum jewellery and the factors that shaped the growth of this sector in the various markets will now be examined.

Although platinum was discovered in Russia as far back as 1814 it was only in the mid-nineteenth century that its potential for jewellery was realised, especially in combination with diamonds as the white colour of the metal enhanced blue-white diamonds better than the yellow of gold, and it does not tarnish. Platinum has numerous advantages which enhances its value in jewellery; it is harder than gold, does not nick or scratch, and is resistant to oxidation. It is also malleable and ductile in its pure form and holds a gemstone better than gold due to its superior strength and hardness. Platinum's unique properties, however, make it a more difficult metal to fashion into jewellery than gold, which is why early attempts to fabricate it into jewellery were unsuccessful. Once the problems associated with its manufacture

were overcome, it became a popular metal in jewellery and its use in this field spread to Russia and Europe where designers such as Cartier, Tiffany and Van Cleef produced pieces reflective of the design era at the time (Vermaak, 1995). The prospects for platinum use in jewellery looked promising in the 1920s, the more so as new sources of supply had been found in the Rustenburg area of South Africa. Nevertheless, at the same time when these new sources of supply were being developed, demand for platinum slumped (Green and Coombes, 1994). With the depression years of the 1930s, platinum became too expensive for popular jewellery and was limited exclusively to exceptional and valuable items, albeit even this limited use ceased with the classification of platinum as a strategic metal during World War I. The post World War I period saw the demand for platinum renewed, but 90 percent of consumption was in industrial applications.

Attention turns now to the leading platinum jewellery producing and consuming countries in the world, and the factors that explain their dominance in this sector of the jewellery industry.

3.4.1 Japan

Interest in platinum for jewellery was dormant until it was rekindled in Japan in the 1960s, due to a combination of factors. Restrictions were placed on the purchase of gold after the Second World War at about the same time that imports of platinum group metals (pgms) into Japan were liberalized (Vermaak, 1995). In this period, too, De Beers launched a marketing campaign for diamond engagement rings, with the stones set in platinum. The complementarity of platinum with diamonds, together with the Japanese inherent regard for the high purity of platinum, ensured growing demand for platinum jewellery. A strong yen and improved disposable personal incomes contributed towards the growth of a thriving platinum jewellery industry in the country, especially in the bridal sector, where platinum engagement rings became an established trend (Courage, 2001).

Despite the emerging interest in platinum jewellery in Japan, it was not until the mid-1970s that platinum producers recognised the potential of platinum in the jewellery sector. In 1975 Rustenburg Platinum Mines, the world's largest producer of platinum, established the Platinum Guild International (PGI) to promote platinum jewellery and create new opportunities in the industry.[16]PGI offices were established initially in Japan, the leading consumer of platinum in the Western world, and Germany, the second largest consumer at the time. Throughout the 1980s and into the mid-1990s,

Japan maintained its pre-eminence in the platinum jewellery market, spurred by the PGI's marketing activities and the favourable economic circumstances that prevailed in that period. Under the PGI's influence, the acquisition rate for engagement rings in Japan grew from less than five percent in the late 1970s, to 80 percent by the early 1990s (Courage, 2001). The trend towards platinum was facilitated by a number of factors, one of which was women's growing affluence and independence which was manifested in the purchase of expensive platinum pieces, and the low yen price of platinum throughout the 1980s, which allowed Japan to import increasing quantities of the metal for jewellery manufacture (Vermaak, 1995). Adding impetus to platinum jewellery fabrication was the fierce competitiveness of the gold industry in Japan. Rather than compete against cheap gold jewellery imports, manufacturers opted for platinum jewellery production and wider profit margins. Demand for platinum surged in 1989/1990 following the relaxation of laws on retail licences, which enabled precious jewellery to be sold alongside clothing and cosmetics, thus extending platinum's accessibility to a wider audience (Vermaak, 1995).

The escalating demand for platinum jewellery in Japan prompted production in neighbouring countries, especially Hong Kong and Thailand, for export to Japan. Platinum jewellery imports into Japan increased by 56 percent from 1989 to 1990, nearly three quarters of which was drawn from Hong Kong and Thailand (Coombes, 1991). Production from South East Asia was given further impetus by Japanese manufacturers themselves taking advantage of cheaper labour abroad by subcontracting all, or part, of the fabrication of their jewellery to Hong Kong and Thai jewellers (Vermaak, 1985). In these cases metal was frequently bought and turned into jewellery alloys in Japan before being assigned to the offshore site for final fabrication into finished jewellery which was then shipped back into Japan (Coombes, 1991).

The strong growth of the Japanese platinum jewellery market slackened at the beginning of 1991 as domestic interest rates started increasing, portending the slump in the Japanese economy. As the economy showed signs of faltering, consumer spending declined and the demand for lavish gem-set platinum jewellery fell, in tandem with lower imports of high quality, polished diamonds which normally would be set in platinum (Coombes, 1992 a; b). Overall demand for platinum did not fall, however, as the trend away from expensive items was compensated for by a growing preference for simple, inexpensive platinum jewellery. Indeed, for the first half of the 1990s, as the Japanese jewellery industry contracted further under impact of the

downsliding economy, platinum sales remained sustainable (Coombes, 1993). The demand for lighter, low–value pieces outweighed the lower consumption of platinum in heavier items. Continued investment in platinum also stemmed from the fall in the yen price of platinum bullion, which brought it close to the gold price and therefore made it increasingly affordable. Another significant factor was the penetration of platinum jewellery into new areas of the retail network, which ensured rapid turnover (Coombes, 1993).

The recession in Japan eventually took its toll on platinum jewellery sales in 1997, when demand dropped for the first time in 14 years. A number of factors contributed to this decline, among them financial pressure on manufacturers, increases in the price of platinum, and the introduction of taxes (Cowley, 1998a; b). The recession had implications for the structure of Japan's large and complex jewellery industry; intermediaries bore the brunt of rationalisation as the need to respond quickly to fashion trends prompted manufacturers to sell direct to retailers and even consumers (Cowley, 1997a). Restructuring also resulted from the demise of many smaller and medium-sized companies which were unable to compete, thereby leaving the stronger jewellery manufacturers to take advantage of platinum's popularity to expand market share (Cowley, 1999).

Just as the wave of platinum jewellery consumption in Japan triggered export production in the South East Asian countries, so the reverse situation in the country had negative repercussions for the exporting nations. In Thailand, for example, production for export, especially by Japanese subsidiaries, almost halved (Cowley, 1999). The weak Japanese economy together with strong bullion prices has made it increasingly difficult for platinum to compete in even the lower priced segments of the market, giving precedence to white gold and silver as substitute white metals (Cowley and Steel, 2001). Consequently, platinum's share of the overall jewellery market has dropped in relation to sales of white and yellow gold (Kendall, 2002).

3.4.2 China

Even as Japan's dominance of the worldwide jewellery market waned, so other markets, previously dormant in the area of platinum jewellery, gained precedence. The most dramatic of these markets has been China, which, from a base of negligible demand, has ascended to world leader in platinum jewellery consumption in under a decade. As recently as 1993, China's annual consumption of platinum jewellery amounted to no more than 15 000 ounces, or about one percent of world

demand (Courage, 2001). At that time Hong Kong was one of the major producers of platinum jewellery destined for Japan, and, as several Hong Kong manufacturers had moved production to mainland China to take advantage of lower labour costs, demand from China gradually emerged (Coombes, 1992a; 1993). The interest in platinum jewellery was reinforced by De Beers' diamond promotion campaign launched in Hong Kong in 1993, which generated widespread demand for diamonds set in white metal. As silver is not a jewellery metal of choice in China, and white gold requires alloying and plating the preference was for platinum. Chinese consumer interest in platinum found ready support from the retail sector given that platinum, unlike gold, was unregulated and therefore assured retailers a higher profit margin. Moreover, it opened up opportunities for those merchants wanting to enter the jewellery trade but unable to obtain gold licences (Courage, 2001).

The production of platinum jewellery in Hong Kong, which was traditionally intended primarily for the Japanese market, increased significantly to meet escalating demand from China as well (Cowley, 1995). Concomitantly, a manufacturing base became established in China, at first in the areas of Beijing, Shanghai, Shenyang and Guanghou. In 1995, this expanded also to Shenzhen and Shaoxing where larger production facilities, with specialist equipment, were developed (Courage, 2001). In 1996 China became the second largest consumer of platinum jewellery after Japan (Cowley, 1997b). With growing economic prosperity and the added impetus of a global trend towards white metal jewellery, China by 2000 eclipsed Japan as the world's leading platinum consumer. This growth was hastened by the marketing intervention of PGI which had opened a Shanghai office in 1998 and launched widespread promotional campaigns to widen the appeal of platinum jewellery beyond the centres of Shanghai and Beijing (Courage, 2001). The onset of higher platinum prices at the end of the 1990s slowed the rate of platinum jewellery fabrication in China. By 2002 and 2003, demand for platinum dropped further, inducing substitution with white gold and also palladium jewellery.

3.4.3 The United States

The USA is the third largest platinum jewellery market in the world. The United States jewellery industry features platinum historically, dating back to the 1920s when the country was the world's largest consumer of the metal. In this period, platinum was widely adopted for jewellery and accessories in the Art Deco style which characterised the era. The flourishing industry came to an abrupt end with the onset of the 1930s depression, and, later, by wartime controls on the metal (Cowley,

1995). Despite the re-introduction of platinum into the jewellery market, demand in the US remained stagnant throughout the 1970s and 1980s. The first upturn of the platinum jewellery market occurred in 1992 when demand increased 75 percent. This jump, albeit from a small base, is attributable to efforts by the PGI and Italian manufacturers at the time to highlight platinum jewellery in the US market.

The PGI's marketing efforts in America in the late 1980s were through the organisation's Italian office, and focused on imports. Italian manufacturers, for their part, were keen to export platinum jewellery to the States where they already had well-established distribution channels for gold jewellery (Coombes, 1989). From 1991, PGI made a more concerted effort to raise platinum's profile in the US market, through consumer campaigns and by establishing a presence at trade shows (Courage, 2001). As demand for platinum items from retailers increased, several manufacturers started to invest in specialised platinum casting equipment and to extend the range of platinum jewellery through a variety of designs across a broader price range (Cowley, 1995).

In 1997 fabrication of platinum jewellery in the United States expanded, and the country became the third largest platinum jewellery consuming market in the world. Rising consumer demand in the States encouraged a variety of retail outlets to stock the product, which was indicative that platinum had become part of the mainstream jewellery market (Cowley, 1998). The fashion preference for white metal jewellery intensified consumer interest and resulted in ever higher levels of fabrication. Domestic manufacturers focused mainly on bridal products, which accounted for over 90 percent of platinum used in jewellery. Products other than wedding and engagement rings were mostly imported from abroad, primarily from Italy, China, India and Japan (Kendall, 2002). Since 2001 demand for platinum has dropped, under the influence of a weakened economy exacerbated by the September 11 disruptions, and the high price of platinum relative to white gold.

3.4.4 Europe

Demand for platinum jewellery from Europe is limited to a few major countries, notably Germany, Italy, the UK and, to a certain extent, Switzerland for platinum wrist watches. Originally, Germany led the European countries in platinum jewellery production and consumption, having a strong tradition in platinum jewellery fabrication. German designs have tended towards the *avant garde*, targeted at a sophisticated and wealthy minority of consumers (Coombes, 1991). Germany's

demand for platinum jewellery is based on domestic consumption and sales levels have followed the vagaries of the local economy. The specialised, up-market category of jewellery tends to be less affected by economic swings than mid- and lower-priced jewellery. From the mid-1990s German production has expanded to include more classical designs with a wider market appeal. This has enabled the country to export to markets such as the USA and Japan. Platinum has made inroads into the German bridal market but remains far from achieving universal popularity, being more firmly entrenched as a niche product. Recently, the combination of a weak local economy and high platinum prices prompted the substitution of other metals for platinum, including white gold and even titanium and stainless steel (Kendall, 2002).

Unlike Germany, Italy does not have an historical base of platinum jewellery production, its roots being firmly in gold jewellery design and fabrication. It is, however, on the basis of Italy's design expertise and dominance of international jewellery distribution channels that it has developed as a platinum jewellery market. As an export oriented producer of platinum jewellery, the strength of demand in Italy is highly dependent on its export markets. Thus, the recession in Japan affected Italian platinum production, although increased sales to the US soon compensated for decreased demand from Japan. In 2001, the sharp economic downfall in both the major markets of Japan and the US had repercussions for Italian manufacturing demand (Kendall, 2002). Since the PGI's establishment in Italy, there has been some growth in local consumption of platinum jewellery, albeit confined to the high-priced designer sector (Cowley, 1996). Expansion into lightweight platinum chain and other articles has stimulated further local demand but, as in the US, the role of platinum in the Italian market is primarily bridal, accounting for about 70 percent of platinum consumption in the country.[17]

Of the three principal jewellery markets in Europe, the UK has demonstrated the most rapid advances in the last decade. Platinum items have traditionally been difficult to sell in the UK where the jewellery market is dominated by nine carat gold. In 1996, however, platinum fabrication increased 85 percent to become an established product in the medium price, high quality jewellery market (Cowley, 1997a; b). Since then demand for the metal has been consistent, and platinum has assumed a premium position in the bridal sector which accounts for virtually all fabrication demand. As in other markets, there have been recent efforts to diversify production into platinum accessories to broaden the market base. Of all the platinum

markets in Europe, and also those outside the continent, the UK was the only market where platinum demand increased in 2001, despite the economic turmoil that affected most countries (Kendall, 2002).

3.4.5 India

The most recent market to be developed for jewellery consumption is India, where PGI established a base in 2000. India first emerged in the platinum jewellery market as an exporter, using its established supply channels of gem-set gold jewellery into the USA to include platinum jewellery as well (Kendall, 2002). PGI perceived in India the potential to not only export platinum jewellery but also develop its own market for the product, given the country's jewellery culture and expanding middle class. India has long been a predominantly gold market but it diversified with ease into diamond jewellery, and PGI has similar expectations for platinum jewellery development in the country. PGI intends to position platinum jewellery as an alternative in the expensive and sophisticated product range. In so doing PGI is taking advantage of the prevalent fashion trend for white jewellery, and the Indian consumer's predilection for high purity precious metal. Already diamond jewellery in white settings is being produced locally to a limited extent, and the strategy is to ensure that the white metal setting chosen is platinum rather than white gold. Initial advertising campaigns were launched in Mumbai and Delhi and have subsequently been extended to other cities which include Bangalore, Calcutta, Chennai and Hyderabad (Courage, 2001).

3.5 Conclusion

This chapter has sought to present an international overview of the changing patterns pf production and consumption of both the segments of gold and platinum jewellery. It has been demonstrated that the jewellery industry plays a prominent role in the economies of several countries, particularly those in Asia. For many years, however, trading in precious metals in certain countries was been constrained by government legislation and punitive taxes, which have only recently been ameliorated to allow easier access to bullion and greater consumption of jewellery. It is testimony to the significance of precious metal jewellery in these markets that, even when legislative constraints were in force, it was not sufficient to quell the industry. Instead, these constraints gave rise to thriving parallel channels of fabrication and distribution, some of which exist still despite less encumbered jewellery trading conditions.

An important factor that emerges from the discussion is the role of international industry organizations in the changing global jewellery economy. The World Gold Council and Platinum Guild International have influenced strategically gold and platinum sales respectively in the world's major jewellery consuming markets. They have played a role in both working with industry structures to improve the product and its availability, and in prevailing upon government for constant reforms to the policy environment affecting jewellery and precious metals. The intervention of these marketing organisations to ameliorate the operating environment for precious metals has served to expand the formal channels of jewellery production and demand in those countries.

The global review of jewellery trading and consumption patterns in world markets is useful as a comparative basis for the examination of the jewellery industry in South Africa. Several key issues emerge from the international analysis which are pertinent to the South African context. One of the issues refers to the strength of the jewellery industry in countries with no wealth of mineral resources. By contrast, South Africa is richly endowed with precious minerals but its jewellery industry plays a minor role in the economy. A second theme is the resilience of the jewellery industry despite the repressive policies that have applied in certain countries. The effect of these policies was to drive the industry 'underground', but not to reduce its significance in the market. The jewellery industry in South Africa has also been subject to repressive government measures but with more detrimental implications for the industry's survival than in the case of the foreign markets. A third aspect, related to that of the policy environment, is the shifting role of government. From initial attempts to curb the growth of the jewellery industry, many of the governing bodies in Asia have introduced reform measures to facilitate trade in, and manufacturing of, jewellery. It will be seen from the discussion that follows that, likewise in South Africa, the government has altered its perspective of the industry, from rigorously controlling it (Chapters Five and Six) to subsequently promoting its development (Chapters Seven and Eight). These and other issues will be analysed in the South African case study to understand the growth path and current status of the industry, in comparison to the experiences of the same sector in different contexts.

Notes for Chapter Three

[1] Chamber of Mines of South Africa, GPC Members' Circular No. 104/81, 20/08/1981, Intergold, General

[2] Chamber of Mines of South Africa, GPC Members' Circular No. Y4/81, 09/01/1981, Intergold: General
[3] Chamber of Mines of South Africa, undated document on 'Events leading to the establishment of Intergold in 1971 – an overview', File: The history of Intergold
[4] Chamber of Mines of South Africa, undated document on 'Development of Intergold 1971-1983 – a chronological record of events', File: The history of Intergold
[5] Chamber of Mines of South Africa, undated document on 'Divisional and other activities of Intergold from 1971-1983', p 25, Intergold: General
[6] Chamber of Mines of South Africa GPC Members' Circular No. Y5/91, 25/04/1991, WGC files
[7] Chamber of Mines of South Africa, undated document on 'Events leading to the establishment of Intergold in 1971 – an overview', File: The history of Intergold
[8] Chamber of Mines of South Africa, GPC Members' Circular No. Y4/81, 09/01/1981, Intergold, General
[9] Chamber of Mines of South Africa, GPC Members' Circular No. Y4/81, 09/01/1981; Intergold: General
[10] Correspondence between D. Mackay-Coghill and K.W. Watson, 31/12/1980, in Chamber of Mines of South Africa, GPC Members' Circular No. Y4/81, 09/01/1981, Intergold, General; Undated document on 'Divisional and other activities of Intergold from 1971 – 1983', Chamber of Mines of South Africa, File: The history of Intergold
[11] Chamber of Mines of South Africa, GPC Members' Circular No. Y4/81, 09/01/1981. Intergold: General
[12] Correspondence between D. Mackay-Coghill and H.E.Jurgens, 19/01/1980, in Chamber of Mines of South Africa, GPC Members' Circular No. Y4/81, 09/01/1981, Intergold: General
[13] Chamber of Mines of South Africa, GPC Members' Circular No. Y4/81, 09/01/1981, Intergold: General
[14] Jetro Japanese Market Report: Jewelry, March 1998, No.11, New York
[15] Anglo American Platinum Corporation Ltd., Annual Report 2001
[16] Anglo American Platinum Corporation Ltd., Annual Report 2001
[17] Anglo American Platinum Corporation Ltd., Annual Report 2001

CHAPTER FOUR

The Jewellery Industry in South Africa

4.1 Introduction

It is significant to observe from the international analysis (Chapter Three) of the major jewellery producing countries in the world that none owes its pre-eminence in this sector to the local occurrence of precious metals or minerals. By contrast, South Africa is world renowned for the rich base of precious raw materials, albeit it lacks a significant jewellery manufacturing sector. In this chapter, the extent of South Africa's mineral wealth with respect to jewellery-related materials is examined, as a basis for understanding the ongoing preoccupation with developing the jewellery sector in the country. South Africa is not only a rich source of raw materials but also has a highly developed mining sector, which processes the locally sourced metals to the point that they can be further beneficiated into jewellery. Alongside the sophistication of the country's mining and processing sector the small-scale nature of South Africa's jewellery industry is in stark contrast to the magnitude of the sector further upstream. This situation is reflective, in part, of the limited investment and support given to jewellery manufacturing relative to that apportioned to the mining industry in its early days.

The chapter is structured into five main sections: following this introduction a synopsis is presented of the country's mineral endowment which served as the cornerstone for the country's economic growth. This broad-based view is narrowed in sections two, three and four which provide a more detailed analysis of the diamond, gold and platinum industries respectively in terms of the mining and processing of these materials in the country. Section five focuses on the jewellery industry in South Africa, the discussion centering on the extent of the industry, its structure and organisation. The discrepancy between the success of South Africa's mining and jewellery sectors is highlighted in the conclusion.

4.2 South Africa's mineral wealth

In reviewing the more prominent jewellery manufacturing and consuming markets in the world (Chapter Three), South Africa's absence from this group is noteworthy in view of the country's status as a major source of the commodities essential to the jewellery industry. A scrutiny of South Africa's natural resource endowment confirms that the country is indeed a source of some of the world's most valuable metals and minerals (Chamber of Mines of South Africa, Annual Report 2005). South Africa has the world's largest gold and platinum reserves and is the fifth largest producer of diamonds in the world. It was the discovery of diamonds in the mid-1860s, followed by the discovery of gold 20 years later, that provided the platform for the country's economic development. This growth was accelerated further by the discovery of platinum group metals in the 1920s. Such discoveries prompted an influx of capital, skills, and enhanced technology into the country, providing the impetus for the country's infrastructure and the establishment of secondary industries. The associated mining and beneficiation activities that arose from these explorations established South Africa as a major exporter of an impressive array of metals and minerals for over 100 years. By the end of the 1980s, over 60 different minerals were produced from more than 1000 mines (Barcza, undated). Although 25 years later there has been some decline in mining activities, there are, nevertheless, about 60 different minerals being produced from over 700 mines and quarries. The contribution from the mines to GDP is approximately seven percent, and it accounts for 30 percent of the country's total exports (Chamber of Mines of South Africa, 2004).

The opportunities generated by South Africa's mineral wealth have not been without negative consequences for the country's economic trajectory. South Africa has been classified as a 'minerals economy' with the attendant complications that underpin the 'resource curse' usually associated with such economies (Altman, 2001). The negative effects that stem from the country's reliance on its resources relate to overvalued exchange rates caused by minerals export earnings, which in turn enabled the government to invest in highly capital-intensive energy and chemicals industries at the expense of the labour intensive manufacturing sector (Altman, 2001). This has left South Africa with a distorted middle income economy which reflects a high domestic cost structure but a weak skills base and human development profile that more resembles a less developed country. Mineral economies are also subject to volatile export prices and falling terms of trade which

can result in an unstable balance of payments and national income, a business cycle linked to commodity prices, and relatively lower levels of national income per capita (Altman, 2001). South Africa has not been exempt from these adverse factors that accompany resource dependence, which partly explains the difficulties of developing a vibrant jewellery production sector in the country.

Structurally, the mining industry is dominated by a small number of large mining houses which are linked to various financial institutions. In addition, smaller producers are also an important element of the industry, especially with the passing of the Mining Charter which prescribes 26 percent black empowerment in the mining sector by 2015[1]. These smaller producers undertake smaller-scale operations that are not usually viable for the larger groups. Given the strategic importance of precious metals and minerals, the state ensured the growth of the mining industry by creating a facilitative environment with the necessary legal, financial and infrastructural services on offer. More specific support was in the form of parastatal bodies such as Mintek and the CSIR (Council for Scientific and Industrial Research) which were established to provide technical services and research facilities specific to the mining and related industries. As a result of this investment drive in the sector, the country's exploration, drilling, geological, mining and metallurgical expertise is recognised among the most sophisticated and advanced in the world (Barcza, undated). A brief examination of each of South Africa's gold, diamond and platinum group industries illustrates their economic significance in the country, and places in perspective the extent of the jewellery manufacturing value chain.

4.2.1 Diamonds

The modern diamond mining industry has its genesis in South Africa with the discovery of the first diamonds in 1866 near Kimberley. This discovery, followed by others, spawned a rush of prospectors to the area and surroundings, culminating in the formation of De Beers Consolidated Mines, the largest diamond company in the world (Lang, 1986). From 1870 to 1930, South Africa dominated world production; currently Australia is the world's largest diamond producer by volume, whereas Botswana is the leader in terms of value of diamonds produced (Kaiser Associates, 2004). Other major diamond reserves occur in Russia, the Democratic Republic of Congo, Canada, Angola, Namibia and Ghana. Overall, South Africa is the fifth largest producer by volume, and is ranked fourth in value output (Department of Minerals and Energy, 2005b). In the global economy, there are about 80 diamond mines, the majority of which (36), are located in South Africa (Department of Mineral

and Energy Affairs, 2004a). These diamond operations in South Africa are comprised of 86 registered diamond-mining licensees, which in 2004 produced 14,3 million carats or about 9,5 percent of the world's 150 million carat production (Department of Minerals and Energy, 2005a; 2005b). Production statistics, however, do not include output from about 500 alluvial diamond "diggers" in the Northern Cape, North-West, and Free State provinces of South Africa (Even-Zohar, 2004). Estimated production figures from these miners may add as much as 150 000 carats to South Africa's total production, an additional value of about $900 million (Damarupurshad, 2002). Overall, De Beers is by far the largest of the mining groups, accounting for more than 90 percent of South Africa's total recorded diamond output. The mining conglomerate operates in South Africa and also in Botswana, Namibia and Tanzania, contributing 31,3 percent of world production by mass, and approximately 41 percent by value (Department of Mineral and Energy Affairs, 2005b).

Rough diamonds are graded or classified according to size, which is measured in carats (one carat being 0,2g), colour, clarity and cuttability. The three main classifications for rough diamonds are gem, near-gem and industrial diamonds. About 20 percent of the world's volume production of rough diamonds are gems, which are polished and set into diamond jewellery. Near-gem quality diamonds comprise approximately 45 percent of production. The balance of world diamond production is industrial quality, which is not used in jewellery (Kaiser Associates, 2005). Gem diamonds can command in excess of $200 a carat. These stones are cut in several countries, including South Africa, albeit the major cutting centres are Antwerp, New York, Israel and India. Newer centres of cutting are China and Thailand. De Beers dominates the diamond market in the gem category, selling up to 65 percent of rough gems through its marketing arm, the DTC (Diamond Trading Company) which is based in London. The remaining 35 percent of rough diamonds in this category are produced by the so-called "competitive fringe" which markets their production outside of DTC channels. Near-gem diamonds cost between $20 and $200 a carat and essentially are industrial diamonds with a small gem-quality portion that can only be cut economically in certain centres where low labour costs prevail. India is the world leader in processing this type of diamonds, employing one million people whose expertise in this sector is such that even diamonds as small as a grain of sugar are cut and polished with 57 facets (Department of Mineral and Energy Affairs, 2004a).

4.2.1.1 *The marketing of gem diamonds*

After mining and prospecting, rough gem diamonds are sold on the international market either through the DTC which sells 65 percent of the world's diamonds annually, or independently by individual producers themselves. The DTC replaced the previous CSO (Central Selling Organisation), this company having been established in the 1930s by Sir Ernest Oppenheimer to stabilize the market for diamonds by controlling the availability of stones to world markets. The DTC operates on the same principle as did its predecessor, which is to purchase diamonds from the world's major producers, and sell them to selected clients known as sightholders. The diamonds purchased by the DTC are sorted into about 16 000 categories based on combinations of size, shape, colour and quality, with each stone valued according to its individual characteristics. Once sorted, the diamonds are arranged into selling mixtures for sale to De Beers sightholders, with sales taking place ten times a year in London and Johannesburg and are known as "sights" (personal communication, De Beers, 1/7/2004). There are 93 sightholders worldwide, 19 of them being in South Africa[2]. The sightholders have to be financially sound, major diamond cutters and polishers or dealers, and usually are based in the principal cutting centres of the world (Fig 4.1).



Fig. 4.1 Major diamond cutting centres

4.2.1.2 *Diamond Cutting*

India is the world's leading centre of cut and polished diamonds by volume, employing an estimated one million people in the process. Traditionally, India's strength in diamond cutting was limited to the manufacture of small, near gem diamonds and Israel with Belgium were dominant in the cutting and polishing of medium and larger stones which require highly specialist skills. Since the last decade, however, high manufacturing costs in these centres has induced diamond cutting activities to shift offshore to other countries with lower costs[3]. Indeed, it is reported that of 30 000 diamond manufacturers that operated in Antwerp three decades ago, only 1 700 remain[4]. India's growing expertise in the cutting and polishing of large stones, enhanced by the acquisition of technology in this regard, has enabled it to attract manufacturing capacity from higher cost areas. Nevertheless, India is experiencing competitive pressure from China which also has the necessary workforce and growing capacity to mass produce polished diamonds (Kaiser Associates, 2005).

Since the late 1990s the issue of "conflict diamonds" has threatened to undermine the diamond industry [5]. Conflict diamonds refers to diamonds originating in war-torn areas in Africa, and used as a source for funding rebel movements in countries such as the Democratic Republic of Congo, Sierra Leone and Angola.[6] Efforts to halt the trade in these diamonds resulted in the Kimberley agreement, by which the governments of 35 diamond producing, trading and manufacturing countries agreed to implement a certification scheme to control the international trade in rough diamonds (Department of Mineral and Energy Affairs, 2001). Arising from this agreement the Kimberley Process certification system was introduced in 2003, according to which all exports of rough diamonds are shipped in sealed containers, accompanied by a Kimberley Process certificate which is issued by a duly authorised body within the exporting country. Imports are processed only if a shipment arrives with the necessary certificate. Since the agreement, more than 70 countries have joined the process by instituting the required legislation; the import and export of rough diamonds is limited to countries that are members of the Kimberley Process (Kaiser Associates, 2005). In addition, the industry, through the World Diamond Council, has taken measures to stem the circulation of illegal diamonds by implementing a system of warranties to endorse each rough diamond transaction in trading centres around the world (Department of Mineral and Energy Affairs, 2001).

4.2.1.3 Diamond manufacturing in South Africa

The trading and processing of diamonds mined in South Africa was, until 2005, governed by the Diamonds Act, 1986. This Act has since been repealed by new legislation in the form of the Diamond Amendment Bill which was approved in November 2005. As details of the Diamond Amendment Bill have not yet been formalised, the Diamond Act, 1986 still applies and it is in this context that it is discussed in relation to the diamond industry in South Africa.

The Act is implemented through the Diamond Board which controls the possession, purchase, sale, cutting and polishing, and export of diamonds. The Act makes it necessary for all diamonds mined in South Africa to first be offered for sale to the local cutting industry to escape the 15 percent export levy otherwise imposed on rough diamonds exported out of the country. The Board may enter into an agreement(s) with any producer, dealer or association. On this basis the Board, in February 1993, reached an agreement with De Beers whereby the mining company may export its entire South African rough diamond production duty-free, in return for supplying the South African industry with diamonds from the DTC. In terms of the agreement, the Board annually views a representative sample of De Beers' production, to evaluate that the goods being exported cannot be economically manufactured in South Africa. De Beers then has to ensure that the equivalent caratage of diamonds that can be manufactured by the industry is returned to South Africa through the sights offered to local sightholders.[7] In this manner the South African cutters theoretically have access to more of the diamonds suitable to them for processing, than if they were to buy from South African production alone.[8]

All locally mined diamonds, from De Beers and other producers, have to be sorted and valued at Harry Oppenheimer House in Kimberley, under auspices of the government valuator, before being sold locally or leaving the country. The diamonds are sorted into three broad categories. The first category refers to special stones weighing over 10.8 carats, and to stones of unusual or rare colour, known as 'fancies'. These diamonds are reserved exclusively for the South African industry. Category two includes all diamonds deemed economically suitable for manufacture in South Africa. These diamonds are incorporated into the DTC's London mix and offered for sale to South African sightholders. Category three applies to diamonds considered unsuitable for local manufacture, and it is such category stones that De Beers is entitled to sell on the international market.[9] Through its agreement with the

Board, De Beers is exempt from duty on category two and three diamonds which are exported.

After the rough diamonds have been sorted and valued they can be traded, either via the DTC in London where the diamonds are mixed with those from other sources in preparation for sale, or, for diamonds not mined by De Beers, through either of the two diamond exchanges in South Africa, *viz*., the Diamond Bourse of South Africa and the Kimberley Diamond Bourse (Department of Mineral and Energy Affairs, 2004a). The Diamond Bourse of South Africa facilitates the sale, export and import of diamonds. South Africa's Diamond Bourse is peculiar to the local diamond industry in that it trades specifically in rough diamonds, as opposed to bourses in other countries which trade mainly in polished goods. The bourse provides a mechanism through which rough diamonds can be first offered to the local industry prior to being exported. The goods are offered for tender, and if no local dealer meets the reserve price of the package set by the seller, the rough diamonds can be exported duty-free.[10] Aside from the Bourse which is situated in the South African Diamond Centre in central Johannesburg, other recognised trading places exist in towns, including Wolmaransstad, Schweizer-Reneke and Barkly West, where diamonds from individual, alluvial 'diggers' are sold (Fig 4.2).

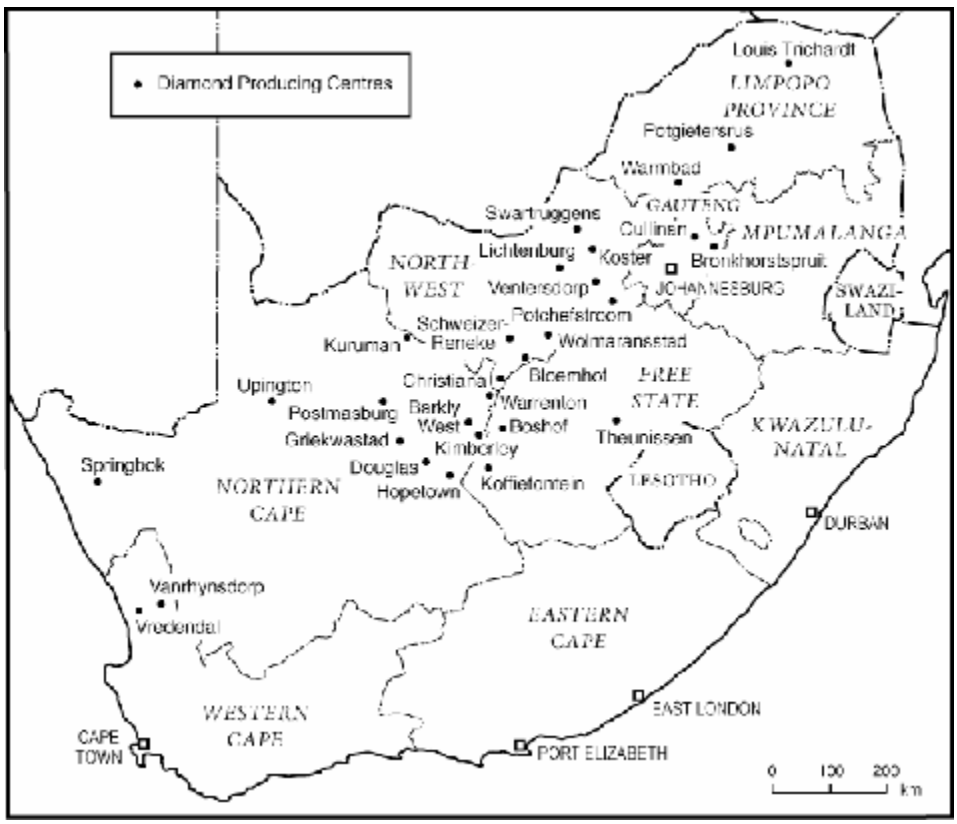


Fig. 4.2 Alluvial diamond areas in South Africa

Small-scale cutters and polishers, who often need small quantities of diamonds, may purchase from the Diamond Development Company (Diamdel), a subsidiary of De Beers established for this purpose. Diamdel is a DTC sightholder but supplements its sight by buying diamonds on the open market from South Africa or overseas. One of its local sources of diamonds is Alexkor, the state-owned mining company that sells all its diamonds via Diamdel.[11] Parcels as small as a single stone may be purchased from the company which is also said to offer technical assistance to small businesses.[12] Diamdel is not the only source of diamonds for small-scale manufacturers; supplies may also be obtained from non-De Beers producing mines, diamond alluvial 'diggers', rough diamond dealers, imports, as well as the Diamond Bourse (Department of Mineral and Energy Affairs, 2001).

The tender system is one means of selling diamonds in the local market. Trans Hex mining group, the second largest diamond operator in South Africa after De Beers, divides its diamond production into cuttable and non-cuttable diamonds, the former being offered for sale in South Africa by tender. Small-scale cutters argue that high prices preclude many of them from tendering for diamonds, especially when Trans Hex has a pre-tender in Antwerp, where the highest price offered is used to determine the reserve price of diamonds for sale in South Africa.[13] Trans Hex claims that it has, on occasion, offered low value tenders consisting of single stones and small parcels, albeit these have met with limited success and even more limited feedback from those associations that the tenders were supposed to help. Nevertheless, the mining company claims it has decided to increase the frequency of these sales. It maintains that the question of local supply is only one aspect of a more complicated issue in aiding the development of the South African industry.[14]

Exports of rough diamonds from South Africa exceed domestic production as even diamonds imported by dealers and cutters and those supplied to sightholders are often re-sold outside the country (Franz, 2001; Damarupurshad, 2002). Figures obtained from South Africa's Diamond Bourse confirm the low volumes of rough diamonds sold locally relative to those exported: for 2003, about 107 000 carats of the diamonds offered for sale through the Bourse were sold to the domestic market versus 1.2 million carats that were exported (Kaiser Associates, 2005). Aside from the rough diamonds exported through the Bourse after unsuccessfully having been offered for sale in South Africa or for being unsuitable for local processing, large quantities of diamonds purchased in the country are also exported for cutting

overseas. It is an accepted fact that all significant overseas rough dealers have buying agents in South Africa.[15] Foreign buyers are also said to come to South Africa to buy large quantities of rough, and ship it overseas.[16]

It is the discrepancy between the limited quantity of diamonds processed in South Africa and the vast quantities exported in rough form that has prompted the replacement of the Diamonds Act, 1986 by new legislation. Among the provisions of the new Diamond Amendment Bill is the establishment of a state diamond trader, to which local diamond producers will have to sell a percentage of their mine production. The state diamond trader will act as a central selling entity, supplying rough diamonds to local cutters and polishers in a bid to increase job creation and skills development in the local diamond industry[17]. According to the new legislation, the SA Diamond Board is to be replaced by a state diamond regulator which will operate the diamond exchange and export centre which will be the only official channel for exporting diamonds[18]. In addition, the legislation provides for the re-inforcement of export duties as a disincentive against the export of rough diamonds and precious metals.[19]

4.2.1.4 *Structure of the South African diamond industry*

According to the Diamond Board, South Africa in 2004 had 354 registered diamond dealers and 269 diamond cutting licensees, the latter employing almost 2000 people (Department of Minerals and Energy, 2004a). The local cutting industry has shrunk considerably from its heyday in the late 1980s when employment peaked at 7000 jobs. One of the explanations for the historical growth of the industry was that diamond cutters in South Africa in the period subsequent to World War II and up to the late 1980s enjoyed a highly distorted system of protection. Not only did government incentives enable the local cutting industry to receive diamonds at a discount price to overseas cutters, the two-tier currency system (commercial and financial rand) that prevailed until the late 1980s led to the purchase of rough diamonds far below market price. As only foreign investors were eligible for financial rand incentives, local manufacturers sold their factories to foreigners. The mostly foreign-controlled local diamond industry benefited even further from generous government subsidies that applied to the establishment of industries near the so-called “homelands”, and by processing some of the rough abroad. Another element that stimulated the growth of the industry in the late 1980s was the ease of access to sight privileges, which could be acquired by purchasing an existing sightholding company (Even-Zohar, 2004). It is also said that the majority of the cutters in the

period after World War II were trained in the polishing of smalls, but with the growth of low cost producers, such as India, South Africa became uncompetitive in the production of stones less than half a carat, and employment in the sector consequently dropped to 1500 people.[20]

With the termination of the existing government incentives, and the abolition of the financial rand, many foreigners, primarily from Belgium, left South Africa, closing their factories in the process. This resulted in a rapid shrinking of the industry, which was exacerbated by the tightening of the CSO sight eligibility requirements, and the imposition of trade and financial sanctions against South Africa. Other constraining factors on diamond manufacture at the time were the demise of the government export incentive scheme, GEIS (Growth and Export Incentive Scheme), and the introduction of VAT which created cashflow problems for many diamond polishers (Even-Zohar, 2004). Some industry players claim that the collapse of the domestic cutting industry stems from the large-scale export of South African rough diamonds, a phenomenon which emerged with the option of exporting diamonds duty free, subject to them being offered for sale in the local market first. According to this argument, the consequent restricted availability of rough diamonds for local cutters caused the severe shrinkage of the cutting industry (Lipchin, 2003).

The crisis that beset the local cutting and polishing industry forced a change of focus for the sector, from the processing of small to larger diamonds. In terms of larger diamonds, South Africa had a cost advantage relative to the established cutting centres of Israel, New York and Belgium. In a bid to re-establish itself as a niche market producer of better quality goods, the industry launched a training initiative designed to retrain workers to cut more complicated stones and sizes which previously had been exported.[21] South Africa's current expertise, therefore, is in the cutting of larger stones. South Africa's high labour costs also make it necessary to specialise in the cutting of larger stones. Cutting costs in South Africa range from $45 to $65 a carat, compared to $8 to $15 a carat in India and $15 to $25 in China. It is argued that labour cutting costs should not exceed ten percent of the cost of the rough diamond, and on this basis South Africa is constrained to the processing of larger, more expensive diamonds (Blom, 2004). The focus of the local industry on better quality diamonds means that almost all the polished stones are exported, the local market being too limited, and the economy insufficiently robust, to absorb more than one or two percent of the locally polished goods.[22]

Unlike the diamond cutting sector, which contracted severely over the past twenty years, the number of diamond dealers in the country has increased markedly since 1995 when only 58 dealer firms existed.[23] Statistics for 2004 reveal that there were over 350 registered diamond dealers in South Africa (Department of Minerals and Energy, 2004a). The sudden increase in the number of licensed dealers is attributable to the lifting of the moratorium that had existed from 1986 to 1995 on the issuance of rough diamond licenses. The freer issuing of diamond licenses stimulated a surge in the number of applicants, many of them from abroad, which led to the granting of over 100 new licences within six months of the end of the moratorium.[24]

The South African diamond industry is represented by a number of organisations, which are reflective of the different interests in the sector. The Rough Diamond Dealers Association was formed after the introduction of the Diamond Act of 1986, to streamline procedures in the granting of licences and the supply of rough diamonds, and to negotiate with state departments such as Customs and Excise. The organisation consists of between 60 to 70 members and is represented on the Diamond Board, the Diamond Bourse, and the Jewellery Council.[25] Likewise, the Master Diamond Cutters' Association represents the interests of the diamond cutting sector of the industry, but is also involved in other industry organisations, including the Jewellery Council. The Association is one of the oldest industry organisations in South Africa, having been founded in 1932. The 60 to 70 members of this particular Association employ at least 80 percent of all workers in the polishing industry.[26]

The polished diamond sector is catered for by two different organisations, the Diamond Merchants Association and the Diamond Club. The Diamond Merchants Association is a broad-based organisation of recent standing, having been established in 1995 to promote the interests not only of polished dealers but also of diamond cutters and rough dealers. The aim of the association was to create an environment for effective liaison between the different sectors of the industry. Although a relatively young organisation, the Diamond Merchants' Association has over 100 members, and within two years of its establishment had been accepted as a member of the World Federation of Diamond Bourses.[27] The Diamond Club is an association of long-standing, having been established in 1941 when diamond and jewellery manufacture were still fledgling industries in Johannesburg. The club has a membership of about 130 of South Africa's leading diamond manufacturers, dealers, and jewellers. A member of the World Federation of Diamond Bourses, the Club also

meets regularly with international leaders, gem laboratories and the DTC in the interests of the trade. The Club has a strict code of ethics and monitors members' conduct; it provides arbitration and disciplinary proceedings when cases are brought against members for breach of conduct or ethics.[28] Because of the considerable overlap in the aims and objectives of both the Merchants Association and the Club, it was decided to join the two associations under a new organisation to represent the polished diamond dealers in the country. The new body, called the Diamond Dealers Association of South Africa, was formed in 2003 and is also affiliated to the World Federation of Diamond Bourses, as were its predecessors the Diamond Merchants Association and Diamond Club (Blom, 2003). Overall, the World Federation of Diamond Bourses is the controlling body of the diamond industry world-wide and affiliated members are allowed access to bourses internationally.[29]

The interests of the non-sightholder and smaller manufacturers, traditionally have been subsumed under the Master Diamond Cutters Association. Many small manufacturers have been dissatisfied with this arrangement, feeling that the organisation is more representative of the needs of large businesses, the sightholders, than of the smaller players. Consequently, in 2000, a number of the small manufacturers left the Master Diamond Cutters Association to found a separate organisation which is more reflective of the interests of the small manufacturers or non-sightholders, namely, the United Diamond Manufacturers Association of South Africa (Udasa) (Jansen, 2000). Udasa stems from the amalgamation of what was previously the Independent Diamond Manufacturers' Association of South Africa, and the Rainbow group which comprised mainly black diamond cutters. The new organisation is said to represent mostly private diamond cutters and polishers, many of whom were only able to obtain their licences after 1985.[30] Udasa, however, is still going through changes and, unlike the other, established diamond organisations, is not represented on all the broader structures of the industry such as the Diamond Bourse and the Diamond Foundation. Consequently it lacks influential power in the industry, which limits its ability to negotiate in the interests of the group it represents (Franz, 2001).

The Diamond Foundation is an offshoot of the Diamond Bourse, and is overseen by the same committee as the Bourse. It facilitates projects aimed at developing or promoting the diamond industry as a whole, and is funded entirely by the Bourse. Between 1990 and 2000, approximately R4 million from the foundation was used to fund the local industry. Most of these funds were absorbed by the diamond training

school, with the remainder going to projects such as the Velani Hive, and in the form of contributions to the Sector Education Training Authority. The Foundation also assists in overseas travel in the interests of enabling South Africa representation at overseas diamond related conferences.[31]

All of the diamond industry organisations, including the Diamond Bourse, Diamond Board, and Diamond Foundation are based at the SA Diamond Centre, a complex which houses almost every aspect of the diamond industry in South Africa. Established in 1993, the centre was developed with the aim of centralising the diamond and jewellery industries in Johannesburg. Response to the centre was mixed at first, with many jewellery manufacturers refusing to be based in the crime-ridden centre of town. Likewise, the diamond industry was divided in its support of the centre. Whereas many of the rough diamond dealers and cutters were prepared to locate in the complex in view of the convenience and security it offered, the polished diamond dealers preferred to locate in a smaller complex situated further from the CBD and closer to the suburbs of Johannesburg. The South African Diamond Centre has become the main centre for the diamond industry in South Africa, encompassing all the representative bodies of the industry, including those groups who originally refused to move there.

4.2.1.5 *Training in diamond processing in South Africa*

Currently, training for the diamond industry is provided by the Harry Oppenheimer Diamond Training School which is financed by the industry through the Diamond Foundation, the Master Diamond Cutters and Rough Diamond Dealers Associations, and De Beers. The school was established in 1990 to train students in all aspects of diamond polishing and to supply the industry with a source of labour. Known then as the Diamond Training School of South Africa, the facility was expanded in 1997 with the financial support of De Beers which then joined the other industry organisations as a trustee of the school, and the name of the school was changed. Prior to the establishment of the school the industry relied largely on the apprenticeship system for skilled workers. Apprenticeship training is still an alternative in the industry, especially with respect to the skills needed in the cutting of larger stones; students at the school work with the smaller range of diamonds.

Six months training is offered at the school. The course encompasses the sorting and evaluation of uncut diamonds, the cutting and polishing of stones, and the evaluation of polished diamonds (De Beers Consolidated Mines (undated)). Except

for two weeks devoted to the grading and evaluation of rough diamonds, the remainder of the course is focused on the cutting and polishing of diamonds. The course aims to teach students the basics in diamond processing, with more specific training provided by the factory in which they may be employed. The school accommodates 58 students at a time and in 2003 had approximately 40 students registered (Rademeyer, 2003). Some of the students are privately supported whereas others, from disadvantaged backgrounds, have bursaries from the cutting and polishing factories and are paid a wage during their period of training. Diamonds are supplied by De Beers, through Diamdel, and are returned for sale in the polished diamond market once polished.[32] The Harry Oppenheimer School is the only one in the industry which is accredited by the Mining Qualifications Authority, the official governing body for training in the sector. In addition, there are a small number of non-accredited schools that provide training in some aspects of diamond manufacturing. For example, the Diamond Education College, based at the SA Diamond Centre, focuses specifically on the evaluation, grading and sorting of rough diamonds. The course extends over two weeks but students may attend additional training sessions for the duration of the year, according to their specific requirements or the problems they encounter in the workplace (Barnes, 2003).

At the time that the Harry Oppenheimer School was opened under the aegis of De Beers and the Diamond Foundation, it was decided to introduce a “hive” entrepreneurial system as a vehicle for stimulating small business development in diamond processing. The aim was to empower previously disadvantaged cutters from all race groups by making available facilities and infrastructure at very little cost to them.[33] The “hive”, labelled the Velani Entrepreneurial Diamond Development Initiative, was officially opened in February 2000 with four entrepreneurs working from the premises. Currently, eleven entrepreneurs are based at the “hive”, but with differing measures of success as some are busier than others. The entrepreneurs purchase their diamonds from Diamdel and other sources open to small-scale manufacturers, and compete with other diamond cutters and polishers in the trade.

It is significant that few of the entrepreneurs who first moved into the “hive” have succeeded in establishing themselves independently outside of the system as originally envisaged. Indeed, the entrepreneurial opportunities offered by the initiative have been limited in terms of numbers of people affected. Consequently, entrepreneurs now have a limited period in the “hive” before having to move out to make room for a fresh intake of entrepreneurs (White, 2003). Overall, the ”hive”

operates on the basis of a communal working space and shared services, enabling emerging entrepreneurs to lease space for a pre-determined fee and, either individually or in partnership, undertake work for established businesses (Chatzistergou, 1998). Based at the S A Diamond Centre, where most of the diamond industry in Johannesburg is located, the hive is located ideally for sourcing contract and other work. Despite this advantage, the initiative has not reached self-sufficiency and continues to be substantially subsidised by the Diamond Foundation.

4.2.1.6 *Problems in South African diamond manufacturing*

The high percentage of diamonds exported from South Africa remains a contentious issue for many of the non-sightholders and smaller manufacturers in the country who feel that more diamonds could be processed locally if greater supplies of rough were made available (Franz, 2001). Non-sightholders, who are usually the smaller manufacturers, claim that they are not represented on the regulatory body of the industry, the Diamond Board, nor on the Board's Section 59 Committee which determines the supply of diamonds to the local industry and, therefore, feel that their needs are not being met (Jansen, 2000). The smaller manufacturers feel aggrieved that, whereas sightholders are assured of a constant supply of raw material, the non-sightholders have to rely on Diamdel which they claim is insufficient to meet demand. Another alternative is to travel to distant trading centres with no guarantee of obtaining their requirements. Rough diamond dealers, who act as middlemen by purchasing diamonds from various sources and selling them to manufacturers, are also said to have developed into local agents for overseas rough buyers, leaving local manufacturers unable to rely on them for supplies (Jansen, 2000). Sightholders present a different view, asserting that the ability of local diamond manufacturers to process only better quality stones limits the range and volume of stones that can be made available. It is argued further that South African mines produce only limited quantities of the diamonds that are economically beneficiable in the country, which makes sale of this production locally ineffective in increasing manufacturing volumes. Accordingly, sightholders maintain that the industry needs to access diamonds suitable to local processing abilities, regardless of the origin of the material (Cohen, 2000).

One problem that is common to large and small diamond cutters alike is finance. Diamonds are available to the local industry at world market prices, irrespective of source, which places South African manufacturers at a disadvantage relative to their counterparts in Israel or Belgium. Local manufacturers have to pay VAT on the

import and domestic sales of rough and cut diamonds, and are obliged to trade in Rands for a dollar-priced commodity, all of which erodes already thin margins in a highly competitive industry (Kaiser Associates, 2005). The problem of cost is exacerbated for small-scale manufacturers who struggle to market their goods internationally and therefore forfeit potentially better margins. Lacking the volume of turnover to justify the use of marketing agents in the USA and Asia, small manufacturers resort to selling locally to wholesalers who themselves market abroad or are affiliated to foreign marketing companies, either way realising a higher price for the product than in the local market (Cohen, 2000).

The cutting industry in South Africa, already limited in terms of the kind of diamonds that can be economically processed, is further constrained by a shortage of master diamond cutters (Leenaerts, 2004). Although the industry relies on trainees from the Harry Oppenheimer Diamond Training School, it is necessary to invest in more advanced training, as well as appropriate technology, in order to enhance South Africa's competitiveness in diamond processing. It is argued that by improving the cutting and polishing skills in the industry and boosting levels of polished diamond production, more foreign buyers would be attracted into the country, thereby affording smaller manufacturers an opportunity of selling polished diamonds at prices comparable to their larger competitors (Cohen, 2000). A polished diamond exchange, (currently lacking in the country), is also argued to be of benefit to the industry, and especially to jewellery manufacturers, in sourcing diamonds for finished jewellery. In the absence of a polished diamond bourse, jewellery manufacturers have to negotiate with individual cutters, or import the stones directly from India or the Far East. In 1996 the Diamond Bourse tried to generate a polished trading floor to enable local and foreign buyers to buy polished from one source, but this attempt met with limited success. One of the core reasons posited for this lack of interest was that polished suppliers were accustomed to operate from their individual offices, and preferred to continue to operate in this manner.[34]

In 2003, the problems experienced in South Africa's diamond industry prompted the government to commission a study designed to investigate the opportunities for positioning the industry as a globally competitive player. The study revealed that the prospects for raising the internationally competitive status of the local industry are limited (Kaiser, 2005). A number of issues underpin the limited opportunities for growth of the South African diamond industry. Among these are that South African diamond jewellery manufacturing is small in scale as compared to the major global

players in Europe, the US and India. Competitiveness in the diamond industry is highly dependent on cost advantage and economies of scale in relation to the mass production, low-end part of the market. The top end of the market relies on quality, design, and branding for competitiveness. South Africa has no pre-eminence in these factors to enable it to become a global competitor. In terms of successful diamond trading hubs, such as the ones that exist in Belgium and Israel, these are usually integrated into established diamond demand networks, and benefit from low–duty or duty-free import and export tariffs, highly incentivised environments and specialised financial services. Similar type hubs are emerging in other major centres of the world, such as Dubai and Shanghai, under the impetus of significant government resources and assistance.[35] These conditions are not available in South Africa, and neither is the country in a position to offer them. Competing in the diamond jewellery retail sector requires the creation of unique shopping experiences, effective branding and marketing, and integration into the luxury goods retail market. South Africa's distance from major consuming markets has inhibited competitiveness in this final stage of the diamond pipeline. Although certain South African diamond retailers have succeeded in penetrating the tourism market, the scale of this market in South Africa is very small in comparison to global diamond retail markets. Overall, South Africa has less than one percent of global diamond jewellery demand, and a limited presence in the major consuming or emerging world markets (Kaiser Associates, 2005).

Currently, the trend in the diamond industry is towards vertical integration, accentuating the relevance of the entire diamond pipe-line up to the point of selling the end product. This growing phenomenon is supported by De Beers' Supplier of Choice programme, and also stems from broader strategies to improve efficiencies in supply chains. The effectiveness of vertical integration is that it reduces the number of intermediaries in the supply chain and therefore improves the efficiency of the distribution system. In addition, it ensures the better co-ordination of processing with consumer demand, tighter control of margins, and targeted marketing and branding that ensures higher consumer prices. With the exception of a few sightholders and larger operations, the majority of the South African diamond industry is not positioned to operate in this manner (Kaiser Associates, 2005). The study concluded that whilst individual companies may access new markets or expand existing market niches, elevating the industry as a whole to become a global player requires long-term interventions and enormous government resources (Kaiser Associates, 2005).

Notwithstanding these problems, considerable efforts have been made to develop and strengthen the local industry to ensure its international competitiveness. Both the diamond training school and the "hive" for emerging entrepreneurs are initiatives which are fully supported by the industry in the form of the Diamond Foundation. Promotion of the industry has not only been limited to improving the diamond manufacturing process. Efforts have also been made to strengthen the diamond value chain by stimulating demand for diamonds further downstream, in jewellery fabrication. De Beers has been most active in this area, launching in 1996, a jewellery design forum. In this forum a selected group of the country's most promising design students attend a series of seminars relating to jewellery before creating their own pieces of diamond jewellery. A "shining light" award is presented to each of the students and the pieces are exhibited throughout the country.[36]

4.2.2 Gold

With the discovery of the world's largest known gold reserves in the Witwatersrand, gold production has been the cornerstone of the South African economy. Currently, South Africa still leads the world in gold production, contributing 14 percent of total world output in 2004 (Chamber of Mines of South Africa, 2005). The country's nearest competitors in this respect are the USA, Australia, China and Russia (Department of Minerals and Energy, 2004a). Although the country's production of gold has been in decline since 1971, from a peak of 1000 tons a year to an output of 342 tons in 2004 (Chamber of Mines of South Africa, 2005), it is estimated that the Witwatersrand gold field still contains as much as 40 percent of known global gold resources (Wilson, 2000). The potential for future mining in the Witwatersrand is not, however, without problems. Increasing production costs, associated with ever-deepening levels of mining and exacerbated by a declining gold price, present a serious threat to several existing mines and to the future exploitation of ultra deep deposits which often exceed four kilometres in depth (Wilson, 2000).

4.2.2.1 *Processing of gold*

In the early days of South African gold mining, little infrastructure existed to support the industry; with no refining facilities, crude bullion produced had to be shipped to London for refining. The Chamber of Mines of South Africa, then known as the Transvaal Chamber of Mines, was founded by the mining houses in 1887, shortly after the discovery of gold, to provide advisory and service functions to its members (Transvaal and Orange Free State Chamber of Mines, 1965). Under the auspices of the Chamber, the first effort at providing some form of processing facility was the

establishment in 1909, of the Witwatersrand Co-operative Smelting Works, to treat the gold and silver bearing by-products from reduction works. The first gold refinery capable of the rapid and effective treatment of large amounts of bullion, was only founded in 1920. Known as the Rand Refinery, it was strategically located in Germiston, 16 kilometres outside of Johannesburg as this constituted the geographical centre of the Witwatersrand gold mining area; in addition, services and rail facilities were readily available. The original capacity of the Rand Refinery was 12 million troy ounces (373 250kg) of gold per annum. Increasing throughput over the years demanded further modifications and improvements which were introduced in 1965 as part of a major expansion programme. At this stage it was decided to amalgamate the old existing Witwatersrand Co-operative Smelting Works with the gold refinery, resulting in a new by-products treatment plant (smelter) being erected alongside the refinery, which facilitated support functions such as administration, laboratory, assay office, and workshop. During the late 1980s the Rand Refinery underwent further upgrading, making it by far the largest establishment of its kind in the world, with a capacity for refining 1200 tons of gold per annum (Mostert, 1998).

Rand Refinery transports mine bullion, upgrades it into gold and silver of commercial purity, and treats a wide range of materials to recover gold, silver and platinum group metals (pgms). The enterprise then supplies world markets with high purity and value-added products such as investment bars, granules, crystals, medallions, bullion coins and gold chemicals. It also administers precious metal sales and distribution of proceeds to investors. Complementing these mainstream activities are analytical, service and security functions. In addition to the core business of mine bullion refining, other functions of the Rand Refinery include upgrading gold to a very high purity for use in industrial and technical applications and for investment purposes. Products from the refinery range from 400 ounce, one kilogram, and ten tola bars, to medallions and granular gold of various alloys for use in jewellery manufacturing (Botha, 2004).

Gold bullion goes through an elaborate procedure before transformation into gold bars and other products. Bullion is collected daily from the mines and transported to the Refinery where it is evaluated for weight and purity to assess the exact value of each customer's consignment. The gold is given an identification code linking it to the source mine. Thereafter it undergoes a complex purification system to reveal the quantity of gold, silver and base metals contained in the deposit. Within two hours of the ore arriving at the refinery, the exact quantity of gold is determined and payment

to the client is calculated. The gold is then pooled, losing its identity, and undergoes further processing to be converted ultimately into granules for use in the production of other goods. Alternatively, it is made into 400 ounce 'good delivery bars', so named because the bars were accepted as being good for delivery to central banks and gold exchanges (Spicer, 2001a). All producers are paid the London afternoon fix on the day that their gold arrives for refining. The refinery is able to borrow, as a loan, the same quantity of gold that was brought in by the producer, which it sells to the gold market. The producer is then paid from funds that are transferred from the refinery's account into the mine's denominated bank account, even before the gold has been refined.

4.2.2.2 *Marketing of Gold*

Until 1998 when the Reserve Bank started to phase out its involvement in the marketing of gold, the Rand Refinery had to sell all South African produced gold, in the form of 400 ounce bars suitable for delivery on the London bullion market, to the Bank. The Bank paid for the gold on the basis of the average of the last two London fixings, less a small realisation charge.[37] This arrangement stemmed from the Currency and Exchange Act of 1933, in which year the Chamber, acting as agent for the producers, entered into an agreement with the Reserve Bank defining the terms and conditions on which the Bank would purchase all output offered. No substantial changes to the agreement took place until 1971 with the advent of the Krugerrands, when the Chamber negotiated the right to sell up to one-third of South African gold production independently of the Reserve Bank, in value-added forms of one kilogram or less.[38]

Under the new agreement, the Rand Refinery was able to sell Krugerrands and other forms of gold to local industrial users and jewellery manufacturers. Gold to South African manufacturers used to be sold through the South African Mint, established two years after the Rand Refinery, albeit the latter took over this function in the 1990s. Sales of gold through the Rand Refinery were under the auspices of the Chamber of Mines which had the right to market gold on behalf of the producers; the refinery itself did not market gold. The specific role of marketing gold was, in the 1970s, assigned to Intergold, which popularized the hugely successful Krugerrand. In the 1980s the World Gold Council succeeded Intergold as the marketing organisation for gold.

Although the Rand Refinery was legally obliged to sell the bulk of its gold to the state Treasury, the mining industry was not entirely averse to this arrangement. The gold producers, unlike their overseas counterparts, may have been denied full control over the marketing of their product, but they also realised that the Reserve Bank disposed of the gold efficiently and effectively, to the benefit of both the producers and the country. Furthermore, undertaking full responsibility for selling the gold themselves carried a number of risks for the gold mining industry. First, they would no longer be paid immediately at market prices for their product; second, they would need to decide whether the gold was sold through the individual mining groups or whether the industry established a central selling organisation; and third, they would need to take frequent decisions on whether to withhold or increase sales, or even buy gold. There was also the uncertainty of the potential impact of new marketing arrangements on the gold market and the gold price, and the implications of possibly competing with customers such as bullion dealers and banks involved in the gold trade. Finally, there were cost and other implications of having to carry inventory, and of establishing and maintaining a marketing infrastructure.[39]

With the announcement by the Reserve Bank towards the end of 1997 that it would start phasing-out its involvement in the marketing of gold, the Rand Refinery was forced to function competitively in response to market demand. The decision to appoint Rand Refinery as the agent of the gold mining companies in the sale of gold was not automatically adopted; the role of the company from being a service organisation in the refining of gold, to adding value to and distributing the product, was carefully considered. Once mandated by the gold producers to be the agent for gold sales, the company made changes to increase its capacity for manufacturing gold, but specifically in the form of value-added products rather than the 400 ounce monetary bars which could only be sold to bullion banks for no more than the spot price (Lourens, 1998a). The refinery expanded its product range to include one kilogram investment bars, ten tola bars (a three and quarter ounce or almost 117gram bar very popular in India), jewellery alloys, and precious metal salts used for gold plating and gold forming, all of which enabled internationally competitive pricing and better profits (Creamer, 1997; Spicer, 2001b). Further, the company expanded its business internationally in response to declining South African gold production and grades; whereas the refinery in the 1970s refined as much as 1000 tons of South African gold a year, by 2000 output was less than half that volume and additional gold was sourced from other parts of Africa as well as Latin America and the Far East (Scheepers, 1999). In order to attract new customers, the refinery offers

a ‘holistic service’, from the logistical requirements of getting gold from the individual mines to the plant in South Africa, to converting the metal into consumable products and distributing it to the world markets (Scott, 2002). Venturing into foreign markets required the refinery, in line with its competitors, to form alliances with bullion dealers to enable it to bear the price and credit risk attached to the selling process. From having no trade relations with large finance institutions prior to 1998 the refinery has, since then, developed associations with a number of global bullion dealers (Spicer, 2001b).

From 1999, the company decided to branch further downstream in the form of semi-manufactured products (semis) for the jewellery industry. The products, ranging from fine gold and carat alloy grain, plate, rod and wire of varying dimensions, were initially targeted at South African manufacturers, especially small-scale operators for whom it was not cost-effective to produce their own semis (Poggiolini, 1999a). South African manufacturers did not, however, respond well to the new initiative, despite the potential gains of buying the products on a mass-produced basis. The poor response from manufacturers was attributed to their being accustomed to producing their own semis. Another reason for the lack of interest was the enormous gold theft market that is presumed to exist, based on the discrepancy between the local jewellery manufacturing industry’s consumption of 10-14 tons of gold a year, and the purchase of only three of those tons from the refinery (Spicer 2001b; 2001c). Having invested in the equipment for semis, Rand Refinery turned its attention to the export market for disposal of the products (Spicer, 2001c). The marketing of gold semis is riskier than marketing other products, such as investment bars, which bear the company stamp and printed quality guarantee, in the absence of a hallmarking or quality guarantee system in South Africa. The company has been more successful in marketing its other products such as small gold bars which are popular in Turkey and India, and chemical salts of which the refinery is the third largest supplier in Hong Kong (Spicer, 2001c).

For many years the Rand Refinery was the only gold refinery in South Africa. This situation changed in 1997 with the opening of Harmony Gold mine refinery, the first independently owned gold refining plant in the country. The new refinery, based in Virginia in the Free State province where Harmony Gold mine is located, is on a much smaller scale to Rand Refinery, with production capacity of two tons a month and a maximum potential of 70 tons a year (Creamer, 1997). The refinery was said to be a more cost-effective option for Harmony Gold than having their gold treated at

the Germiston plant. Other reasons for establishing the facility were that it conformed to the plan of developing the Virginia area into a jewellery manufacturing hub (Bradley, 1998a). The processed gold from the new refinery is intended for the export and domestic market, and especially for locally based jewellery manufacturers who, it is hoped, will be attracted to the area by the convenient availability of refined gold and jewellery alloys (see Chapter Seven).

4.2.3 Platinum

The platinum group metals (pgm) occur as a family of six chemically similar elements identified as platinum, palladium, iridium, rhodium, ruthenium and osmium. These metals are among the least abundant on earth but their properties of high density, strength, catalysis and high melting temperatures make them singularly valuable in highly technical applications in industry and, in the case of platinum, in jewellery (Spicer, 2001d). South Africa is in the envious position of supplying about 77 percent of the world's total platinum supplies, or 5,030 million ounces of a global total of 6,500 million ounces (Kendall, 2005). Global supplies fall short of the level of demand, currently registering a deficit of 80 000 ounces (Kendall, 2005). The metal's scarcity serves to enhance its value, and since 2000 platinum has replaced gold as South Africa's single largest generator of foreign exchange earnings (Holtzhausen, 2001; Scott, 2001).

4.2.3.1 *Platinum mining in South Africa*

In 1924 the world's largest platinum reserves were discovered in the Bushveld complex of Limpopo Province. The source of the discovery in South Africa was a geological layer, the Merensky Reef. The site of the original discovery was the eastern Bushveld but when even richer deposits were found on the western part of the complex, mining explorations shifted to the Rustenburg area in the west which remains the location of the world's largest platinum mines (Keogh, 2000). Production in the early years was very low; only about one million ounces of platinum were mined in the 25 years subsequent to the Merensky discovery. As demand for the metal improved, however, especially after the Second World War, so supplies increased and South Africa progressed from producing one-third of world platinum demand in the 1950s, to producing half in the 1980s, and three quarters by 2003 (Lourens, 1999a; Keogh, 2000).

The Bushveld complex has been described as an enormous, roughly shaped basin about 400 by 300 kilometres in extent, with the centre buried underground and the

edges exposed (Spicer, 2001e). It is these "edges" that form the eastern, western and northern limbs of the complex. Of the several layers that make up the Bushveld complex, two are platinum bearing reefs, these being the Merensky and Upper Group Two (UG2) reefs that occur on the eastern and western sides of the complex; a third pgm rich layer, the Platreef, occurs on the north-eastern limb (Keogh, 2000). Whereas the Merensky Reef has been the principal source of production since the 1920s, its importance is diminishing as mining exploration increasingly targets the UG2 layer, which is estimated to contain more platinum than the Merensky layer (Creamer, 2001). Extraction of the UG2 already began in the 1970s and by the end of the 1990s accounted for well over 40 percent of ore processed (Keogh, 2000). The bulk of the platinum mined thus far has been in the Western complex, which produced 93 percent of South Africa's output by 1999. One of the reasons given for the preponderance of mining in this area is the availability of infrastructure, water, rail links, and human resources, relative to the eastern side which is characterised by poor transport, water sources and power networks (Spicer, 2001e). Increasingly, however, mining activity is taking place on the eastern limb, through expansion of existing producers and new entrants into the industry (Creamer, 2001).

Platinum mining in South Africa is dominated by a handful of large producers, headed by Anglo Platinum (Angloplat) which accounts for almost half of the country's production. Angloplat's output of 2.45 million ounces in 2004 is more than twice that of its nearest competitor, Impala Platinum, and two and a half times that of the country's third largest producer, Lonmin. The other companies, Northam, Aquarius and Southern Era, are considerably smaller producers with platinum output below 300 000 ounces (Kendall, 2005). The numbers of producers in platinum mining are likely to increase significantly given the number of new partnerships being formed, especially in the interest of raising the level of black empowerment in the sector (Holtzhausen, 2001). This trend is also set to accelerate under impetus of the new minerals legislation which aims to substantially increase black ownership in the mining sector within the next ten years (Jones, 2002). With expansion of production through existing and new concerns, it is estimated that platinum output from South Africa will exceed six million ounces a year within the next two to three years (Kendall, 2002). These and higher levels of production should be possible for the country, given that the ore reserves for the Bushveld complex have been estimated at more than four billion ounces (Spicer, 2001e).

4.2.3.2 *Platinum processing*

The processing of pgm is long and complex as it involves the recovery of six metals including small amounts of gold and substantial quantities of the base metals copper, nickel and chrome. In addition, ore mined from the Merensky and UG2 reefs requires treatment in separate milling and flotation circuits until the smelting stage because of different metallurgical properties.[40] Because base metals occur together with the precious metals, processing requires two refineries, a base metals refinery (BMR) and a precious metals refinery (PMR). Once the ore reaches the surface it is crushed and milled to reduce the size of the rock particles and expose the pgm containing minerals. The ground particles are mixed with water and special reagents in a so-called "froth flotation" process which results in the pgm-rich particles separating from the waste by clinging to induced air bubbles. After drying, the flotation concentrate is smelted at extremely high temperatures, causing a matte of the valuable materials to form and separate from the unwanted matter. At this stage the matte goes to the BMR where the base metals are extracted and refined. The final stage is the separation and purification of the six platinum group metals, plus gold and small amounts of silver. This is the most complex and difficult part of the refining process, involving the ultimate extraction of each of the seven precious metals at different stages, starting with gold and ending with rhodium. The refined PGM have a purity of more than 99.95 percent and can be produced in a number of forms such as ingot, grain, or a fine powder known as a "sponge". The time between mining of the ore and production of the pure metal is around six weeks for palladium and as much as 20 weeks for rhodium (Keogh, 2000).

Unlike the gold industry which, apart from Harmony, uses one refining plant to process its ore, each of the country's three largest platinum producers has its own base and precious metals refineries. These refineries serve the needs not only of the owner groups' mines, but also of joint venture partnerships and other, local producers lacking their own facilities. The local refining of South African platinum production is a relatively recent phenomenon. Until 1972 platinum refining was undertaken in the UK, under auspices of the company Johnson Matthey which was appointed the refining and sales agent for South African-mined platinum. With the surge in demand for platinum and the consequent expansion of production, the platinum producers assumed responsibility for all their smelting and refining requirements (Green and Coombes, 1994).

4.2.3.3 *Marketing of platinum*

In contrast to gold, platinum has historically not been subjected to constraints or other government restrictions on sales of the metal. In the early days of platinum mining, Johnson Matthey's position as the world's major fabricator and supplier of platinum products made it the natural choice as sales agent for what was then Rustenburg Platinum Mines (belonging to the Anglo Platinum group). The arrangement was ideal at the time given Johnson Matthey's technical prowess in the field of platinum fabrication, and the distribution of its manufacturing and sales outlets throughout the industrialised world. Part of the company's contractual obligations with the mine was also to develop new product uses for platinum. When demand for platinum soared in the 1970s, on the basis of its catalytic application in pollution control and, later, popularity in jewellery, the original sales agency agreement with Johnson Matthey was revised to give Angloplat greater involvement with fabricators and consumers. Thus, the mining company undertook responsibility for direct contracts in the emerging auto sector and for metal sales to major fabricators, and also took control of the refining process. In addition, Angloplat established a separate organisation, the Platinum Guild International, for specific support and development of the burgeoning platinum jewellery industry. Johnson Matthey's role was as marketing agent to support and expand world platinum demand, in particular through the research and development of new applications for the metal (Green and Coombes, 1994).

This symbiotic relationship between Angloplat and Johnson Matthey has continued: the latter provides intelligence and market research that ultimately informs the marketing and operational strategies of the mining giant.[41] Johnson Matthey is the Angloplat agent for the sale of platinum to the local manufacturing industry. Through them, pure platinum is sold directly to the jewellery manufacturer, or is sold to metal suppliers who first alloy the platinum for direct use by the manufacturer. Alternatively, platinum is imported into the country, either in its pure form or as minted coins, blanks and semi-blanks that can be melted down and sold in forms acceptable to the industry. Another source of platinum for manufacturing purposes is from some of the other platinum producers in the country who sell direct to the industry.

The Platinum Guild, following the phenomenal growth of the platinum jewellery market, expanded its operational base from Japan where it was originally focused, to Europe, the USA, China and India. Until 2001 the Guild was supported only by

Angloplat. Since 2001 other South African producers, among them Impala, Lonmin, Northam and Aquarius, have agreed to support the Guild's activities, albeit on a smaller scale to Angloplat which remains the largest contributor. Another organisation, the International Platinum Association (IPA), is also supported by the major platinum producers. The IPA was established at the end of 1987 to provide a communication forum for producers, precious metal fabricators and refiners.[42] Both the Platinum Guild and International Platinum Association, despite being financed by South African producers, are firmly focused on markets outside South Africa. Overall, the South African platinum manufacturing market is too small to warrant extending the promotional activities of these organisations to the country. Platinum producers do play a role in promoting the South African platinum jewellery industry (Chapter Seven), but not via the Guild or Association.

4.3 A Profile of the structure of the jewellery industry in South Africa

This profile was compiled from documentary sources and important stakeholder interviews. The interviews were both at an individual level in terms of obtaining information for this study, and through interactions with industry representatives in the course of participating in government-related initiatives such as the cluster programme and jewellery marketing study.

In light of South Africa's enormous mineral wealth and the sophistication of its mining sector, the extent of the downstream beneficiation of its precious metals into jewellery is minimal. The value of South Africa's jewellery industry is estimated at R3 billion, based on an acquisition study conducted by De Beers in 1997, in which the local diamond jewellery industry was valued at R1.3 billion. From this it was deduced that the gold jewellery sector was worth approximately R1 billion, and the watch sector about R800 000. The industry employs between 15 000 and 20 000 people, of which about 4 000 are in the manufacturing sector (Noik, 1999a). The jewellery industry in South Africa is presided over by the Jewellery Council of South Africa, the overarching body of the industry which, through its constituent organisations, represents the various facets of the industry as a whole.

The constituent bodies of the Council are broadly representative of the jewellery and diamond aspects of the industry (Kabat, 1983). With regard to the jewellery sector, the Jewellery Association of South Africa and the Jewellery Manufacturers' Association represent the retail and manufacturing sectors of the industry

respectively; diamond organisations affiliated to the Council include the Diamond Club and Diamond Merchants Association of South Africa, both representative of the polished diamond sector, and the Master Diamond Cutters' and Rough Diamond Dealers Associations, which respectively represent the cutting and rough diamond dealing sections of the industry. Membership of the Council is also extended to the importers and distributors of watches, clocks and jewellery; equipment and other suppliers to the industry, and the wholesalers of pearls, precious stones, jewellery and costume jewellery. These segments of the industry are affiliated to the Council in their own individual capacity, as the Jewellery and Watch Distributors Association that used to represent this constituency was wound up towards the end of 2000, given the lack of "any pertinent issues to deal with other than the duty on pearls and clocks".[43] Members of the association, therefore, assumed direct membership of the Jewellery Council. The mining sector is also represented on the Council through the membership of De Beers, Anglogold-Ashanti, Anglo Platinum Management Services, and the Chamber of Mines. The Jewellery Council is based in Johannesburg and describes its functions in the industry as marketing, representation to government, the organisation of trade fairs, seminars and training courses, the operation of the Diamond Certification Laboratory, and the dissemination of information to the industry. In addition, the Council organises the annual jewellery trade fair, Jewellex, and an annual design competition to foster and promote the skills of local designers.

4.3.1 The jewellery manufacturing sector

In 2003 South Africa's jewellery manufacturing industry comprised approximately 350 manufacturing concerns, these being mostly small-scale businesses employing less than 50 people (Minitt, 2000). Fewer than ten companies employ above 100 people; the largest manufacturer employs nearly 200 workers (Martin, 2003). The manufacturing sector is divided mainly between the two provinces of Gauteng and the Western Cape, with a sprinkling of manufacturers in the Durban/Pietermaritzburg and Bloemfontein areas. The Durban/Pietermaritzburg region has a strong contingent of Indian manufacturers and retailers who cater for the local Indian community, but the historical marginalisation of Indian jewellers, coupled to the under-resourced and poor representative structure of the governing body of the industry, has resulted in a dearth of information relative to this sector of the industry. Because of the location of the manufacturing sector in two distinct geographical areas, it is represented by two separate organisations, the Jewellery Manufacturers' Association in Gauteng and the Cape Jewellery Manufacturers' Association in the Western Cape.

The jewellery manufacturing sector is said to consume about 14 tons of gold a year (Kaiser Associates, 2001). Estimates on the amount of platinum a year used in jewellery manufacturing vary enormously, with some in the industry claiming no more than 50 kilograms and others estimating consumption of as much as 400 kilograms (Eliot, 2003). One of the platinum supplying firms to the industry maintains that approximately 135 to 150 kg of platinum a year is used by the industry as a whole; higher estimates are likely to include recycled platinum (Eliot, 2003). Certainly, platinum sales for finished jewellery are unlikely to be excessive given the size of the industry in South Africa which is still in its infancy. It is estimated that only 50 jewellers throughout the country can produce platinum jewellery; platinum, apart from being considerably more expensive than other jewellery metals, is more difficult to fabricate into jewellery and also requires to be treated separately from other metals because of the risk of contamination (Eliot, 2003). It is, therefore, important for manufacturing jewellers working with platinum to have separate areas and equipment, a requirement that not many jewellers can fulfill.

Most of the jewellers that fabricate platinum make to order, as the expense of the metal makes it prohibitive to keep jewellery in stock. The locally produced items are mostly hand-crafted, because of the expense of the raw material and of the casting machines for batch production. Casting methods of manufacture are used in the case of high volume orders, which justify the use of machinery (Shimansky, 2003). Very few platinum manufacturers produce using these methods, however, as less than six companies supply export orders (Martin, 2003). Large manufacturers in South Africa are still small by global standards, employing less than 20 people. Indeed, only two platinum manufacturers are high-volume, export-oriented producers. One of these is a chain-making operation established at the end of 2003 as a joint venture partnership involving one of Italy's largest platinum jewellery producers, a South African manufacturer and Implats. The other large exporter does not produce finished jewellery but instead exports semi-finished platinum to the United States.

With respect to gold jewellery, about 20 percent of local production is exported, principally to the UK, US and Australian markets, with some tentative forays into the Japan, Chinese and Hong Kong markets in the Far East, albeit with marginal success (Kaiser Associates, 2001). Like the UK jewellery market, South Africa is mostly a nine carat gold consumer market, although handcrafted pieces in 18 carat gold and in platinum are also in demand by both local and tourist consumers (Noik, 1999a). Jewellery manufacturers are usually classified as either mass producers or

design craftsmen, producing unique, handcrafted pieces. Many of the local producers use a combination of casting (mass production) and hand-finished techniques, requiring a high percentage of skill in the business.

In terms of design, South African talent in this field has often been recognised through the winning of several internationally acclaimed competitions, such as the De Beers Diamonds International Awards and the Gold Virtuosi Competition*. Nevertheless, overall South African produced jewellery lacks its own design 'signature' to distinguish it in the international market. Indeed, it has often been observed that South African jewellery manufacturers either imitate European designs, or produce highly ethnic designs with little international appeal. To become globally competitive, manufacturers need to produce original designs that express the African influence, but in a globally acceptable style (Noik, 1999a; b; Whitmore, 1999).

4.3.2 The jewellery retail sector

The retail sector of the industry consists of about 3000 stores employing approximately 9 000 people. About one-third of the retailers are represented by the Jewellers Association of South Africa, the organisational body for this sector. In keeping with trends in other parts of the world (Chapter Three), most of the retail outlets are chain stores or franchises. Of the retail outlets affiliated to the Jewellers' Association, approximately 75 percent form part of chain or franchise businesses, the remaining 25 percent made up of smaller concerns with less than ten branch outlets, and independent operators (Delport, 2005). Although merchandise is both local and imported, South African retailers tend more towards imported goods, despite a 20 percent import duty. Local manufacturers claim that retailers base their purchasing on cost, regardless of the quality of local fabrication (Kaiser Associates, 2001). The retailers' preference for imported, versus locally produced goods does little to promote the growth of South African manufacturing. The main reason, however, for the diminutive size of the local jewellery sector is the lack of a jewellery-buying culture which normally underpins the success of many of the major jewellery consuming countries of the world. Moreover, with a very low percentage of the population sufficiently affluent to purchase precious jewellery, some manufacturers produce specifically for the tourist market. Others are gradually realising that exporting may be their only means of continuing to operate in the sector.

* Sponsored by Anglogold, Vicenza Fair and World Gold Council

4.3.2.1 *Training in jewellery manufacturing*

Training in jewellery manufacturing is primarily through the country's tertiary education institutions: the Technikons of Pretoria, Witwatersrand (Johannesburg), Durban and Cape, and Stellenbosch University in the Western Cape (Fig 4.3). Of these, the jewellery department at the University of Stellenbosch is the oldest in the country, having been established over 30 years ago. This department is also the only one in the country from which a university-level degree in jewellery design may be obtained. Only 12 jewellery applicants are accepted at any time, which means a total complement of 35 to 40 students over the four year course.[44] The jewellery courses at the Technikons were introduced in the 1990s, except for the Durban Technikon which, in the mid 1970s, was the first such institution to offer training in jewellery design and manufacturing. All of the Technikons offer a diploma course over three years, with an optional fourth year where students obtain the equivalent of a degree. Aside from teaching all the theoretical and practical aspects of jewellery design and manufacturing, the Technikon courses also cover business management practices to equip students in running their own businesses. Pretoria Technikon is the only institution to offer a specialised, one year course in platinum jewellery manufacturing. The course, sponsored by Angloplat, comprises the fourth year option for the jewellery students at the Technikon, but is also open to any jewellery graduate for specialisation in platinum jewellery manufacturing. Of the four technikon jewellery departments, Pretoria is the largest with an intake of approximately 30 to 35 students in first year and an average of 90 students overall (De Lange, 2003). The other departments are smaller with an average of 60 to 70 students at any one time.

The Technikon jewellery courses provide the most comprehensive tuition in jewellery design and manufacturing. In addition, courses in the field are also available through some of the colleges in the country. Currently three colleges, Cape College in the Western Cape, P.E. College in Port Elizabeth, and Bloemfontein College, provide a two–year certificate course in jewellery design and manufacturing. The Cape College has exit levels at the end of each year and, although the courses at the other colleges are not similarly structured, they are likely to do so in accord with the new national qualifications system for industry training. The colleges accommodate an average of 30 students. The Cape College trains additional students on a part-time basis through specific course modules for those employed in the industry, and P.E. College offers introductory training to over 20 students at school level, to encourage a jewellery career choice. The college courses are said to be specifically tailored to industry requirements, and this is borne out by the high employment rate of college

graduates. Students from the Cape College starting in the industry have all been employed thus far, and the P.E. institution claims that 97 percent of their students are absorbed by the industry. The ease with which students find employment in the trade is related to the nature of the training programme at the colleges which is particularly focused on manufacturing and production, with lesser emphasis of design which is more the domain of the Technikons. [45]

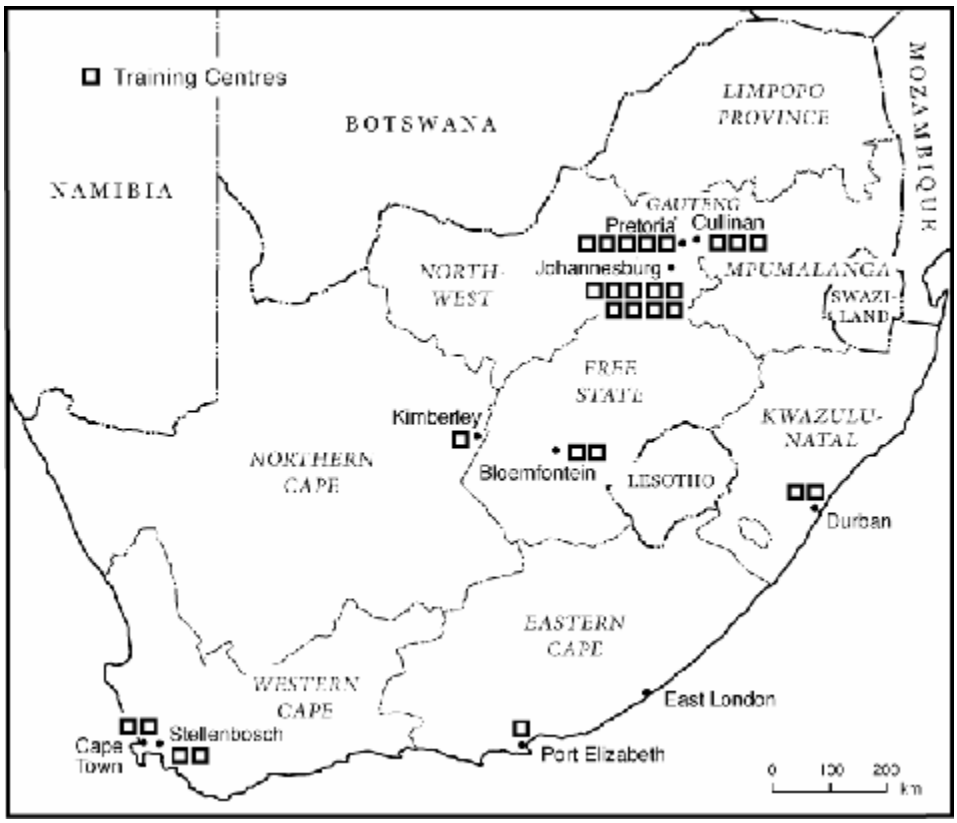


Fig. 4.3 Jewellery training institutions in South Africa

One of the problems faced by the jewellery departments is affording the precious metals required for training purposes. Occasional donations of precious metal are made by the individual mines, Rand Refinery, and certain of the metal suppliers, but in most instances the cost of working materials has to be borne by the teaching institutions and students. For this reason students often work with less expensive materials such as silver, using gold and platinum only in specific instances.

A recent addition to the number of training institutions offering jewellery courses is *Vukani Ubuntu* Jewellery Design School, first opened in Atteridgeville, a black township in Pretoria, for training black, disadvantaged and inexperienced people in jewellery manufacturing. The school, opened in 1998, offers a three-year design course with the emphasis on practical skills, the aim being to train students as

effectively and efficiently as possible to enable them to quickly become self-sufficient through the manufacture of jewellery and crafts of saleable quality. Soon after the school was opened, a manufacturing workshop was established at the school to allow students to make jewellery to order, and also to sell ranges direct to the public, thereby gaining commercial skills at the same time as generating an income for themselves and the project. Work in the manufacturing centre has since been incorporated into the school curriculum as the practical side of the course. Students therefore attend two years of theory, and the third year is focused on producing commercial jewellery through the manufacturing workshop; previously the whole course extended over two years, and working in the manufacturing centre was optional (Maré, 2003).

The school operates with virtually no means of income beyond a R500 registration fee from students, with an additional R2 000 a year from those students who can afford it, towards a trust fund for use in the purchase of tools. The school, therefore, is reliant on sponsorships to continue functioning. One of the first sponsors of the project was Anglogold; subsequently other organisations have contributed their support, enabling the school to expand its activities. In 2003, 31 people were being taught in Atteridgeville, of which 15 are in first year and the remainder are equally divided between second and third year. Of the ten students that have graduated thus far, eight have succeeded in gaining employment in the jewellery sector, either through establishment of their own businesses or as employees (Maré, 2003).

Since opening in Atteridgeville, several other jewellery design and training centres have been opened, or are in the process of being established, by *Vukani Ubuntu*. The second such school to open was in Virginia, in the vicinity of the Harmony Gold mine, and in premises donated by the mining company. Aside from the contribution and assistance of Harmony Gold mine, the school in Virginia was also facilitated by a grant from the Italian government for the promotion of jewellery expertise in the area. The choice of the Virginia area in the Free State was made on the basis of government and private sector plans to develop a jewellery manufacturing hub there, facilitated by the proximity of Harmony Gold mine and its recently established refinery. The school, towards the end of 2002, became independent and is no longer managed exclusively through *Vukani Ubuntu (*Maré, 2003*)*.

In 2002 a jewellery manufacturing centre was opened in Barberton under auspices of *Vukani Ubuntu,* with financial assistance from African Pioneer Mining, based in the

area, and local government. Approximately 16 students, most of them from the Atteridgeville school, are established at the manufacturing centre, producing jewellery for sale through LOSA, a London-South Africa venture involving community development organisations in South Africa and Sotheby's in London.[46] The LOSA project was at first focused on rural craft work from South Africa and, based on the success of that venture, is now expanding to include jewellery. It entails a number of British-based designers who develop jewellery designs with international appeal but inspired by South African indigenous skills and culture, and the consequent training in South Africa of previously disadvantaged manufacturers to produce those designs. The jewellery pieces are intended for exhibit and sale in London through Sotheby's (Maré, 2003).

Another school established through *Vukani Ubuntu* is in Kimberley in the township of Galeshewe, in conjunction with the locally based Kimberley College for Further Education. The project differs from the others in that it is focused on the cutting and polishing of precious stones. Thus far, 13 people have completed the one year training course, comprised of six months theory followed by practical work. Several other training and manufacturing centres are planned for other parts of the country, in both urban centres and the more outlying areas (Maré, 2003).

Another organisation involved in engendering an interest in jewellery manufacturing and craftsmanship among unskilled and unemployed youth is Imfundiso Skills Development, a non-governmental organisation started in 2001. In 2004 Imfundiso opened the Soweto Jewellery School in Soweto, the largest black township in Johannesburg. The school programme offers a two-year jewellery manufacturing course, after which students may further their studies at a Technikon, or enter the trade as employees of established manufacturers. In addition to the school in Soweto, Imfundiso operates three other jewellery manufacturing centres, *viz*., the Cullinan Jewellery School in Pretoria, the Sekhukhune jewellery School in Limpopo, and the Refilwe Jewellery Campus (AngloGold Ashanti Marketing, 2005).

Training in jewellery fabrication is not only institutional; it is said that the bulk of the industry's training occurs outside the formal education system through apprentice- or learnerships and "on-the-job" training. Between 120 and 140 apprentices are registered in any given year, which is similar to the number of students registered for jewellery design at the Technikons (Noik, 1999a). The training requirements of the jewellery and diamond manufacturing industries, whether apprenticeship or

institutional based, is governed by the Mining and Quarrying Sector Education Training Authority. Within this structure, training representatives from the diamond and jewellery sectors have contributed in drawing up course curricula and training programmes to coordinate and standardize the various training options available. Nevertheless, the educational needs of the industry will vary with new developments, and it is important that the training programmes are revised periodically to reflect the changing requirements of the industry.

4.4 Conclusion

The discussion in this chapter has demonstrated the value of South Africa's natural resources in laying the foundation for the country's economic base, and elevating the mining sector to one of the most sophisticated in the world. Nevertheless, the global demand for diamonds, gold and platinum, whilst it fuelled the growth of mining and related industries in the country, at the same time shifted attention away from the use of these resources in the country itself. With the exception of diamonds whose export in rough form was, to a limited extent, controlled by legislation in order to encourage the local cutting and polishing industry, the mining and refining of the other metals for consumption in foreign markets was actively supported by government through the provision of infrastructure and supporting organisations. Indeed, for many years, the supply of gold from South Africa was intended specifically for foreign markets, as gold producers were legally obliged to sell the refined gold to government which had the sole agency in disposing of it internationally.

Platinum, whilst exempt from state decrees as to the marketing and trading thereof, has been destined for sale almost exclusively in the global market where demand stems from. With demand outstripping supply of the metal in its primary form, the local use of the metal in the manufacture of added value products has received scant attention. With limited incentives to promote the further beneficiation of precious metals resources, and the absence of a jewellery-buying culture in South Africa, the local jewellery industry has grown almost in inverse proportion to the mining sector.

Other factors are significant in retarding the development of jewellery manufacturing in South Africa, and these factors are highlighted by shifting the geographical focus from the national scale to an investigation of cluster dynamics at the local level. It will be shown in the following five chapters that the evolution of South Africa's jewellery

industry can best be understood in terms of analyzing the rise and fall of the jewellery cluster in Johannesburg. The theoretical framework of industrial clusters forms the basis for examining the factors that have impacted successively over time on the changing face of the country's leading cluster of manufacturing and retailing establishments. Many of the factors that have shaped and reshaped the Johannesburg cluster are a mirror of international trends in the restructuring of the global jewellery industry. Nevertheless, there are other locally-specific issues that come to the fore when analyzing the trajectory of the South African jewellery cluster.

The evolution of the jewellery industry in South Africa can be broadly interpreted as undergoing three phases of development. The first phase, from about the 1940s to 1972, is significant for the clustering of jewellery-related businesses in Johannesburg in the wake of the discovery of gold and diamonds in the area. At this stage the core of South Africa's jewellery industry is located in Johannesburg, with incipient jewellery centres in Natal and the Western Cape. During this period there were some efforts to foster the growth of smaller, incipient clusters elsewhere in the country but the dominant cluster remained the one in Johannesburg.

In phase two of the industry's evolution, from the early 1970s to the mid 1980s, efforts to expand the industry outside of Johannesburg were intensified. Under the aegis of the Jewellery Council of South Africa, the focus on the industry is geographically broadened to encompass areas beyond Johannesburg. With the expansion of other jewellery clusters nationally, especially in Natal and the Western Cape, the Johannesburg cluster no longer is solely representative of the industry in South Africa, albeit it still constitutes the major part of the national industry.

The third phase in the growth of the industry, beginning in 1988 and continuing into 2003, is characterised by a suite of government and private sector initiatives to renew the existing industry and establish new centres of development in areas not previously associated with jewellery manufacturing. Some of these initiatives are driven by the cluster approach of agglomerating sector-specific industries in a defined area, whereas others subscribe to the concept of strengthening the vertical and horizontal linkages within the sector as a whole.

The features and cluster dynamics of the three phases in the trajectory of the jewellery industry in South Africa form the focus of analysis in the following five

chapters. In Chapter Five the historical analysis commences with the early development of a manufacturing jewellery cluster in Johannesburg.

Notes for Chapter Four

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[3] *Business Day*, 27/5/2005
[4] *Ibid*
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[7] *Diamond News and SA Jeweller*, November 1997; *Business Day*, 05/07/2005; *Business Day*, 12/06/1005
[8] *Diamond News and SA Jeweller*, May 1996; *Business Day*, 05/07/2005
De Beers Consolidated Mines (undated): The role of South Africa in the international diamond industry, Johannesburg
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[11] *SA jewellery News*, January 2001
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[15] *Diamond News and SA Jeweller*, May 1996
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[17] *The Star* :*Business Report,* 01/09/2005; 31/09/2005
[18] *Business Day,* 01/09/2005; *The Star,* 01/09/2005
[19] *Business Day*, 11/09/2005; *The Star: Business Report* ,18/10/2005
[20] *Diamond News and SA Jeweller*, May 1996
[21] *Diamond News and SA Jeweller,* December 1999
[22] *The Star: Business Report*, 11/10/2005
[23] *Diamond News and SA Jeweller*, May 1996
[24] *Ibid*
[25] *SA Jewellery News*, October 2001
[26] *SA Jewellery News*, August 2001
[27] *SA Jewellery News*, November 2001
[28] *SA Jewellery News*, December 2001
[29] *Diamond News and SA Jeweller*, May 1996
[30] *SA Jewellery News*, January 2001
[31] *SA Jewellery News*, April 2000
[32] *Diamond News and SA Jeweller*, August 1997
[33] *Diamond News and SA Jeweller*, October 1999
[34] *Diamond News and SA Jeweller*, May 1996
[35] *Business Day*, 27/05/2005
[36] *Business Day*, 01/07/2005; 05/07/2005
[37] Chamber of Mines of South Africa, 'Marketing of South African gold', correspondence from senior general manager of the Chamber of Mines to economic counsellor, SA Embassy, Madrid, 04/02/1994, WGC Files
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[39] Chamber of Mines of South Africa, GPC Members Circular No. Y.11/93, 27/04/1993, WGC Files

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[41] Anglo Platinum: Annual Report 2001, Anglo American Platinum Corporation Limited, Johannesburg
[42] Anglo Platinum: Annual Report 2001, Anglo American Platinum Corporation Limited, Johannesburg
[43] *SA Jewellery News*, November 2000, p 6
[44] *SA Jewellery News*, January 2001
[45] Interviews with representatives of Cape College and PE College (Port Elizabeth)
[46] *Sunday Times*: *Business Times*, 17 March 2002

CHAPTER FIVE

The Emergence and Consolidation of the National Jewellery Cluster: 1920-1972

5.1 Introduction

The purpose in this chapter is to return to the theoretical debates discussed in Chapter Two and to trace the emergence of the jewellery industry cluster in Johannesburg, identifying the 'turning points' that determined the growth path of the cluster from the early 1940s to the early 1970s. It will be argued that two major turning points affected the development of the industry in this period. The first turning point was connected to the Second World War and to the restrictions to the economy that this entailed. The second occurred towards the end of the 1940s, when the South African government restrained access to gold in a bid to preserve bullion for the fiscus. The study focuses on the reaction of the cluster to these events, especially the joint action initiatives engaged in by jewellers in overcoming the obstacles to the development of the trade. Specific attention is drawn to the role of national government in influencing the growth path of the industry, either through direct intervention, or indirectly through broader inernational policy.

This chapter is centred on the dynamics of the jewellery sector from the time that it was a fledgling industry in the 1920s, to the end of the 1960s when it had evolved into an established cluster with a representative structure. In examining the course of the events that shaped the industry, the discussion is organized into four sections. The first section outlines the legislative framework that determined the boundaries for the functioning of the industry, and analyzes the elements that defined the jewellery industry as a cluster in Johannesburg. The second section defines the first turning point for the cluster and the effect that this had in introducing cohesiveness and structure to the industry. It is shown how during this period jewellery manufacturing in Johannesburg came to the fore, establishing this activity as a recognized section of an otherwise retail-dominated industry.

The second turning point in the industry forms the focus of the analysis in the third section. The emphasis is predominantly on the role of national government in steering the course of the industry, and the response from industry to the events impacting on it. It is argued that the government in South Africa affected developments in the cluster not only through the regulatory environment, as in many other countries (Chapter Three) but also through policies that precluded growth of the local jewellery industry. Nonetheless, intervention by the state was only one of the factors influencing growth of the cluster. Another important factor, which is examined in section four, was the response of jewellers in the cluster to the challenges of competition and technological development. It is the ability to transcend these pressures that determines a cluster's resilience and its capacity for expansion (Chapter Two). In the case of jewellery in South Africa, the cluster was often divided by sectional differences and therefore did not always remain cohesive in times of stress. Rather, it succumbed to conflicts and disputes that weakened the organizational body that might have sustained it.

5.2 Establishment of the industry

5.2.1 Regulations controlling jewellery manufacturing

For all that South Africa is one of the most renowned producers of precious metals and minerals in the world, it is significant that the local jewellery industry grew *despite* government efforts to restrain it, and not as a natural consequence of the availability of the raw materials. Because of the strategic value of gold to the country, beneficiation of the metal for jewellery was grudgingly tolerated rather than encouraged by the authorities as it was perceived to detract from the real purpose of gold as bullion. For this reason, ownership and trading in gold was strictly controlled by law under the auspices of the gold and diamond sector of the police. The laws which governed gold manufacture were subsumed under Transvaal Ordinance No. 35 of 1908 and Union Act No. 18 of 1913, which specifically prohibited the purchase or dealing in unwrought gold without a license, and required jewellers to keep a register recording details of the amount of gold in their possession, dates of purchases, whom purchased from, and quantity manufactured or in the process of being manufactured.[1] To ensure compliance with the regulations, the law vested wide powers in the police to inspect jewellers workshops, premises and vehicles at "all reasonable times by day and by night".[2] Police

were known periodically, and without warning, to arrive at a jewellers' premises to check whether or not the gold was being used for jewellery.

Despite the stringency of the regulations, there was no consistency in their application to the precious metals industry. Thus, although the processing of gold was subject to police vigilance, access to the metal was relatively free of restrictions. Anyone wanting to operate as a jewellery manufacturer only had to apply for a permit from the Receiver of Revenue, who was obliged to grant the permit as long so the applicant was deemed a "fit and proper" person.[3] There were aspects of production that the law completely overlooked, such as the caratage of items manufactured and how, and to whom, the articles were disposed. Further, the register was only required for gold, and not for silver or platinum.

It must be recorded that, in South Africa, only white people were entitled to work with or deal in unwrought gold[4]. Certain legislative variation applied to working or trading in gold between the different provinces. The major difference was in Natal. According to the Natal Mines Act of 1899, Indians were technically prohibited from working with gold but, after this issue was debated in 1915, it was decided to not take action against any Indians training as jewellers, and they were thus granted a concession to purchase gold by means of a police permit[5]. Before the end of the Second World War, when the concession granted to the Indians was once more called into question, the Minister of Mines was hesitant about suddenly terminating Indian jewellers' access to gold. Consequently, Indians continued to manufacture and trade in gold. Indeed, given the paucity of white jewellery manufacturers in Natal, coupled to the fact that Indians were not officially permitted to operate as jewellery manufacturers, police control of gold in Natal was considerably more lenient than in the Transvaal, the only requirement being that manufacturing jewellers keep records of receipts of gold and disposals. By contrast, manufacturing jewellers in the Transvaal had to keep a more detailed register of the gold in their possession[6].

Government attitude to the local beneficiation of precious metals and minerals was more supportive in respect of diamonds. Special legislation in the form of Act No. 38 of 1919 was passed "to make provision for the establishment, carrying on, regulation and control of a diamond cutting industry in the Union; for ensuring a supply of rough or uncut

diamonds to persons lawfully engaged in such industry; and for other purpose incidental to such matters".[7] The intention of the Act was to establish and control the diamond cutting industry in the country as well as to provide employment opportunities. As a result of the Act, by the beginning of the 1930s, 32 diamond cutting factories were established in Johannesburg. Nevertheless, by the end of 1936, the economic downturn of the great depression had caused these establishments to dwindle to only eleven or twelve, the majority of which were acknowledged to be struggling.[8] The cut stones were mainly targeted at the export market, either through direct selling, or by selling to buyers who would then export.

The gold law was not only introduced to control the movement of gold; it was also to protect the gold industry against jewellers who were generally regarded as potential 'miscreants'. Government openly articulated its mistrust of jewellers. This is evident in the government's response to a request from the governor of colonial Ghana for information on the laws in South Africa pertaining to gold. The colonial authorities sought assistance in framing policy to enable "native goldsmiths" to gain access to gold for handicrafts and related articles.[9] The South African government's reply was that "the laws of this country are framed primarily to protect the gold industry"[10]. Accordingly, the government stated that "without exception all jewellers in the province of the Transvaal (are regarded) as suspects".[11]

Unfortunately, the government's suspicions of jewellers were often given credence by the high incidence of illicit gold buying occurring across the Witwatersrand. Theft of gold from the mines was rife and attributed by disgruntled workers to "the policy of the Chamber of Mines to substitute natives for white men in responsible positions".[12] The gold producers, on their part, blamed the police for only allocating six men as "the only official protection against gold theft within an area roughly 60 miles long by eight miles wide".[13] The problem of stolen gold was not only limited to isolated occurrences; it seemed to be a well-organised phenomenon which extended beyond Johannesburg. Illicit gold dealers were said to employ "coloured touts who approached the natives in reduction works with a suggestion that they should steal gold products".[14] The stolen gold was converted into rough pieces of jewellery which was then distributed by agents to "places so widely apart as Kroonstad, Mafeking, Rustenburg, Bethal, Bethlehem, etc., etc., these agents posting them in their turn to addresses in England".[15] So extensive

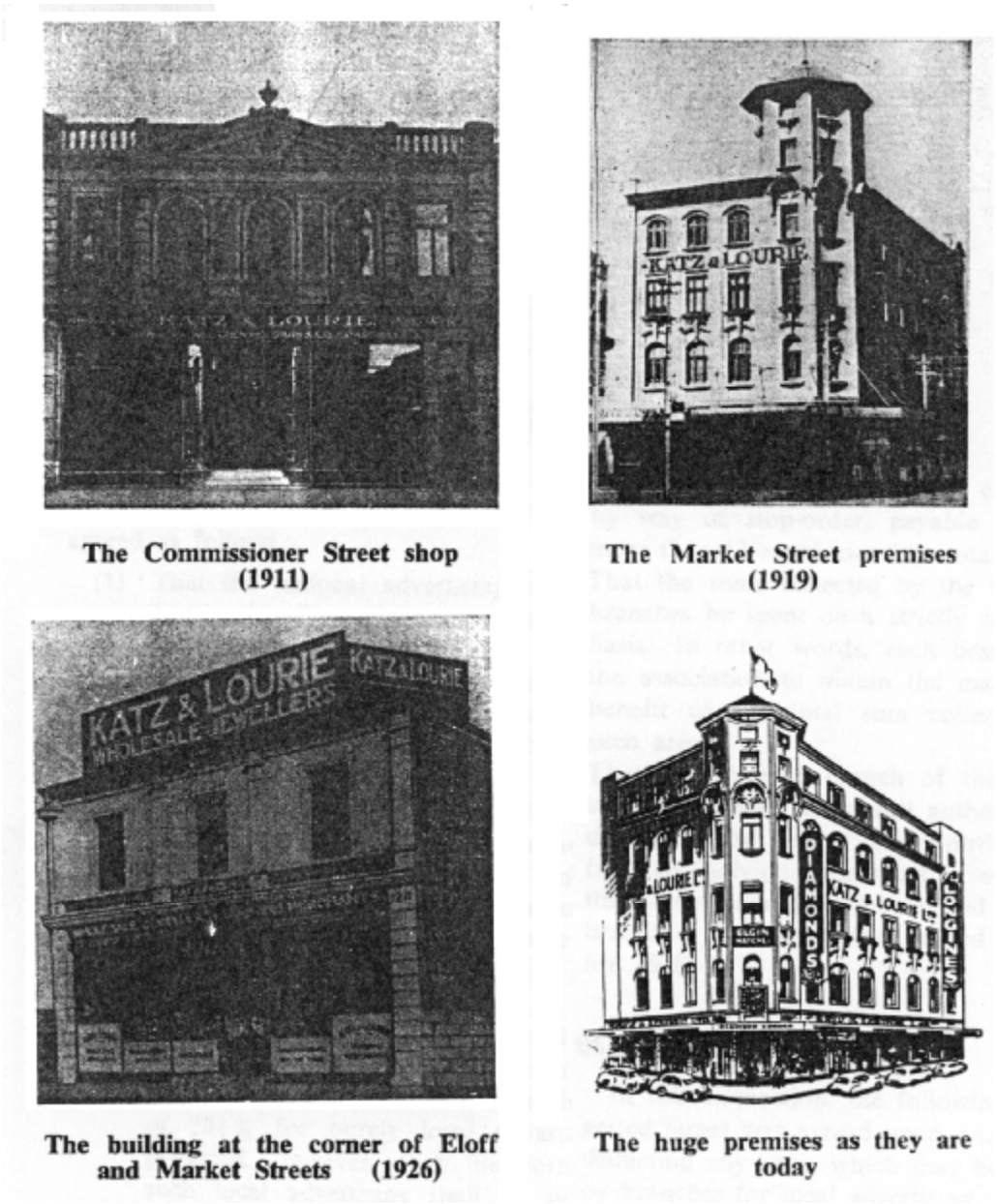
was the trade in stolen gold that it was reported to outstrip jewellery imports into the country. Indeed, whereas gold jewellery imports in the mid-1920s were estimated at £100 000 a year,[16] jewellery from illicit gold reportedly amounted to £350 000.[17] Claims that the jewellery was illicit were made on the basis that the amount of gold jewellery being locally marketed was disproportionate to the number of licensed jewellers in the Johannesburg area. Only 44 licensed jewellers were purported to be practicing in Johannesburg[18], and no new applications for permits had been received since 1908.[19]

One of the reasons for the seemingly unrestrained growth of the illicit gold trade was the leniency of the courts towards offenders who were only penalized with a fine[20], and the *laissez-faire* attitude of the authorities in enforcing the regulations pertaining to jewellers. Despite legislation aimed at controlling the activities of jewellery manufacturers, there were no undue restrictions concerning the issuance of licences. Indeed, it was possible for "any European, whether qualified as a jeweller or not, …on application to the Receiver of Revenue, (to) obtain a jeweller's permit upon payment of the sum of £1 per annum".[21] Overall, the people most concerned about the illicit gold trade were fellow competing jewellers and jewellery retailers, threatened by the 'unfair competition' posed by the sale of the cheaper, locally made products over imported jewellery sold by retailers.[22] Indeed, the South African jewellery industry *circa* the 1920s was not so much focused on manufacturing as on retail, with retail stores selling jewellery which was imported primarily from the UK. Locally produced jewellery was often scornfully dismissed as "weight and fashion" jewellery such as bangles, wedding bands, and medals, that did not require much value-added work in fabrication. Jewellers' low estimation of the local product is evidenced in the remark by "one of the biggest men connected with the jewellery business on the Rand", that "you can go right through the country and see shops stocked with jewellery which is obviously of local manufacture for most of it is in a crude form".[23] The low quality products referred to in these instances largely were the output of the "nefarious traffic" of illicit gold dealers and manufacturers operating in Johannesburg, which situation was facilitated by the lack of a hallmarking system to ensure the standard quality and caratage of jewellery items.[24]

5.2.2 Characteristics of the emerging jewellery cluster

The underground practices in the industry notwithstanding, a legitimate jewellery manufacturing trade did exist in Johannesburg and exhibited many of the characteristics

of an industrial cluster. The trade was practiced primarily by craftsmen who had come from Britain and various other parts of Europe in response to the opportunities offered by a burgeoning town after the discovery of gold on the Witwatersrand (Plate 5.1). According to the industrial census of the time, the number of manufacturing jewellery



The Commissioner Street shop (1911)

The Market Street premises (1919)

The building at the corner of Eloff and Market Streets (1926)

The huge premises as they are today

Plate 5.1 Katz & Lourie premises

establishments in Johannesburg in 1926/1927 was 39, and employed almost 300 people.[25]The jewellers inevitably settled in close proximity to each other in the limited trading area that constituted the town. Apart from the agglomeration of sector-specific

firms in a circumscribed area, the jewellery industry in Johannesburg conformed to the notion of a cluster in other ways. The firms were all small in size with only one or two larger manufacturers employing a limited number of skilled people and apprentices. Specialisation and division of labour was also evident; on the jewellery manufacturing side there were master jewellers, setters, engravers, diamond mounters and goldsmiths,[26] and, in diamond manufacturing, cutters and polishers. The retail section included wholesalers, retail shop owners and travelling salesmen. Further up the value chain were the producers of the precious metals, the mining companies which, however, were not fully integrated in the jewellery sector in that they did not sell their product directly to the market. Gold was sold to government which made it available to the industry through the Mint, and later, the Rand Refinery. The Rand Refinery, aside from selling precious metal, assumed an important role in the development of the jewellery industry through its production of refined gold and gold alloys, and processing of jewellers' sweepings and filings (waste from jewellery manufacturing). Until the 1970s platinum, albeit already in production in South Africa (see Chapter Four), was not refined locally and the metal for use in jewellery was therefore imported. In terms of diamonds, De Beers sold its stones via sightholders who then sold to diamond cutters and polishers, and these supplied jewellery manufacturers. Although the raw material producers were all based in town, the Mint and Refinery were further removed from the center of Johannesburg, and therefore did not form part of the immediate geographical cluster.

Jewellers' permits enabled them to purchase gold from Rand Refinery. The refinery, however, was not their only source of gold. "Old" or used gold from existing jewellery was also purchased for resmelting and fabrication, albeit jewellery made by this means was not of the same quality as that made from fine gold, given that few jewellers could assay gold and turn it into the required caratage. Police records show that by 1939, of the 47 recognised manufacturing jewellers in Johannesburg, only four purchased gold from Rand Refinery. The average purchases for that year amounted to 50 ozs a month. At that time, only one Indian manufacturing jeweller in Natal purchased from the Rand Refinery. Import restrictions during World War Two considerably boosted local jewellery production and therefore, by the mid 1940s, sales of gold from Rand Refinery had escalated to almost 44,5 million ozs, sold mostly in Natal and Johannesburg to respectively 95 (83 of them Indian) and 73 manufacturing jewellers. The average

quantity of gold purchased per jeweller also increased, with some jewellers purchasing up to 350 ozs of gold a month.[27]

Legitimate jewellers in the industry sought to ensure the sustainability and credibility of the industry by establishing an apprenticeship committee to oversee the training of apprentices in the different manufacturing occupations of diamond mounting, setting, engraving, and goldsmithing. The fostering of local expertise through the introduction of local training programmes was, however, not supported by the South African government who believed that "the South African boy had not proved a success in this line of work", and "would never give the time and attention to thoroughly mastering the trade".[28] A better option, according to the authorities, was to rely on the immigration of trained men from England and other parts of Europe.



Plate 5.2 Diamond cutters selling diamond jewellery directly to the public

In keeping with the pattern of industrial clusters as experienced in other parts of the world (Chapter Two), relations between the clustered jewellers were both harmonious and antagonistic. Early reports testify that "jealousy and antagonism between dealers

were rife, and vicious cut-throat trading was the order of the day".[29] These hostile interactions were manifested in jeweller' accusations of each other of illicit gold trafficking, and in complaints to the authorities of diamond cutters encroaching on jewellers' territory.[30] Some diamond cutters, unable to dispose of all their diamonds in the export market, ventured into selling diamonds locally, although not to jewellery manufacturers or retailers as might have been expected, but directly to the public, in the form of mounted stones (Plate 5.2). This activity raised the ire of jewellers who protested bitterly against this alleged 'unfair competition' on the part of cutters who, it was said, did not possess general dealers licenses allowing them to sell to the public. Despite the lack of such licenses, the diamond cutters took advantage of their ready access to diamonds to undercut jewellers' trade.

These disputes between diamond cutters and the jewellery sector were reflective of the conflictual relations between different sections of the industry and were to be a recurring feature in the development of the jewellery industry. Consistent with the theory on clusters, however, fierce competition among traders did not rule out amicable relations. Jewellers in the city used to gather in the main hotel in the area in order to discuss their common affairs. From these social gatherings there were even a few attempts to formally organise the industry. The first Association of manufacturing jewellers was formed before 1914 and survived well into the 1920s before ceasing to exist. In 1938 a new organisation was formed, known initially as the Master Manufacturing Jewellers Association and later as the Transvaal Jewellers. This organisation, too, enjoyed only a brief life.[31] Indeed, it was only with the exigencies of the war period and the attendant difficulties of restrictions and price control that the industry became organised on a more solid basis than previously in a common struggle for survival. This development marked the first turning point in the evolution of the jewellery cluster.

5.3 First turning point

5.3.1 Formation of the jewellery association

The Second World War marked a crucial turning point for the industry in at least two important respects. First, it served as a catalyst for South African jewellery manufacturing which until now had played a minor role relative to the retail sector. The war had the effect of curtailing imports from the UK to a quarter of 1939 figures, and

totally prohibiting export jewellery from the USA to South Africa.[32] Such restrictions had serious implications for South Africa which imported about 75 percent of all jewellery and silverware sold in the country. Consequently, retailers' attention shifted to local craftsmanship in order to compensate for the shortage of foreign supplies. The opportunity for manufacturing provided by the war became evident as items such as the horse-racing trophy the 'Durban Gold Cup',[33] and church and turret clocks, which previously had been imported from England, began to be produced locally.[34] The growing importance of the jewellery industry earned it a section in the trade journal *Diamond News*, which initially had been dedicated only to diamond related issues.

Second, the difficulties engendered by the war period had the effect of promoting cohesiveness in the industry and organising it on a more formal basis than heretofore. At a meeting in 1942 of representatives of the retail, wholesale and manufacturing sections, it was agreed that the difficulties facing the industry could best be dealt with by a corporate body representing the entire industry cluster, rather than by individuals.[35] Accordingly, the *Diamond, Jewellery and Allied Industries Association of South Africa* was formed that same year, incorporating separate retail, wholesale and manufacturing divisions of the industry and with representation along the same lines in the major provinces. Provision was also made for an Allied Industries section to represent the interests of engravers and setters. This section of the trade, however, failed to become fully organised and therefore was not represented as a separate section on the Association. The Association was broadly aimed at uniting the industry and defending its interests relative to legislation, taxation, and other government decrees, as well as promoting the sector and its products to distinguish it from other trades. The means of communication in this regard was the *Diamond News and SA Watchmaker and Jeweller* which was adopted as the official mouthpiece of the organization (Plate 5.3). Shortly after the national Association was formed in Johannesburg, branches were established in Cape Town and also Pretoria. Thereafter other branches were opened in Durban, Port Elizabeth, Bloemfontein and Kimberley. By the end of 1942 the national Association boasted a membership of 203, of which 75 percent were based in the Transvaal.[36] That same year the Association was also registered under the Companies Act, thereby formalising its status as the representative body of the industry, which facilitated interactions with the government.[37]



THE JEWELLERY TRADE

Unnoticed by the public, hardly realised even by those in close contact with the developments which are taking place, the war has brought about sweeping changes in the economic structure of South Africa. Countries which formerly exported goods in considerable quantities to the Union are temporarily in the hands of the Germans, while of the few European territories still retaining their freedom several are effectively cut off geographically from commercial contact with South Africa. To an appreciable extent the cessation of imports from the Continent of Europe has been counterbalanced by increased shipments from Britain and the United States. The prior claims of armaments, however, together with the demands on shipping space, have handicapped British and American exporters, and supplies of some types of goods have become unprocurable from overseas or can be obtained only in limited quantities at irregular intervals. Added to the difficulties of importers are the soaring prices which have complicated such international trade as still remains. Many South African merchants remember the sudden drop which took them unawares after the first world war, and feel that it is safer to be understocked, a policy which may or may not be justified, but hardly serves to stabilise trading conditions.

The effect of the disorganisation of world commerce and the stoppage or partial stoppage of so many channels of trade has been to throw the Union very largely on her own resources, and industrialists have taken advantage of their opportunity to an extent which would hardly have seemed credible two years ago. Not a month passes without the establishment of new industries, the opening of new factories, or extensions to the premises of existing factories. In common with all other trades, the South African jewellery trade has benefited from the enterprise of local manufacturers. Unlike the majority of traders, however, jewellers have hitherto lacked an organ to keep them abreast of developments which directly concern their own business. Yet without a trade publication it is becoming more and more impossible for the individual retail or wholesale jeweller to keep track of everything that is taking place. Among the many new articles which are being manufactured in the Union it would be strange if there were no lines which it would pay jewellers to stock. There may also be special orders which formerly would have been executed for the retail jeweller by a firm of experts overseas, but which could be successfully carried out in the Union—if he only knew where to place them.

It is felt, therefore, that by keeping members of the trade in touch with current developments this section should fill a need which is becoming increasingly apparent. The suspension of trade with Japan will doubtless give a further impetus both to local industry and to imports from Britain and the United States. There is no doubt that the jewellery trade in South Africa will make rapid progress. The complete withdrawal of cheap Japanese articles from the market must create openings of which both manufacturers and traders will take full advantage. The information which it is hoped to make available in these pages should make it easier for them to secure the trade contacts they require.

While the primary object of the section is to act as a link between the retailer on the one hand and on the other the wholesaler, the local manufacturer and the manufacturer's agent, this is but one of several directions in which it is hoped to serve the trade. No matter how rapid the industrial progress which is made in South Africa, it is self-evident that we can never hope to be entirely self-contained. Not only shall we continue to be dependent on overseas suppliers for many lines, but jewellery fashions in this country will always be influenced by those of London and New York—and perhaps, too, of other former centres now temporarily eclipsed. This medium should serve, therefore, to keep the trade in touch with the latest trends and developments in the jewellery business throughout the world.

Finally, it is hoped that this section may help to bring about a closer understanding between members of the trade. One of the most pronounced features of commercial development in recent years has been the formation of strong trade associations. Generally speaking, retailers have been slow to organise. Nevertheless, it has gradually been realised that the increasing complexity of modern trading conditions, aggravated in many cases by over-competition and consequent under-cutting, makes it impossible for the individual trader to safeguard his own rights and interest

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Plate 5.3 First feature on the jewellery industry published in the Diamond News and SA Watchmaker and Jeweller

5.3.2 Activities of the Association: consolidation of the industry

Once it was formed, the Association assumed responsibility for dealing with a number of problems affecting the trade. Many of these problems were war-related and entailed meeting jewellers' immediate needs, whereas others concerned the formalisation of the industry and its establishment on a firmer basis. One of the first tasks of the organisation was to challenge some of the government decrees restricting trade development. The organisation succeeded in securing import permits for watches, watch parts and tools from Switzerland, which products had been suspended by the authorities due to the war.[38] It also made successful representations to the government regarding a new import duty on platinum, and the importation of repair materials for clocks.[39] On these war-related matters the Association worked closely with the national Jewellery Import Panel which was established, alongside other panels representative of commerce and industry in South Africa, to assist the industry in coordinating its requirements and enabling collective orders to be placed. The Import Panel was solely concerned with overseas imports and, unlike the Association, was representative not only of jewellers engaged exclusively in the trade, but also of merchants who imported goods classified as jewellery prior to 1939.[40] Through collaboration with the Import Panel, the Association was instrumental in allowing imports of small, monthly quantities of platinum and palladium which, since the previous year, had been unavailable to jewellery manufacturers.[41] Similarly the Association tried, albeit unsuccessfully, to obtain a rebate on small, unset diamonds which could not be fabricated in South Africa.[42]

Aside from assisting with the urgent requirements of the trade, the Association was concerned with protecting the interests of its members and ensuring the respectability of the industry sector. One of the important issues in this respect was that of hallmarking. As already indicated, the lack of a hallmark system for South African jewellery was problematic, especially in respect of illicit dealers and manufacturers producing under-caratage products. With the myriad manufacturers who had sprung up to avail themselves of the opportunities provided for local manufacturing, the problem of under-caratage work was greatly exacerbated.[43] The issue of hallmarking was not an easy one to resolve given the expense and administrative costs entailed in insuring, forwarding and returning articles from a central bureau. In addition, there were also divergent opinions on how hallmarking should be implemented, and whether it should be made

compulsory or not.[44] This issue was one which the Association was to pursue for a number of years, but without reaching consensus.

Coupled to the call for a hallmarking system to curb the activities of dishonest manufacturers, the manufacturers section of the Association further advocated legislation to restrict the issue of permits to prevent ”incompetent persons” from opening workshops.[45]Concern about the practices of unqualified producers was not only in the interests of the public or for its discrediting effect on the industry, but was also prompted by the threat of competition. Hence, it was claimed that it was “in the interests neither of the trade nor of the municipalities themselves, that licences should be granted without due regard to the qualifications and standing of the applicant and the number of trading establishments already in existence”.[46] It was acknowledged that control of trading licences could not be vested in the industry as “the possibility exists that in certain circumstances such powers might be abused to create a monopoly of established interests”. Accordingly, a government body was thought to be the best option. Government authorities, however, were not in a position to issue jewellery licences selectively; the Receiver of Revenue, in charge of licences at the time, stated that “I may not discriminate between applicants as long as they are ‘white persons’”.[47]



Plate 5.4 Cartoon depicting jewellers' frustration with competition from other retail outlets

A key objective of the Association in protecting the interests of the cluster and its members was to ward off competition from non-jewellery retail outlets trading in similar products to jewellery stores. This was an issue of great concern to the cluster, but one over which the Association had little control. The problem that "all sorts of retail stores have cut in on the legitimate trade of the retail jeweller in recent years and the extent of this proselytizing is rapidly assuming alarming proportions" was particularly significant in the war period in view of the restricted merchandise that was available to jewelers (Plate 5.4). The problem was especially apparent in the sale of watches and artifacts which were increasingly on offer by other retail outlets, such as tobacconists and chemists. Not only retailers complained of such encroachment. Manufacturers, despite enjoying a captive local market due to restricted imports in the early 1940s, were sensitive to the inroads into their perceived territory made by the South African Mint in the manufacture of medals, regalia and other associated precious metal articles. Jewellery manufacturers claimed that this line of jewellery constituted a significant portion of their trade and remarked sarcastically that "if the production of medals is undertaken by the Mint, there is, theoretically, no reason why the state should not manufacture engagement and wedding rings and set up its own channels of distribution".[48] Although powerless to restrain competing businesses from engaging in jewellery sales or manufacture, the Association attempted to secure the interests of jewellers through an advertising campaign aimed at highlighting the advantages of purchasing jewellery from legitimate and knowledgeable practitioners.[49] An advertising campaign through press advertisements was started in the Transvaal, in 1944, and a more extensive, national campaign was launched two years later to highlight not only the value of jewellers but specifically those belonging to the Association[50](Plate 5.5). The national publicity campaign was a disappointment for two reasons: insufficient funds for the venture and, linked to that, lack of support from jewellers themselves. Consequently, it was not repeated the following year, 1947, as had originally been planned.[51]

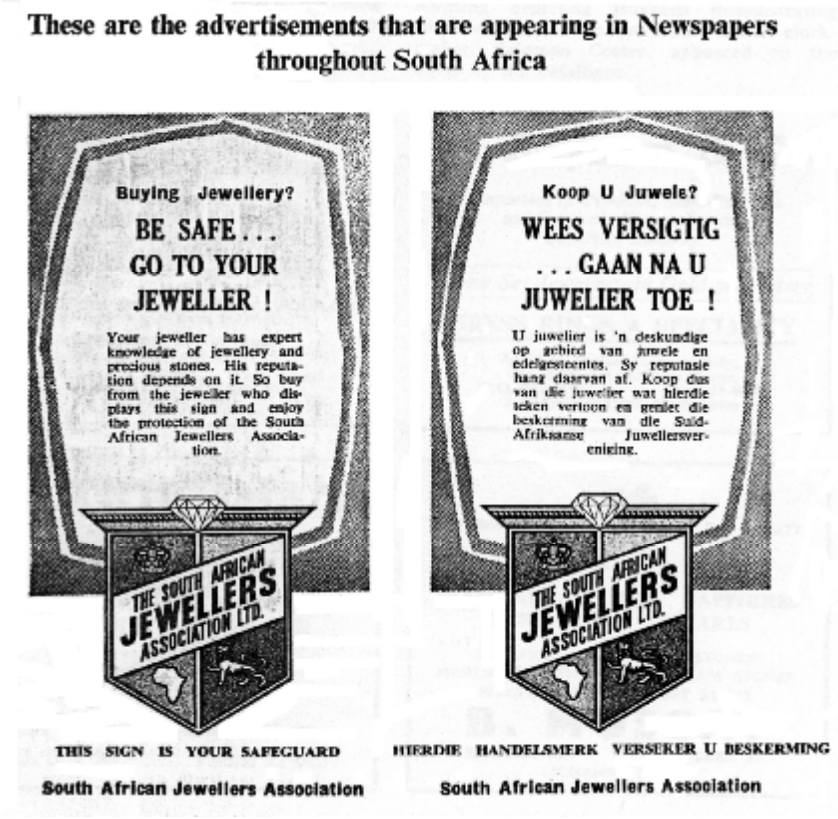


Plate 5.5 Advertising campaign run by the Association

Despite not always obtaining full cooperation from jewellers in its undertakings, such as in the case of the publicity campaign, the Association did succeed in its aim of establishing communication channels between the various sectors of the industry, and across geographical boundaries. Founders of the Association commented that "if the war has done nothing else, it has certainly shaken South African jewellers out of that fatal coma of apathy which existed before it began".[52] Persistent exhortations from the Association for jewellers to join and cooperate as a unit resulted in a steady number of membership applications.[53] The role of the Association was further consolidated in 1943 when, under its auspices, an Industrial Council, incorporating the Jewellers' and Goldsmiths' Union and the Transvaal Jewellers' Association, was established for the Transvaal to administer employer/employee issues in the region.[54] The first conference of the Association in 1944 brought together the various branches of the organisation and established it on a more solid footing (Plate 5.6). A national executive committee, with representation from all the branches, was established to deal with national issues, and the name of the Association was abbreviated to the *South African Jewellers' Association*.[55]



Plate 5.6 South African Jewellers' Association, 1944

5.3.3 Rivalry and competition in the jewellery cluster

The efforts at cooperation in the industry, through membership of the organisation and participation in its activities, did not obscure the intense rivalry and competitiveness that existed among players. Competitive relations are intrinsic to clusters, and can be a positive attribute when they lead to product or technological innovation for the industry concerned. In the case of the jewellery cluster, however, rivalry and competitiveness was more indicative of lack of trust and weak vertical and horizontal linkages among players than competing for excellence. The structure of the Association along sectional representation was based on the realisation that "to get the wholesalers and retailers to work together, and the manufacturers with some other section of this organisation is impossible".[56] Sectional differences plagued the Association from its inception. Indeed, it was often commented that sectional interests tended to cloud and impede the Association in addressing matters of common interest.[57] One of the founders of the Association resigned in early 1943, barely a year after the establishment of the organization, due to what he perceived to be "a strong tendency to assert sectional rivalries and bring into prominence personal jealousies and animosities".[58] Certainly, there were numerous instances of one section of the industry pointing fingers at the other for alleged 'unfair practices'. These accusations persisted throughout the early development of the cluster, but were especially manifest in periods when economic

circumstances favoured one section of the industry above another. Thus, in the early to mid-1940s, when retailers struggled to obtain imported merchandise, there were complaints of manufacturers or wholesalers underselling the retailers whom they were meant to be supporting.[59] Economic depression in the 1930s prompted a deputation of jewellery retailers to complain to the Board of Trade and Industries of the practice of diamond wholesalers selling diamond jewellery direct to the public. In their protests against the activities of the diamond wholesalers, the jewellery retailers claimed that their sales had dropped by as much as 75 percent as a result of the 'encroachment' from diamond dealers.[60]

Poor vertical relations were particularly apparent in the case of manufacturers and retailers. As imports from overseas "dwindled to perilous levels"[61], leaving locally produced goods the only option for retailers, there were protests that local manufacturers were supplying departmental stores and other non-jewellery stores when the requirements of the 'legitimate' jewellery trade were not satisfied in full.[62] In 1944, retailers went so far as to suggest that manufacturers, as well as wholesale jewellers and distributors, give a written undertaking to confine locally manufactured jewellery to jewellery-exclusive stores only, in return for a similar assurance from retailers that they would support local producers.[63] Manufacturers, however, did not trust jewellery retailers to guarantee the absorption of their total output, and therefore felt compelled to supply outlets that were not jewellery specific.[64] The tables were turned when, in 1946, imports started filtering back into the country after the Second World War, and retailers chose to stock imported rather than locally manufactured products. Neither could manufacturers combat the preference for imported goods by offering significantly lower prices for locally produced items, as the costs of imported materials required in the manufacturing process did not allow for local manufacture at greatly advantageous prices. The manufacturing jewellers' section of the Association suggested approaching government about increasing the duty on imported jewellery, but the retail and wholesale sections of the Association refused to support this proposal.[65] Not only did retailers refuse to assist the manufacturers in this regard, they themselves were accused of exacerbating the problems for manufacturers by importing semi-finished jewellery that was then completed and sold locally as a 'South African' product.[66]

The limited cooperation between jewellers was manifested not only in the vertical relationships between manufacturers and retailers, but was also evident in horizontal relations among fellow competitors as well. Certain members of the Association tried, albeit unsuccessfully, to discriminate against non-members by barring them from conducting trade relations with wholesalers or manufacturers belonging to the Association.[67] The animosity between rivals in the industry was even more pronounced in the case of exclusive jewellers and departmental stores. When, in 1946, departmental stores with jewellery sections tried to apply for membership of the Association, they were rejected as "a strong body of opinion was opposed altogether to the admission of departmental stores, and was not prepared to extend the privileges of membership to anybody, except legitimate jewellers". [68]

The rivalry evident within and between sectors of the industry also extended to competitiveness based on geographical location. Shortly after the Association was established, it was noted, in 1943, that "the traditional distrust and rivalry between provinces" was already becoming manifest.[69] The Transvaal branch of the organisation, which represented the dominant cluster of Johannesburg, often assumed responsibility for making representations to government and organising matters pertaining to the industry as a whole. This dominant behaviour was resented by the smaller clusters. In particular, members of the Cape branch of the Association felt that they were not always informed of decisions made by the Transvaal branch on behalf of the industry.[70] Although the issue of who took responsibility for broad industry matters was resolved by the establishment of a National Executive Committee comprised of representatives from all the branches, tension between the Transvaal and Cape sectors of the industry never disappeared.

Inter-provincial competitiveness was more prominent between the Cape and Transvaal than other provinces because of the concentration of jewellers in these two areas, albeit the Transvaal was the larger jewellery cluster of the two. There was a strong representation of Indian jewellers in Natal, on a par with the number of white jewellers in the Transvaal, but this sector of the industry was never regarded as part of the mainstream jewellery sector, primarily because of Apartheid policy but also due to the different styles of Indian jewellery relative to Western-style jewellery. Indian jewellery differs to that of Western-style jewellery in that it is more intricate and ornate, and uses a



Plate 5.7a Example of Indian jewellery



Plate 5.7b Example of Indian jewellery

higher caratage of gold which is usually of 22 carat and above (Plates 5.7a;b). Mainstream jewellery manufacturers were dismissive of Indian jewellers, observing that "a considerable amount of jewellery is worn by Indian women but generally they do not wear the European style of jewellery but a peculiar and traditional style of their own which is not made by European manufacturers but by Indian craftsmen operating in their own homes and backroom workshops".[71] At the time that the Association was formed, the question of Indian membership was raised and, although it was generally agreed to extend membership to Indian jewellers[72], there is no record of any Indian jewellers having joined the Association.

The Association tried to overcome conflicting views and interests in the industry by emphasising the need for national unity in resolving common problems. A united front was essential, it was argued, especially with respect to interactions with government who preferred to liaise with a nationally representative body of the industry than with separate units.[73] These admonishments from the industry did not, however, appease "the muffled stirrings of revolt" which had begun to surface two to three years after the establishment of the Association [74]. There were those in the industry who believed that the organisation was too bulky and therefore unable to attend to local matters in the same manner as would a separate local body. Proponents of this view argued that the trade would be better served by separate, independent associations representing each section of the industry, and coordinated by a federated national body.[75] This matter was to reach critical proportions at a later stage in the development of the industry and of the jewellery cluster.

5.3.4 Role of Government

Despite the bureaucratic exigencies which hampered the functioning of the industry, it was the attitude of national government, more than regulations, that impacted most negatively on the cluster. South Africa's position as a leading producer of the raw materials used in jewellery gave local jewellery manufacturers little competitive edge in that they struggled to obtain the precious metals required, either because of regulation, or lack of processing facilities in South Africa at the time. Platinum was one such metal that, despite being mined abundantly in South Africa, had to be processed overseas and re-imported into the country for further beneficiation. Aside from the difficulties the jewellers had in obtaining some of their basic materials, government exacerbated the

problem further through the imposition of taxes, which often were levied arbitrarily. In 1937, government imposed a duty of 15 percent on platinum re-entering the country,[76] a tax that seemed to be applied erratically and inconsistently depending on the classification of the metal as ingot, bar or bullion, and on government whim. The scarcity of platinum supplies prevailed even when Rustenburg Mines Ltd began refining the metal in South Africa, rather than exporting it to England for refining before re-importing it into South Africa.[77] The problem of taxation also applied to small diamonds which, despite being imported because of the lack of relevant expertise in South Africa, were nevertheless subject to a 30 percent import duty.[78] Given that the government's import penalties applied to some of the primary materials in jewellery, the competitiveness of local manufacturers vis-à-vis their counterparts internationally was negatively affected.

Government war restrictions, although applicable to all industries and not only to the jewellery sector, were another means by which the state affected the industry. It might be argued that the wartime shortages endured by the industry were inevitable. Nevertheless, the application of the regulations at the time was made unnecessarily onerous. Jewellers despaired at the complicated phraseology of price control regulations which made these difficult to understand and comply with. When, after the war in 1946, price control gradually eased on some items, it remained in force with respect to others, giving rise to confusion and undue administrative work.[79] Likewise, when the government in 1943 banned the import of Swiss goods into South Africa, including watches, it provided no adequate explanation for this decision despite persistent enquiries from jewellers.[80] The ban on watches from Switzerland was mystifying given that the Swiss authorities were prepared even to charter special ships to deliver the watches to South Africa.[81]

Government's negligence of the industry and its difficulties was partly attributable to the 'luxury goods' nature of the industry which tended to elicit less concern for its needs relative to the needs of other industries which provided 'essential' goods or services. In the incipient years of the industry, in the 1920s, appeals to government to reduce or withdraw the 30 percent duty applicable to imported jewellery met with a curt refusal on the grounds that "jewellery is regarded as representing articles of luxury highly suitable for taxation through the Customs Tariff, and that the disadvantages … do not appear to be sufficient to warrant a departure from that principle".[82] It is ironic that despite the

advantage of the industry as a ready source of tax income, this was not sufficient for government to promote the development of the sector. On the contrary, government actively discouraged the growth of the manufacturing side of the industry for its consumption of a strategic resource that was more valued by government as bullion than in further beneficiated form. Hence, the government's reluctance to make available the necessary resources for the effective functioning of the industry. Manufacturing jewellers, for example, were prohibited from smelting more than two ounces of gold at a time,[83]a restriction that not only limited production but also retarded the technological development of the industry by preventing manufacturers from adopting new manufacturing methods that necessitated the smelting of larger quantities of gold.[84]

Even where material resources were not at stake, the government failed to support the industry when opportunity arose. The visit of the Royal Family to South Africa in 1947 is a case in point. To mark the occasion of the visit, the South African Jewellers' Association offered to set the diamonds selected for presentation by the South African government to the visitors, in approved designs and without cost to the government. The Association assured government that the work could be executed as efficiently in South Africa as elsewhere in the world. Moreover, it expressed commitment by offering full responsibility for the safety of the stones and for ensuring a high standard of craftsmanship in the work of mounting and setting. A letter outlining the Association's offer was sent to the Prime Minister, but this was never acknowledged, or the matter ever raised with industry members. Indeed, the Association only heard later of the government's decision to have the diamonds, which had been locally sourced from state diggings and cut by the Master Diamond Cutters' Association, set outside the country.[85] Understandably, the industry was shocked and disappointed at this show of prejudice from the government, and denounced it as "an unwarranted reflection on the trade in South Africa.[86]

Another way in which the government undermined the local jewellery cluster related to the area of exports. Commensurate with government's *laissez-faire* attitude to the industry prior to the war, the export of gold jewellery out of South Africa was, during the late 1930s, not heavily controlled. Export levels then were very low, under £2 000, of which £1 200 went to what was then the colony of Rhodesia.[87] The low volumes of exports were primarily reflective of the small size of the manufacturing sector at the time.

With the growth of the industry in the wake of opportunities presented by the war, jewellery manufacturers increasingly were in a better position to capture markets outside of South Africa. Government pre-empted such an opportunity, however, by introducing legislation towards the end of 1942, prohibiting the export of gold jewellery to territories other than Southern and Northern Rhodesia and Nyasaland.[88] When, after the war, manufacturing jewellers requested permission to export in response to demand from countries such as India, Pakistan, Egypt and Australia, they were refused on the basis that "if you were to export to those countries you might as well send gold bullion – they want the gold for the free market".[89] Arguments by deputations of jewellers, in 1948, that exporting would enable the industry to expand, create employment, and become more competitive, fell on deaf ears.[90]

5.3.5 Post-war developments

As the war period came to an end, so the industry gradually recovered from the restrictions it had endured over the previous six years. At the same time, other problems became manifest. With the lifting of import restrictions, the outlook for jewellery retailers improved as they gained access to a greater variety of goods from overseas, and "the spending power of the public show(ed) no real signs of slackening".[91] Towards the end of the 1940s jewellery retailers once more had the upper hand in the industry, as is evident by the observation that the "South African market seems to be receiving attention in a number of exporting countries and it is becoming a little difficult to keep pace with the ever broadening stream of supply which threatens to become a torrent at any time".[92] For many manufacturing jewellers, however, the outlook was not so rosy as the rising tide of imports constituted a threat to their own survival. Although it was generally acknowledged that some local craftsmen could confidently hold their own against jewellery from overseas, there were many others who were not competitive in a freer market. Thus, as the jewellery retail trade blossomed, so the manufacturing sector declined. The Industrial Council for the manufacturing jewellers and goldsmiths' industry in Johannesburg claimed that in an 18 month period between 1946 and 1948, average turnover of manufacturing jewellers dropped by a factor of one-third. Employment also declined, from 197 white and 200 black employees in 1947, to 155 white and 161 black workers by 1948. This represented a decrease in employment of 21,3 percent for whites and 19,5 percent for blacks.[93] The recession was attributable to three main factors: competition from imported precious jewellery, higher imports of imitation jewellery that

competed with precious metal products, and reduced customs duty on all imported jewellery from 33⅓ percent to 20 percent.[94] The manufacturing sector of the industry sought protection from government by requesting a 30 percent increase in tariff duties for imported jewellery. Government was unable to comply in that it was bound to a maximum tariff duty of 25 percent according to the GATT (General Agreement on Tariffs and Trade) agreement. The constraints of the GATT agreement notwithstanding, however, government was not convinced that the industry merited protection. Government's response to the delegation of manufacturing jewellers was that if the industry had not succeeded in becoming locally competitive under the 33⅓ percent duty, it was unlikely ever to become internationally competitive with an increased level of duty.[95]

The other problem that surfaced once the industry emerged from the encumbrances of the war period, was that of waning interest in the Association. The initial enthusiasm in the industry to overcome common problems on a joint basis never fully displaced the skepticism held in some quarters concerning the validity of the Association, nor did it sufficiently counteract a tendency in the industry towards apathy. Already in the second annual meeting of the Transvaal branch of the Association it was noted that "the apathetic spirit among jewellers and watchmakers, which has so long retarded the normal progress of the trade" still prevailed.[96]Certain sections of the industry remained unresponsive to continued efforts of the Association to organise them as a representative body. Association leaders pleaded with industry members to join, arguing that "an association with a large and representative membership wields a great influence", and that "only indifference and apathy on the part of members themselves, coupled with non-cooperation from jewellers who insist on remaining outside, can arrest and retard the normal progress of the association, now so firmly established".[97] The watchmaking and, to a large extent, retail sections of the industry, however, remained recalcitrant. The Association thus decided eventually to merge the two sectors as one body in order to facilitate representation in the organisation.[98]

Another indication of declining interest in the Association was the poor participation in joint action activities. Reference has already been made to the disappointing outcome of the first national advertising campaign led by the Association, due to a lack of funding and support from the jewellers concerned. A similar proposal to hold an exhibition of

locally manufactured jewellery designed to promote South African craftsmanship was aborted because of conflicting interests between the manufacturers, who wanted to be identified with their jewellery pieces, and retailers who felt that to include the jewellers' identity was tantamount to encouraging direct sales between manufacturers and the public.[99] The growing strength of the industry in the post-war period exacerbated the lack of interest in the Association. Jewellers had been drawn to the Association through adversity; in particular, to overcome war-related constraints. Once these problems had been overcome, jewellers lost interest in co-operating collectively. Confident in their own individual capabilities, jewellers gave the impression that "because the post-war period has been successfully negotiated, there is no longer any need for an Association".[100]The sustainability of the organisational body of the industry was at risk as nominal membership outnumbered active members by twenty to one.[101] Indeed, the continued existence of the Association was only assured through the emergence of a crisis situation that induced jewellers to once more identify with the Association. This crisis marked the second turning point in the development of the jewellery trade and cluster.

5.4 The second turning point

5.4.1 Restrictions on the supply of gold and regulatory constraints

If the first turning point marked the establishment of the industry on a more organized basis through the formation of the representative body, the second turning point is noted for the role of government in influencing the trajectory of the cluster. Towards the end of 1947 there were indications that South Africa's economy was faltering. Imports had outstripped exports by £119 million in 1946 and this, coupled to a progressive decline in gold production, called for the curtailing of imports or substantial increase in exports, rather than sale of gold bullion, to rectify the adverse trade balance. The jewellery industry fully expected the government to focus on significantly augmenting exports and, after deliberations with Treasury, the Association felt confident that the prohibitions on gold jewellery exports would be withdrawn or modified so as to permit "the export of gold jewellery under the most favourable conditions possible".[102] The government's decision on the problem, however, ran contrary to these expectations when, towards the end of 1948, import control measures were introduced, restricting imports from hard currency countries to 50 percent of 1947 import figures. Importers who had commenced business after the 1st of January, 1947, were to submit special applications for import quotas from

the authorities. The industry accepted this news resignedly, expecting the manufacturing section, at least, to benefit from the new restrictions.[103] Hopes that the local manufacturing sector would counteract shortages from abroad were dashed, however, with the introduction of the severest measures yet, upon the industry, namely, the restriction of gold supplies for local manufacturing purposes.[104]

Government decided, without any warning, in 1949 to halt gold supplies to manufacturing jewellery firms in the Cape because the province was not covered by the Gold Law provisions that applied to the Transvaal. The police in the Cape, therefore, had no control over the movement of gold in the area. Despite protracted discussions with the authorities and recommendations to make gold supplies to Cape jewellers subject to the fulfillment of acceptable conditions, Treasury refused to change its stance.[105] Cape manufacturers drew attention to the 80 artisans, journeymen, apprentices and other employees, who would be faced with unemployment. Government's response was to warn of extending the cuts in gold supplies to manufacturing jewellers throughout the country, such was the critical state of the country's gold reserves.[106] This warning was borne out by a government statement, three months after terminating gold supplies to the Cape, that it would "curtail drastically the amount of gold to be supplied to jewellers… by fixing annual quotas for jewellers on the basis of the amount of gold obtained by them from the Mint in 1942".[107] Limiting the amount of gold to 1942 levels meant that all jewellers who had commenced manufacturing operations after that date, were barred from practicing the trade any further. Although the South African Mint made this point to Treasury and suggested that another, more recent date, be chosen, the Reserve Bank remained adamant in its decision.[108]

One of the reasons put forward by government for introducing such drastic measures was that the gold used for local jewellery manufacture reduced the country's monetary gold reserves, which were necessary for meeting urgent import requirements. The other key reason proffered by government amounted to a public indictment of the industry, being an accusation that the growth of the local jewellery industry was based on a lucrative smuggling trade that had grown in response to the high price of gold in free markets abroad. According to the government, the increase in the number of jewellers who purchased gold from the Mint from ten in 1939, to over 200 in 1948, was due to

'smuggling' practices. Under the new measures to eradicate the alleged smuggling, jewellers had to contend not only with reduced amounts of raw material, but were also subject to "such conditions as may be considered necessary to ensure effective control over the use of gold".[109]

The industry reacted to the government announcement with outrage and dismay as many producers faced the collapse of their businesses. The potential damage to the industry inflicted by the government's decree was not only in choking off the supply of resources to manufacturers, but was also in the stigmatisation of the industry at a time when the Association was trying to enhance the general image of the industry to the public.[110] To counteract the effect of the state's accusations, the Association released a press statement refuting the allegations by Treasury and censuring government for "gross distortion of the facts".[111] The government's reference to only ten jewellers in 1939 was declared 'fallacious' and 'incorrect', and the implication that the amount of gold used in local jewellery manufacture could have any significant effect on the country's economic position was dismissed outright. In exonerating the industry the Association pointed out that, prior to the war, manufacturing jewellers obtained their gold mainly through purchasing old jewellery, and only when these supplies declined did they turn to the Rand Refinery and the Mint. In addition, scarcity created by the war stimulated increased demand from local manufacturers and this translated into higher purchases from the Mint. The popularity of white gold also made higher demands on fine gold as it was a prerequisite for the preparation of white gold. The industry, therefore, had grown and expanded as a result of 'normal' factors and not through illegal dealings.[112]The argument that local manufacturing compromised the gold reserves of the country was rejected by the Association which illustrated how gold purchases in the Transvaal and Cape for the year 1948 represented a meagre 0,151 percent and 0,015 percent respectively of total gold production in the country for that year.[113]

As a result of consultations with the industry, the Department of Finance agreed that the restrictions on the supply of gold, as originally conceived, had been too drastic, and decided to make available a quantity of gold to each province, to be distributed to individual jewellers by industry representatives, in consultation with the police.[114]The amount made available to the industry as a whole was around 20 500 ozs, nearly three times the amount of gold sold to jewellers in 1942. This amount, albeit more than would

have been available to jewellers under the government's original decree, was still considerably lower than jewellers' normal consumption which, in the first ten months of 1948, amounted to over 29 000 ozs.[115] In terms of the gold allocations per province, Natal was the most adversely affected, receiving only about one-fifth of the total. The province had been a major consumer of gold, accounting for almost half the gold used in 1948, primarily because of the Indian jewellery industry which was based there.[116]As Indian jewellers were primary suspects in the alleged 'smuggling' activities, however, the curtailment of gold supplies was most severe in Natal. Under the new scheme of gold allocations, supplies of the metal were resumed to the Cape, which for four months in 1949 had been without gold. This system of gold distribution was only applicable to existing jewellers and deliberately excluded new entrants into the industry on the basis that "every ounce of gold supplied to local manufacturers of jewellery means that one less ounce of gold is available to pay for the country's essential imports of raw materials, capital equipment and finished products…and consequently applications from new firms cannot as a rule be considered".[117]To tighten the availability of gold even further, the government ruled that permits for issuing gold to jewellers would be valid for the month of issue only, making invalid any permits not used for the relevant month. In addition, jewellers with "excessive stocks" of gold filings, clippings and sweepings had to sell these for refining and were precluded from receiving the equivalent value of the waste in fine gold as this was said to constitute an extra gold allocation. Similarly, jewellers with "excessive stocks" of unwrought gold had to sell the surplus gold. Nevertheless, there was no definition of the term "excessive", and the interpretation of this was left to the discretion of the police.[118]

Alongside the curbs on gold supplies, government imposed further restrictions on the industry by, in 1949, introducing stringent control measures which governed the manufacture, possession of, and dealing in unwrought gold. These new regulations were ostensibly to counteract the escalating problem of smuggling and illicit gold dealing, and were accompanied by the strengthening of the Gold and Diamond branch, which was the section of the police responsible for the jewellery industry.[119]The initial draft of the regulations subjected every aspect of gold processing, from purchasing the unwrought gold to selling it as jewellery, to police supervision and inspection, facilitated by the increased powers of search by the police. Every activity carried out by a jeweller, from transporting the gold from the Rand Refinery to smelting it, required a separate permit.

Moreover, only gold of a maximum of 18ct was allowed to be manufactured, and no more than five ounces of gold a day could be smelted without a special permit. The industry, in this instance, was fortunate that the draft regulations were submitted first to the Association and Union for comment before being promulgated. In this way, some of the more onerous provisions of the regulations were adjusted and the impact on the industry was not as severe as otherwise might have been. Nevertheless, the decision to subject the jewellery industry to constant police vigilance had been introduced.[120]

5.4.2 Gold jewellery exports: facilities and restrictions

Government restraint of jewellery manufacturing and trading was not limited to the local market but extended to jewellery exports as well. Regulations governing the export of gold jewellery were drawn up after the Treasury, in 1949, formally reached an agreement with the IMF on the question of the sale of gold at premium for industrial, artistic and professional purposes. Export of gold through private channels was prohibited due to the "abnormal exchange conditions" which had created a black market for gold in a number of countries and carried the risk that "exports of gold jewellery therefore serve to feed the free or black market and will ultimately undermine the whole system of exchange control".[121] The agreement with the IMF was based on a distinction between goldware and semi-processed gold. Goldware referred to fully manufactured articles with at least 20 percent value added to the gold content. The IMF recognised that South Africa had a right to a fair share of this market provided that the government could ensure that the gold was fully fabricated before export. Semi-processed gold, by contrast, was gold processed to 22ct and easily converted to monetary gold, so its export necessitated much stricter control.[122]Semi-processed gold was only allowed to be exported to manufacturers overseas on production of an import licence and a sworn affidavit from the target country, to the effect that the purpose of the gold was for fabrication only. All gold exports from South Africa had to be through a permit issued either by Treasury, the Reserve Bank or a commercial bank.[123] Only three companies were licenced to sell goldware and semi-processed gold: Greaves, Precious Metals Development, and SA Goldware, all of which were based in Johannesburg.[124] Despite the export controls, not all countries were acceptable as gold export markets; centres such as Syria, Lebanon and Tangier, for example, were suspected to be free markets for gold, so applications from them for gold purchases were refused.[125]

Under the revised jewellery export system, local jewellery manufacturers were allowed to export, but under stringent requirements. The conditions demanded that, *inter alia*, a separate export factory be established in order to facilitate police supervision at all times; all parcels of jewellery for export be examined and sealed by the police; no jewellery from the factory be sold locally; all manufactured articles be exported within a reasonable time after manufacture; each piece of jewellery have 25 percent value addition; and, the export manufacturer had to sell to the Treasury all foreign exchange derived from the sale of the exports.[126]In addition, gold for exports was sold at a ten percent premium, and had to be paid for in "hard currency" which was to be either American dollars or Swiss francs.[127]The barriers to participating in jewellery exports were, therefore, high, and not many jewellers could avail themselves of the opportunity.

5.4.3 Government discriminatory practices

Government justified the harsh regulatory policies towards the jewellery sector as necessary measures within the broader objective of requiring bullion to stabilize the country's balance of payments. There were certain instances, however, when government displayed unwarranted prejudice towards the industry. Nowhere is this more apparent than in the case of SA Goldware. This enterprise was a new, government-sponsored company, established with the necessary facilities and the right to manufacture and export fabricated gold to the "free market" that local jewellers were prohibited from export. SA Goldware was registered with a capital of £500 000, and was ostensibly to be a private sector company under foreign management.[128] The government's announcement of the company represented a blow to the jewellery cluster which was bitterly disappointed at being deliberately overlooked in a scheme that applied to them directly but on which they had not even been consulted for their opinion or participation. Even more offensive to the industry was that 'foreigners' were being offered opportunities which had been consistently denied to the local industry.[129] On numerous occasions the local industry had approached government for permission to export, but these pleas had always been rejected. One of these discussions with the authorities had taken place just prior to the government's announcement of the company, giving the industry cause to believe that the SA Goldware venture "was not even the government's own conception, but was actually taken over from the jewellery trade, which has long sought permission to establish an export trade in articles manufactured from the country's own gold".[130]

The establishment of SA Goldware was controversial in several respects. The enterprise had not only been granted export rights but had also received preferential treatment from the government with respect to sponsorship and assistance. The favoured position of the company posed significant threats to established jewellers Concerns were expressed that either SA Goldware would receive gold allocations "disproportionate to what is received by our members", or that, if allotted gold from the national quota, this "would accentuate the difficulties already encountered by our members, as their allocations would be automatically reduced". [131]Furthermore, jewellers sought confirmation from government that SA Goldware products intended for the export market would not be diverted to the local market. Government assured the Association that the firm would not be granted any special concessions at the expense of Association members.[132] The Association's misgivings about the new company seem to have been well-founded. Two years after it was established, SA Goldware applied for, and was granted, additional gold above that received by the rest of the industry, albeit with the proviso that the gold articles be sold externally and not in the local market.[133]This proviso was not adhered to, however, and the gold products were sold locally on the pretext that the goods were articles that could not be manufactured in South Africa and had to be imported.[134] Representatives of the industry reacted to knowledge of this with consternation, asserting that local jewellers, if allowed sufficient gold resources, were also willing and capable of producing items in the "prohibited list" and therefore of competing with SA Goldware. Even the police working on the case at the time expressed their objection to SA Goldware extending its operations to the local market, and consequently did not recommend the company's application for additional gold. These objections notwithstanding, Treasury overlooked the police recommendations and continued to approve increased gold quotas to SA Goldware, even up to one and half times the monthly average made available to other jewellers, and specifically for goods that were sold locally. The police were aware of the irregularities in this system and tried to bring them to the attention of the authorities, warning that "if further increases are granted it can only result in the ousting of the smaller and old established jewellers who would also like to extend their businesses if more gold were available".[135] Nevertheless, such reports made little difference to the attitude of the Treasury on the matter.

SA Goldware began to sell on the local market because export conditions had changed, making it permissible to export fine gold in the form of bars to private purchasers. Consequently, the purpose of SA Goldware to sell semi-processed gold at a premium, had become superfluous and the firm was no longer competitive in the export market. The firm, having received government assistance from the outset, continued to be favoured by being exempt from the restrictions that were binding on other firms in the industry. Thus, SA Goldware not only produced for the local market, contrary to the conditions under which it had been originally established, but sold all types of jewellery articles as well and not only those products that could not be produced in the country. Moreover, a 300oz quantity of gold made available to the firm to manufacture medals, on condition that any gold not used for this purpose be sold to the Mint, was subsequently allowed to be retained by the company.[136] Such government leniency towards SA Goldware was in stark contrast to the rigorous conditions as laid down for the rest of the industry, for which even jewellers' waste was subtracted from the following month's quota. In addition, SA Goldware was consistently granted its applications for additional gold whereas other jewellers had to submit to producing below capacity due to insufficient gold supplies. SA Goldware also received preference above new entrants into the industry who were delayed in starting their businesses due to their gold applications not being approved. Furthermore, other jewellery exporting firms which had operated under the same circumstances as SA Goldware and were thus equally affected by the change in export policy, were not favoured by the government. The inconsistent application of the regulations to the industry prompted the police in charge of managing the distribution of gold in jewellery production to declare that "the allocations of gold had not been a police matter, but a decision by Treasury, contrary to the original conditions imposed on this firm (SA Goldware)".[137]

The special privileges accorded SA Goldware were clearly insufficient to make the firm competitive as it repeatedly approached Treasury for ever greater concessions. In 1954 it requested permission to extend its operations to include those activities performed by Johnson Matthey, the supplier of semi-processed precious metals and alloys to manufacturers.[138] Johnson Matthey, however, operated under a recovery works licence which entitled the firm to supply gold only in semi-finished form to the industry, and not as finished articles, such as SA Goldware sought to do. The police were forceful in their recommendation to not extend further privileges to SA Goldware, claiming that "every

other manufacturing jeweller will be entitled to demand the same privileges, thus making the quota system a fiasco".[139]In 1955, SA Goldware was forced to close down, a confirmation of its lack of competitiveness despite the extensive special privileges that the enterprise had enjoyed.

5.4.4 External pressures on the cluster

The period from the late 1940s to the early 1950s was a difficult one for the jewellery cluster. The industry had to contend with reduced gold supplies, stultifying regulations, and government decisions based on a prejudiced assessment of the abilities of the local manufacturing sector. These restraints, however, were not the only obstacles impeding the development of the industry. In 1950 the Chamber of Mines decided, with approval from Treasury, to charge a premium for gold supplied to local manufacturing jewellers.[140] The premium was to be on the same basis as that charged to firms manufacturing for export, .and was set at 30 shillings an ounce. In announcing the increase, the Gold Producers' Committee made it very clear that it did "not wish to have prior discussions with the SA Jewellers Association or other interested bodies" on the matter.[141]As expected, the increase in the gold price came as a shock to the industry which remonstrated against the injustice of South African manufacturers paying more for gold than jewellery producers in other countries where no gold mines existed. Moreover, it was argued, the premium charged to overseas purchasers was to improve South Africa's foreign exchange position and should have no bearing on the supply of gold for local manufacturing purposes.[142]Finance authorities were implacable on their decision, claiming that if overseas manufacturers were willing to buy considerable quantities of semi-processed gold at a premium above the monetary price, there was no reason why the gold producers should be forced to supply local needs at the monetary price.[143]Jewellers' residues and sweepings, which previously had to be sold for refining, would now be returned to jewellers as the equivalent in gold, as the premium price was not to be included in the payouts to jewellers for their waste metal.[144]

Other problems which occupied the industry Association in this period was the government's "prohibited list" on imports which had been introduced in 1948 and was still in force. The list was part of the government's import control measures and was much decried by the industry as it encompassed much of the goods sold by retailers. The import control system was complex, allowing for both sets of "general" and

"restricted" permits. General permits were valid for goods from any part in the world, including the so-called "hard currency" countries (currency in dollars and Swiss francs). Restricted permits applied only to goods from "soft currency" countries. Import permits allocated were on a ratio of 25 percent general, and 75 percent for restricted permits. Nonetheless, both these type of permits could be converted on a ratio of five to one, into permits for purchase of goods on the prohibited list.[145] Although the system offered some choice, there were very few importers who could afford to sacrifice permits by converting them to restricted goods on the one to five basis.[146]Each year the industry expected the government to either abolish the list or relent on some of the items listed. Nevertheless, each time the rules were enforced or even more stringent measures applied. As with import control during the war, shortages affected not only the range of goods for retail, but also raw materials, such as jewellers' findings, which were essential for repairs and the manufacture of articles.[147]

5.4.5 Effect of the government measures on the industry

The crisis induced by the government's drastic measures had the effect of once more uniting the industry in an effort to overcome the new problems imposed on it. Membership of the Association by mid-1949, soon after the government curtailed the supply of gold to manufacturers, totalled 400, and it was reported that "the vast majority of jewellers in the Union are members of the organisation".[148] Representation encompassed the major cities through branches in Johannesburg, Pretoria, Cape Town, Durban, Port Elizabeth, East London, Kimberley and Bloemfontein.[149]The effort to take joint action through the organisational body of the industry was motivated not only by the recent government punitive measures, but also by other pressures bearing on the industry. The bleak economic climate in the country engendered uncertainty and lack of confidence and had a dampening effect on consumer spending. The shortage of money in the economy was exacerbated by a reduced flow of overseas capital, and of immigrants, into the country.[150]

As had been the experience during the war years, not all the restrictions had a detrimental effect on the industry. The prohibition of imports gave rise to a proliferation of manufacturers, albeit of varying competence. At the end of 1952, for example, 21 new jewellers were said to have been registered and some firms had "imported expensive machinery and craftsmen necessary for the trade and extended their

business at an outlay of thousands of pounds".[151]Whereas gold supplies were limited according to the strictly controlled quota system, there was some provision for additional disbursements of gold for new firms or for the expansion of existing businesses. The additional gold was either requested from Treasury by the police, or it was obtained by the authorities redistributing gold from the prescribed quotas that had not been utilized by particular jewelers..[152]Although manufacturing jewellers had necessarily adapted to inadequate gold supplies for their purposes, they regularly protested at the unfairness of the authorities who granted overseas firms any amount of gold for fabrication whilst denying local jewellers their requirements.[153]The standard argument from the authorities was the same, namely, that large quantities of gold exported translated into foreign exchange for the country, whereas supplying gold locally reduced gold resources which were necessary to pay for imports.[154]Indeed, if anything, gold allocations to jewellers were made even more stringent when it was decided to deduct from each manufacturer's quota, the amount of gold recovered from sweepings. Jewellers contended that the gold recovered in this manner represented gold salvaged from the amount that had already been allocated, and that it should therefore not be set off against a future allocation.[155]As the finance authorities were not concerned about jewellers' predicament when making these decisions, the Associations' protests made little difference.

5.4.6 Sectional differences in the industry

By the mid-1950s, the period of scarcity, under which the industry had battled to survive and grow, gradually started to ease. The national economy showed signs of improvement and some concessions were given to jewellers in the form of making available additional import permits for certain items on the restricted list.[156] Welcome news for the industry as well was that Treasury had acceded to the Association's repeated requests and reduced the premium on gold from 30 to 15 shillings per fine ounce,[157] before finally, in 1954, abolishing the premium altogether. As a consequence, manufacturing jewellers reverted back to the system of being paid in currency for their sweepings, as opposed to receiving the equivalent value in gold.[158] That same year exchange control regulations were relaxed sufficiently to enable jewellers to export to neighbouring countries, as long as such exports did not require increased gold quotas.[159]Further changes were evident in the following year, 1955, when some jewellery items were removed from the restricted list and the ratio of conversion of

general import permits for restricted imports dropped to a 3:1 ratio.[160] The period of prosperity that was slowly becoming manifest was not welcomed by all, and especially not by many of the manufacturers who, for the past six years had been providing for a captive market. On the lifting of import control, therefore, manufacturers had conflicting viewpoints to those of retailers and wholesalers. Indeed, it was even suggested that it might be necessary for manufacturers to become a separate body, whilst still remaining affiliated to the Association.[161]

Sectional differences in the industry became manifest specifically around the issue of requesting increased tariffs on imported jewellery. The Association refused to support manufacturers on this matter, and the latter therefore approached government as the Industrial Council for the Jewellery and Precious Metal industry, comprising both employers and unionised employees. The application for tariff protection disclosed elements of dissent in the industry that were not simply limited to sectional differences. Initially, the Industrial Council applied for a protective duty of 45 percent, to approximate the level of protection that jewellers had enjoyed under the combined effect of 20 percent tariff duty, and the exchange control of 5:1 under the import control regulations.[162] The Council felt justified in requesting such a high tariff, given the high protection costs applicable in countries such as Canada and Australia, and to counteract the possibility of the USA or UK dumping "out of fashion" jewellery in South Africa.[163]On being informed that government was bound by the GATT agreement to tariff duties not exceeding 25 percent, the Council modified its request to a 30 percent duty, but then also requested a rebate on small diamonds, precious and semi-precious stones, palladium, pearls and jewellery findings (parts and accessories for jewellery manufacturing).

It was on the issue of duty rebate on imported findings that schisms in the industry came to the fore. Manufacturers who produced findings, as well as the Jewellers and Goldsmiths' Union, were opposed to a rebate on duty, whereas those who did not manufacture the items, were in favour. The jewellers' Association supported a rebate on findings, but was opposed to an increased duty on finished jewellery on the basis that the cheaper jewellery lines produced locally did not compare to the superior quality, wide variety and lower price of mass produced goods from overseas.[164]The Jewellery Manufacturers' Representatives Association in South Africa equally objected to the

recommendation for increased duty on imports, arguing that the local industry, although able to produce hand crafted jewellery to a select market, was unable to compete in the cheaper, mass produced articles except through prohibitive tariffs that would increase prices to the public.[165]In reviewing the conflicting applications and comments from the industry, the authorities concluded that it was not viable to protect the local industry against imported, mass produced goods. Indeed, it was suggested by government that "it would be in the best interests of the Union to encourage that skilled labour to take employment in more economical industries".[166]

Similar discord in the industry led the authorities to reject a further application for duty rebate on the inputs into precious jewellery manufacturing, such as loose diamonds, precious stones, and palladium. In this case, the government representatives went so far as to draw up a questionnaire for distribution among industry members, to gain an indication of the raw materials required, and the extent of their use. Although manufacturers in both the Transvaal and the Cape were canvassed, only six replies were received to the 85 questionnaires circulated, despite waiting seven months for responses. The Board of Trade and Industries decided that the industry was not in such dire straits as claimed, and therefore dismissed outright all the applications for rebates.[167]

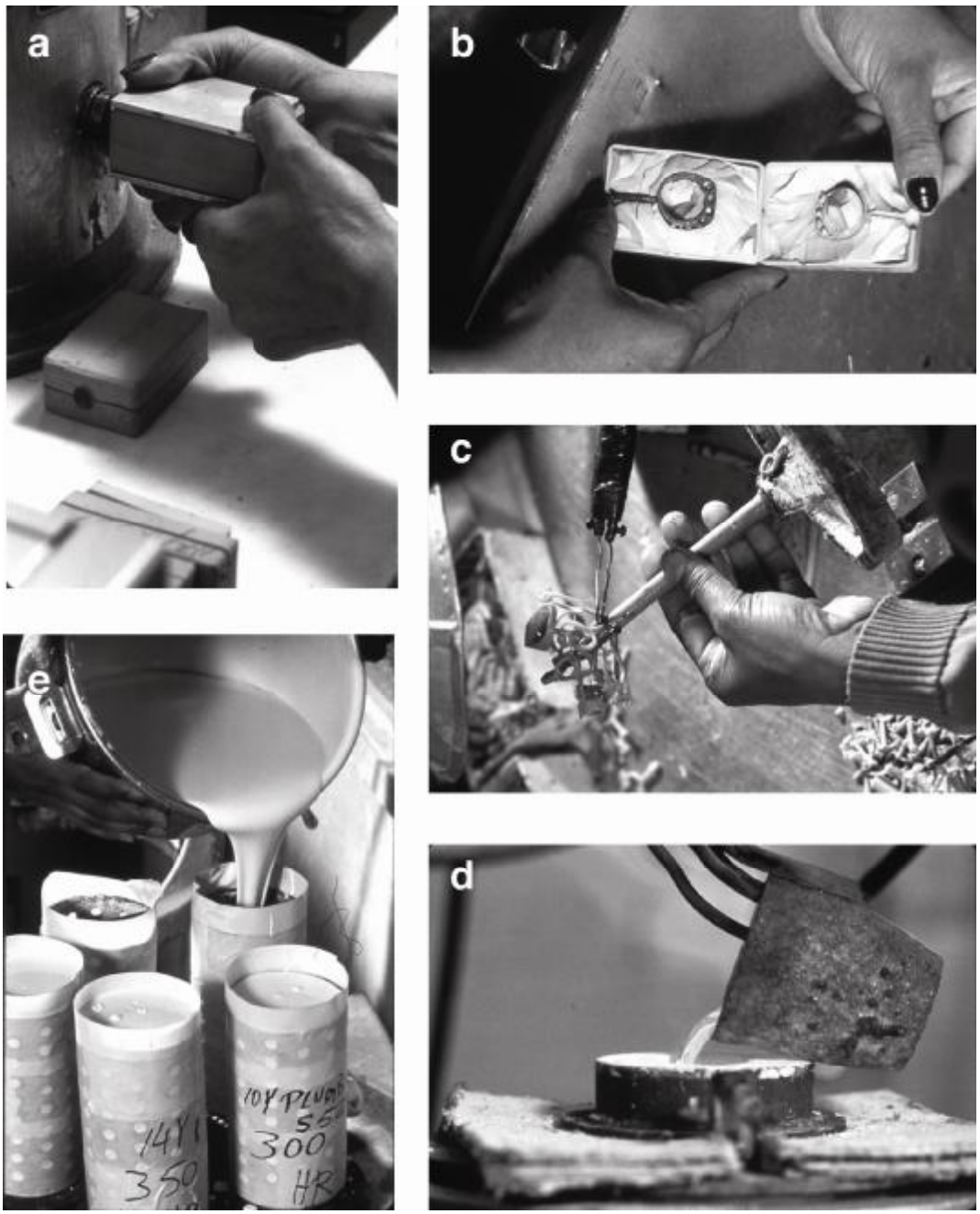
5.4.7 Threat of technological development

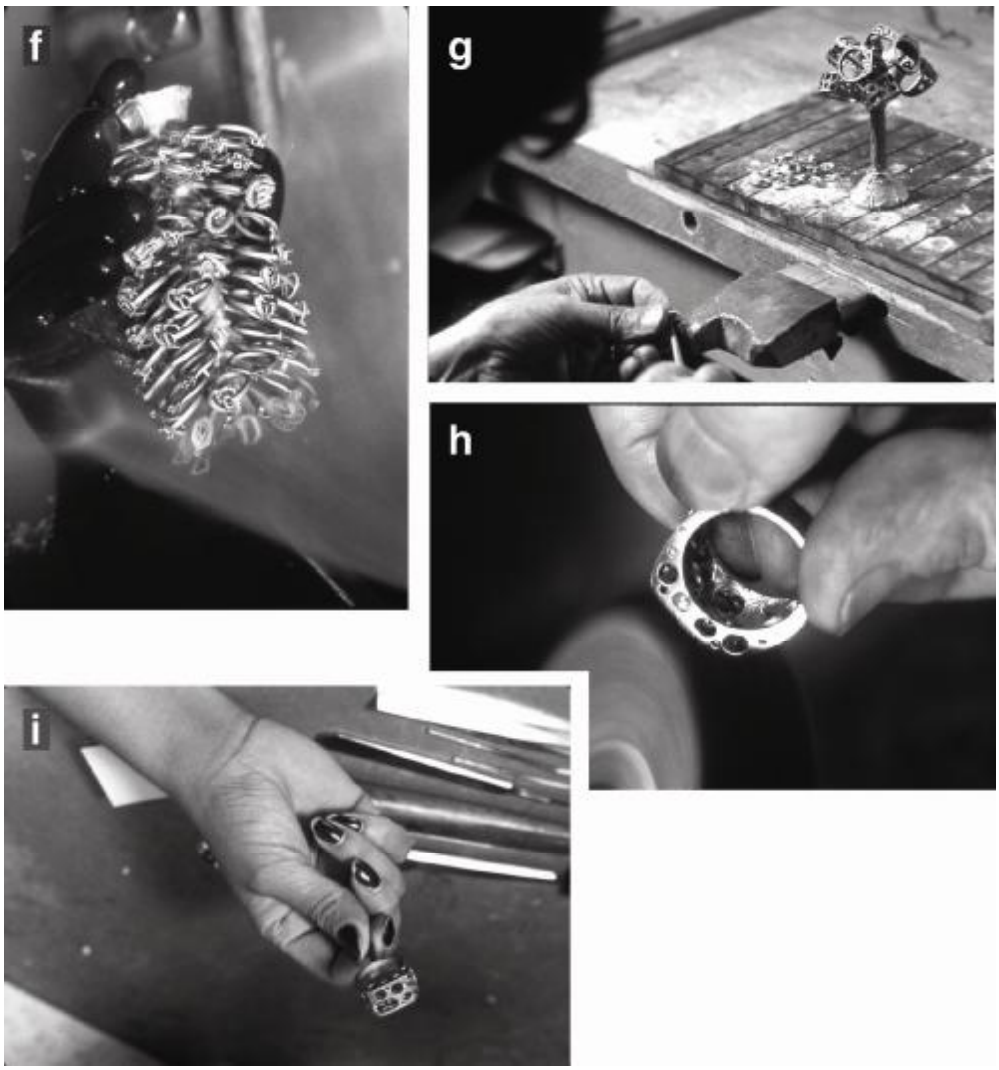
As import competition threatened to displace some of the less competitive local manufacturers, so it eroded horizontal relations in the cluster. Efforts to procure tariff protection had proved unsuccessful and only served to highlight the growing divisiveness in the industry. These rifts in the industry were further accentuated by the actions of certain manufacturing jewellers who sought to remain competitive by forcefully resisting the technological advancement of their competitors.

The pressure to compete with imported products prompted manufacturers to explore alternative means of reducing production costs, either through increased mechanisation or by employing unskilled labour, or a combination of the two. The introduction of mechanisation was possible mainly for mass produced jewellery as handcrafted jewellery required highly skilled apprentices known in the trade as 'journeymen'. Manufacturing jewellers in South Africa in the 1950s were engaged in two main lines of

production: precious jewellery using purely precious metals and stones, and so-called imitation jewellery which was plated with gold or silver and used semi-precious stones. Precious jewellery production could be either hand crafted, expensive pieces or cheaper "fashion jewellery" for the bulk of the population.[168] It was in the production of imitation and the cheaper lines of precious jewellery that mass production methods could be employed. The mass production technique popular at the time was the 'lost wax' process, currently still in use, which involves the injection of molten wax into moulds to make wax patterns that are then built onto a "tree" or "sprue" of wax. The tree is then placed in a can into which liquid plaster is poured and allowed to set, thus forming a plaster mould. When molten gold is poured into the plaster it sets into the patterns formed by the wax moulds, and these become the jewellery pieces which are then finished by hand (Plates 5.8a-i).

Several manufacturers using the lost wax process argued that most of the tasks in the lost wax procedure were simple and repetitive and therefore required only unskilled work with a commensurate rate of pay. It was on this issue that a dispute arose between the Industrial Council of the industry and mass production manufacturers. SA Goldware was one of the first firms to disagree with the Industrial Council views of what constituted journeyman's work.[169]In its proposed new agreement in 1950/51, the Council had stipulated that all workers engaged in the lost wax process, regardless of the work performed, had to be classified as journeymen and paid accordingly.[170]SA Goldware and other firms involved in mass production disagreed with the terms of the agreement, arguing that whereas certain tasks in the lost wax process required journeymen's skills, such as the making of models, rubber moulds and casting gold in the plaster casts, all the other operations were very simple and could be "performed by a raw native after a few days' training".[171]The Industrial Council's point of contention on the issue was not so much whether the operations in question were highly skilled or not, but that the lost wax process was "highly productive from the output and value point of view",[172] implying thereby that the firm involved ought to pay journeymen's wages because it could afford to.[173]


a
b
c
d
e
14Y
350
10Y PLUG
55
300
HR



Plates 5.8a-i Lost wax process in jewellery manufacturing

The overriding concern of the Council on the lost wax process was the threat of this technology and innovation to the continuation of skilled workers in the industry. The Secretary to the Industrial Council stated openly that "mechanisation will overcome the human element and the cheap wages you suggest will further nullify the entire industry at the expense of the qualified journeyman".[174]Aligned to this fear was that black African labour, because of lower wages, would eventually oust white employees from their positions. This concern was clearly expressed in the Secretary to the Council's remark that "this is a very nice and tight little industry…but…if the wage rates considered by this Council to be fair and equitable are tampered with, this industry could quickly deteriorate into another native trade".[175]To this end, the Industrial Council introduced a clause into its agreement, decreeing that only a journeyman or apprentice could be employed in journeyman's work. If, in specific circumstances, a non-journeyman were employed in journeyman's work, that employee also had to be paid journeyman's wages. This clause was to prevent employers from using unskilled labour in journeyman's work, and paying only the minimum wage of £11 a week as opposed to the journeyman's wage of £16 or even £30 a week in particular cases.[176]More significantly to the Industrial Council, however, is that employers would be forced to employ white workers instead of black labour, as there were only 16 black journeymen in the industry at the time.[177]

The dispute succeeded in forcing some changes to the Industrial Council's new agreement, reached in September 1951, as even the Department of Labour concurred that the prescribed wages for certain work operations were disproportionate to the level of skill required. The Council's new agreement therefore classified some of the operations in the lost wax process in a separate category with attendant lower wages. Nevertheless, mass manufacturers were still dissatisfied as it was alleged that insufficient of the lost wax operations had been classified as unskilled, and consequently the wage rates for that method of work were still considered to be too high. Manufacturers opposing the new agreement decided to form their own separate organisation, the Precious Metals Manufacturers' Association, on the basis that the existing employers' organisation of the Industrial Council was not representative of their interests.[178]The new association consisted of only three companies: SA Goldware, Metal Art and, Pretoria Badge and Silversmiths. All three enterprises engaged in mass production, albeit SA Goldware was by far the largest of the three.[179]The attempt to circumvent the terms of the Industrial Council Agreement through dissociation from the

existing employers' organisation did not prove successful as the authorities decreed that the interests of the mass producers were represented in the existing body.[180]Certainly, from information submitted by the Industrial Council, of 43 mass producing jewellery firms, almost half were members of the Industrial Council's employer organisation, and none opposed the new agreement.[181]The difference would seem to lie in the extent to which the firms referred to by the Industrial Council were involved in mass production. Very few firms at the time produced exclusively mass production jewellery; most engaged in a combination of mass production techniques and hand-crafted work. By contrast, SA Goldware, was established specifically to manufacture in volume. Once the government's export policy changed to allow the open sale of ingot gold on the international market, SA Goldware was deprived of the "opportunity of handling vast quantities of gold for the manufacture of pseudo ornaments and articles of jewellery".[182]From casting molten gold articles, which required neither finish or special attractiveness as they were destined for sale on the so-called prohibited "free market", the firm now had to compete with standard, higher quality jewellery. Under these circumstances the firm's employees, having only the limited skills required for gold casting, were ill-equipped to function competitively under the changed conditions.[183]

5.4.8 Reaction from the industry to the threat of competition

Although only the three mass producing firms protested against, and challenged, the new Industrial Council agreement, the Council suspected that other firms might not be abiding by the content of the agreement to employ qualified journeymen for journeyman's work and pay. There being no overt evidence to implicate suspected errant employers, however, the Secretary for the Industrial Council allegedly resorted to devious practices in order to trap such employers. The Secretary reportedly arranged with certain employees in the firms to inform on employers' practices of using non-journeymen in journeyman's work, and provide details of the amount paid to employees.[184]In addition, the Secretary was said to sneak, unannounced, into firms' premises and question employees on their work description and wages. In these "interview" sessions the Secretary would apparently "put words in the interviewee's mouth" to forcefully implicate the employer of labour malpractices.[185]The Secretary for the Industrial Council was intent on finding certain employers guilty of contravening the Council's regulations, in order to fine them heavily and eventually to push them out of business.[186]The Secretary's show of apparent concern for the well-being of black

employees led labour authorities to interpret his actions as displaying "communist tendencies".[187]The opposite conditions applied, however, as the Industrial Council was overwhelmingly concerned with preventing the infiltration of blacks into skilled positions in the industry.[188]Additionally, the Council was threatened by the perceived unfair competition from firms "with a great wage advantage over any of their competitors" by virtue of employing blacks in skilled positions and paying them minimum wages.[189]

It was not only members of the Industrial Council who tried to undermine competitors in the industry in order to secure their own positions. In many instances Association members also tried to protect their own interests, often at the expense of fellow competitors who were not Association members. At one stage, several jewellers in Pretoria complained to government that the South African Jewellers Association was actively preventing non-members from doing business with collective buying organisations.[190]Buying organisations represented a group of people who, on the basis of their collective buying power, could purchase items on credit, or at discounted prices. The contract that the Association entered into with the buying organisation, prevented the latter from purchasing from any other jeweller who was not a member of the Association. Non-member jewellers, keen to trade with the buying organisations, would apply for membership of the Association, hoping that this would enable them to start trading relations immediately. These non-member jewellers were told unequivocally that "until such time as an applicant for membership is fully and finally accepted as a member, such applicant is precluded from participating in any of the contracts entered into between the Association on behalf of its members and the various purchasing associations".[191]What was worse, however, is that the applicant jeweller would then be denied membership of the Association for no apparent reason, and would still be precluded from trading with the purchasing organisations.[192]If the buying organisation contracted to the jewellery Association did enter into a contract with another jeweller who was not a member, the organisation was refused further business from the Jewellers' Association.[193]Indeed, it required the intervention of the authorities, in response to numerous complaints from jewellers, before the jewellery Association acceded to granting membership to jewellers wanting to trade with buying societies.

5.4.9 Inter-provincial rivalry

Discord in the industry was not only limited to the Johannesburg cluster. As the industry in Cape Town strengthened, tensions between the two groups became evident. This friction between the Johannesburg and Cape jewellers further undermined solidarity in the industry and weakened the fragile relations between manufacturers. Cape jewellers, despite being part of a smaller cluster, were fiercely resistant to identifying themselves with their counterparts on the Witwatersrand. At the time that the Industrial Council applied to the Board of Trade and Industries for increased import duties on jewellery, in 1955/1956, the Cape Jewellery Manufacturers' Association, consisting of 31 members, was approached to see if they wanted to be associated with the application. The response from the Cape Association was that it supported the application in principle but preferred to make its own representations to government.[194]

Another instance of inter-provincial rivalry between the two clusters centred on the establishment of an apprenticeship committee in the Cape. The existing Apprenticeship committee for the Witwatersrand/Pretoria areas recommended extending the area of jurisdiction of the Committee to include the Cape. This proposal was supported by the National Apprentice Board, particularly in view of the greater number of employers and unionised employees in the Transvaal, which amounted to 100 and 170 respectively, versus the approximate 20 employers and 100 unionized employees in the Cape.[195] Nevertheless, the employers in the Cape "were emphatic in their opposition to the jurisdiction of the Johannesburg/Pretoria Committee being extended to Cape Town", claiming that conditions were not the same in the two centres, and that control exercised from Johannesburg would be detrimental to the jewellery trade in the Cape.[196]Unionised labour in the Cape was in favour of coming under the jurisdiction of the Witwatersrand Committee, and disputed that the trade differed between the two provinces; the only difference being in the wages prescribed.[197]Journeymen were paid higher wages in Johannesburg than in the Cape, and it was assumed by the Johannesburg Committee that this fact accounted for the attitude of employers in Cape Town.[198]The labour component in the Cape was largely comprised of Coloured workers and there was a "tendency for the minimum wages prescribed in the Conciliation Board for the industry at the Cape to become maximum wages in the case of (Coloured) journeymen".[199]Moreover, according to the Union in Cape Town, the lack of apprenticeship control and the absence of a training syllabus in Cape Town led to some

apprentices being trained in such a manner that they could only be useful in one workshop, which in practice barred then from employment elsewhere. Training in the province was also said to be haphazard, with trainees' status often changing overnight to a different work category. The concerns from the Union and National Training Board notwithstanding, the Cape Manufacturer's Association refused to amalgamate with the Transvaal committee and instead established its own apprenticeship committee.

5.4.10 Threats to industry cohesiveness

The disputes among jewellers at a time when the government was relinquishing its grip on the industry, through the lifting of import control and relaxation of export control measures, was indicative of manufacturers' insecurity at the prospect of no longer being protected against international competition. Competitive pressures caused manufacturers to react to even the most minor indications of unfair competition. For example, the government received complaints that certain jewellers were not observing the compulsory closed period over Christmas.[200] Probably the most frequently voiced complaint by the industry was that the Mint was undertaking work which fell within the jewellers' domain.[201]The authorities duly investigated all these complaints but the rebuke from the Mint that the industry was being "petty, unrealistic and merely of a nuisance value" was reflective of the waning tolerance for the industry's constant lamentations.[202]

For many manufacturers there was cause for alarm in this period of the mid-1950s which was marked by a number of industry closures. The period was referred to as the "slackest…in history" for jewellery manufacturers as 150 jewellery manufacturing firms, representing half of the firms that had existed in Johannesburg in 1953, closed their doors, leaving approximately 200 qualified jewellers unemployed.[203]There were certain manufacturers, however, who remained unperturbed at the so-called 'recession in the trade'. More especially, these were mainly manufacturers of high quality, hand crafted jewellery who maintained that the setback in the industry was largely applicable to the "mushroom" industries that had sprung up during the war and immediate post-war years, producing mainly the cheaper lines of jewellery. Manufacturers of "real" jewellery, it was argued, had proved competitive with overseas imports in both quality and price, and could still employ skilled craftsmen at favourable rates of remuneration.[204]The impact of the freer system of trade policy on the firms producing cheaper jewellery was clearly manifested in the decline of a number of these firms from between 50 and 60 enterprises

in the early 1950s, to only six a decade later.[205]Contrary to the claims of some of the more prosperous jewellers, craftsman jewellery manufacturers were not immune to the effects of the new trade policy conditions. The virtual demise of the local "imitation" jewellery sector was as much attributable to the uncompetitiveness of such jewellery manufacturers as to the flood of imitation jewellery coming into the country, which in turn reflected the increasing consumer preference for cheaper jewellery. Not only was this type of jewellery cheaper, but its quality was also improving, all of which "contributed materially to the undeniable falling off in jewellers' turnovers".[206]



Plate 5.9 American Swiss Watch Co. Ltd., forerunner of jewellery retail chain stores

Aligned to the rising popularity of cheaper jewellery was the steady emergence of department stores and other outlets selling this line of jewellery, in addition to watches and giftware. Jewellers, therefore, were faced with the threat that the "standard practice for departmental stores to feature jewellery counters"[207] would result in "the gradual extinction of the specialist jeweller".[208]Large scale retail manufacturing stores were another threat to the individual jeweller. American Swiss retail chain, which started as a small jewellers' store in Cape Town in 1896, gradually multiplied to three stores in the Cape, but within a year of merging with Foschini fashion chain in 1968, had opened 13 stores countrywide[209] (Plate 5.9). As jewellery became more accessible to the

population as a whole, there was the growing trend to facilitate payment by selling on credit. Jewellers who traditionally had only sold on cash terms were forced to extend credit to customers in order to keep their clientele base.[210]

It is significant that as manufacturers struggled to maintain their competitive position locally, they showed little interest in cooperative relations to counteract some of the obstacles affecting them. A publicity campaign launched by the Association to reverse the flow of customers to competing stores, elicited little response from the industry, both in terms of interest and financial support.[211]Likewise, when the Association offered to make representations to government to reduce the import duty on small diamonds, manufacturers made little commitment in providing the Association with the necessary information.[212]The lack of interest in cooperating with the industry organisational body was not only reflective of apathy, but was also indicative of "a measure of unhealthy friction" that had arisen between the different sections of the trade.[213]Indeed, there were several members who were dissatisfied with the way the Association was constituted, and preferred it to function as a federation of the jewellery trades.[214]This was an issue that would eventually come to a head and force the reorganisation of the Association.

If members demonstrated scant interest in the industry Association when there were obstacles to be overcome, the apathy was even more pronounced in the absence of major challenges to jewellers. The early 1960s were prosperous years for the industry, but signified a period of rapidly declining interest in the SA Jewellers' Association. Fears that the Association was losing ground[215]were reinforced as the East Rand branch of the Association ceased to exist[216], and other branches showed signs of following suit.[217]The Association was reported to be running at a loss, and going through a period of internal crisis.[218]It no longer played a major role in the industry, aside from organising and convening the annual national conference. Attendance at branch meetings barely reached a quorum, and at the tenth conference of the Association in 1966, certain of the branches were not even represented, confirming that "the enthusiasm which was once so prevalent in the trade was on a definite decline".[219]

It was not only the SA Jewellers' Association that was teetering through lack of support from, and dissension among, its members. The Industrial Council for the industry was also on a precarious balance as the Manufacturing Jewellers' Association engaged in an

"underground war" with the Jewellers and Goldsmiths' Union and new competitors.[220]Members of the manufacturers' association were said to have banded together to prevent newcomers in manufacturing from joining the association and from recruiting qualified staff. The opposition to the new firms was rooted in the age-old grievance that they were selling direct to the public.[221]On another front, the manufacturers' association had reached deadlock with the Union on the issue of recruiting skilled labour from abroad to overcome the shortage of skilled workers in the country. About 20 skilled journeymen had been recruited against fierce resistance from Union members who disputed the shortage of skilled labourers and denounced the recruitment of immigrants on the basis that it would lead to a reduction in the wage structure.[222]Unable to reach a settlement, Union members went on strike in November 1968. Although some members returned to work in January the following year, it was as individuals and not as Union representatives. The strike apparently had little disruptive effect on production as it started too late in the year to affect the Christmas peak production period, and because employers were themselves craftsmen and therefore able to continue production work. By March 1970 the dispute between employers and employees had still not been resolved, causing the Union to lose its collective bargaining power base and bring to an end the Industrial Council. The Union could continue functioning but not as a signatory to an agreement between employer and employee.[223]

5.4.11 The Association in crisis

The manufacturers' victory over the Goldsmiths' Union was heightened by boom conditions which ensured "Christmas buying on the biggest scale known in the jewellery trade" in 1968,[224]and prevailed into the following year. In keeping with previous occasions of unrestrained consumer spending, however, the government soon introduced measures that curbed the extravagant buying and selling in the market. This intervention was in the form of a 20 percent sales tax on all jewellery at the point of local manufacture or importation.[225]It was reported that the news "burst like a bomb on the industry" and forced many manufacturers and distributors to suspend operations while deliberations took place with the authorities.[226]The meetings with the relevant government bodies were not in vain in that diamond cutters and dealers as well as jewellery manufacturers, were spared having to pay sales tax, and only retailers were left with the additional financial and administrative costs. Imported jewellery immediately went up in price by 20 percent, but for locally made articles, the new system was frought

with problems and inconsistencies. Varying amounts of tax were applicable for different articles, and there was no clarity on what constituted “new jewellery”, especially when it came to the restyling or repair of jewellery involving gold or diamond additive.[227]In addition, there was no tax on certain metals such as stainless steel, and different tax percentages for gold, diamonds and pearls or precious stones. Every article sold had to be listed, its elements separated, and the different percentages applicable to precious stones and gold added to the selling price.[228]The Association in this period once more revived its function in the industry and played a significant role in assisting retailers with their queries and clearing up anomalies and uncertainties.[229]

The negative effect of the sales tax went beyond the administrative encumbrance incurred; it effectively quelled the exuberant trading that the industry had enjoyed and heralded an “era of tight money”.[230]Retailers soon noticed a decline in luxury buying, a trend which intensified when the sales tax increased by five percent a year later, and was broadened to include watches, a previously exempted item.[231]The jewellery industry was said to be barely growing relative to other trades, making 1970 one of the most difficult years for the industry.[232]By the time government announced another five percent increase in the tax, during early 1971, the industry hardly reacted, inured to the tightening economy. The repercussions on the trade were evident as turnover dropped five percent only a month after the latest tax increase. South African travellers overseas were said to be able to purchase diamond jewellery cheaper than in their own country.[233]The tax burden affected more than just turnover in the industry; it also dampened jewellers’ morale. The tax exacerbated financial pressures on the industry and ultimately curbed the excitement generated by the first attempt ever by manufacturers, to stage a trade fair for retail jewellers and overseas buyers.[234]The 1970 fair was highly successful and inspired plans for similar events the following year, but these plans never reached fruition as firms, disillusioned by the economic circumstances, withdrew their support and the organisers lost interest.[235]

Despondency in the industry, coupled to the crumbling cohesiveness of the cluster, caused jewellers to distance themselves further from the Association during this period of difficulty. Lack of support from members led to a crisis in the Association, and, by the time of the eleventh national conference of the organization, in 1972, it stood at a crossroads.[236]The main resolution to be decided upon stemmed from the two main

clusters of the industry, Johannesburg and Cape Town, each with its own proposal for the future of the organisational body. The Johannesburg cluster called for the basic structure of the SA Jewellers' Association to be retained, but with substantial revision of the constitution. By contrast, Cape Town jewellers insisted on the total replacement of the existing organisation by a National Coordinating Council, representing provincial, autonomous wholesalers' and retailers' associations. Already the manufacturers' section of the Association had collapsed with the resignation of eight of its eighteen members, leaving only the retail and wholesale section of the industry to be represented in the Association.[237] In the course of debating the role of the Association, attention was drawn to what was probably the most important issue underpinning the crisis of the organization, namely, that "the revival of the Association will not last outside the conference doors if it is not part of a general revival of interest among jewellers, of the spirit that sustained the Association in its heyday".[238] It was evident that simply changing the system was not going to address the problem of apathy among jewellers.

The decision with respect to the structuring of the Association was made in favour of retaining the existing structure but changing the constitution to allow membership of all jewellers and department stores if these conformed to acceptable standards. In addition, a Federal Council was formed, consisting of one representative from all the associations concerned with jewellery, such as the Master Diamond Cutters' Association, the Jewellery Manufacturers' Association, de Beers and the Watchmakers of Switzerland, to act on behalf of all sections of the industry at national and government level.[239]The restructuring of the industry organisation, accompanied by the abolition of the original bye-laws, immediately brought the important Sterns retail chain into the fold, thereby significantly reviving the Association in terms of numbers and support base. Sterns had severed ties with the Association as far back as 1957 due to a disagreement with Sterns' methods of promoting business. Attracting Sterns back as a member of the Association was, however, insufficient to ensure the survival of the newly constituted industry body. The cluster, and Association, was to go through further changes before settling into a new growth path. It was these changes that marked the third turning point for the development of the cluster (see Chapter Six).

5.5 Conclusion

The growth path of the jewellery cluster in Johannesburg, from the early 1940s to the 1960s, was a difficult one, characterized more by obstacles than opportunities. Most of the difficulties encountered by the cluster stemmed from economic circumstances, and especially of government policy. In the formative years of the cluster, from the mid-1940s to the early 1950s, economic upheavals in the form of World War II presented the greatest challenges to the industry. The war period created shortages of imported goods, both for retailers and manufacturers. At the same time, however, the adverse circumstances proved an important turning point for the industry in that it prompted unity in the cluster through the establishment of an industry representative body, and the absence of imports stimulated growth of the local manufacturing sector.

The creation of an industry association was the first manifestation of joint action in the cluster which otherwise exhibited weak vertical and horizontal linkages. Rivalry and sectional differences often divided the industry and undermined co-operative relationships. The industry Association was important in bringing cohesiveness to the cluster and in meeting the industry's immediate needs. The Association was less influential in combating government decrees that effectively prevented the industry from developing. Government policy with respect to jewellery came to fore in the late 1940s, with the introduction of stringent laws and regulations aimed at curbing the use of gold in manufacturing. The imposition of control measures on the industry was motivated by the need to conserve gold bullion for government purposes, but it was also a reflection of government's prejudiced assessment of the industry and its capacity to develop. The effect of these constraints was to arrest the development of the cluster, and to drive its activities underground.

It is unfortunate that joint action in the cluster came into effect mainly in times of tribulation. When the difficulties occasioned by war or government regulation had subsided, entrepreneurs tended to lose interest in the Association and instead, lapsed into rivalry that more often undermined, than sustained, industry growth. Rather than strengthening horizontal and vertical ties with each other to withstand competition from foreign imports, participants acted individually and often resorted to underhand tactics to

gain competitive advantage. Such behaviour was prompted not only by the threat of competition from foreign sources, but also by technological advancements that were likely to increase opportunities for competitors, and especially for black workers at the expense of white employees. Innovation in the industry therefore tended to be met more by resistance than support, a factor which added to the constraints on industry growth.

The Association was powerless in overcoming rivalry in the industry; indeed, in trying to represent all sectors of the industry the Association often found itself in conflicting situations which ultimately led to dwindling membership. Even the emergence of another crisis situation in the form of the imposition of sales tax on jewellery did little to revive the role of the Association in the industry, indicating the need of a new representative body to unite the growing disparateness of the jewellery sector. It is this new phase in the history of the industry that forms the focus of discussion in Chapter Six.

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CHAPTER SIX

Cluster Cohesion, Stagnation and Decline

6.1 Introduction

This chapter analyzes the events that marked the third turning point in the evolution of the jewellery cluster in Johannesburg, from 1972 to the end of the 1980s. One of the salient factors that demarcates this stage in the trajectory of the cluster is the formation of the Jewellery Council that superseded the SA Jewellers' Association as the representative body for the jewellery industry in South Africa. It is argued that the establishment of the Jewellery Council marks the crucial and third turning point in the development of the industry. The impetus for introducing a new governing structure for the industry was led by external agents, and the role of these agents in the growth of the jewellery sector forms an important theme in the chapter.

One of the discernable elements of the Jewellery Council in its approach to the industry is that it encompassed the industry at the national level, thereby widening the focus from the Johannesburg cluster. The attention of the Council on the broader industry did not, however, preclude the importance of the Johannesburg cluster as the largest agglomeration of jewellery–related entities in the country. The cluster, therefore, was still an important medium for understanding the impact of internal and external factors on the broader industry.

This chapter highlights the role of the Jewellery Council in the industry, and its failure to prevent the stagnation and eventual decline of the cluster that marked this phase of its trajectory. Despite the interventions of the Council in the areas of education and training, promotional activities, and the lobbying of government on the issue of taxes, a number of factors militated against the growth of the industry, and of the cluster in particular. Some of these factors were internal, stemming from shortcomings in the industry itself, whereas others were of external origin, and beyond the industry's control.

In exploring the issues that impacted on the industry the chapter is organised into four sections of discussion. Section one delineates the events that led to the formation of the Jewellery Council, drawing particular attention to the role of external

agents in influencing these developments. The second section focuses on the role of the Council and its activities in the industry, especially in establishing training facilities, promoting the sector, and introducing cohesiveness. Section three analyses the internal and external factors that impeded the development of the industry in this period. The result of these factors in causing the decline and eventual demise of the Johannesburg cluster forms the focus of analysis in section four. The various strands of the discussion are joined together in the concluding section of the chapter.

6.2 The third turning point

6.2.1 Formation of the Jewellery Council

Consistent with observations in the literature on industrial clusters (chapter two), to the effect that the growth of a cluster is often induced by external agents, the catalyst for propelling the Johannesburg jewellery cluster into its third phase of development came from agents outside the cluster. The significant agents were the mining houses, especially de Beers and the Chamber of Mines. Although these mining companies comprised a link in the jewellery value chain through their role as precious metal and diamond suppliers, they were not involved further downstream in jewellery production. The gold producers, especially, were not interested in the jewellery market; rather, their primary concern was to maximize bullion production. The gold mining sector altered its approach to the jewellery industry in the 1970s, with the realization that jewellery absorbed 70 percent of the supply of "free" gold. Whereas the price of bullion had remained unchanged for the past 34 years, the price of "free" gold varied according to demand.[1] Awareness of the significance of jewellery in gold consumption led gold producers, through the Chamber of Mines, to establish the International Gold Corporation (later known as Intergold), with the specific purpose of promoting gold usage, especially in jewellery[2] (Chapter Three).

Accordingly, whereas the Chamber of Mines had previously been aloof from the local jewellery industry, from the beginning of the 1970s it became more responsive to the needs of the jewellery sector. On more than one occasion the Jewellery Manufacturers' Association had approached the Chamber of Mines for a gold subsidy to enable manufacturers to produce for export.[3] The manufacturers claimed that the high level of imported Italian jewellery made it imperative for them to export in order to remain competitive. The increased costs of producing for the export market were exacerbated by the high price of gold and jewellers sought a reduced gold price from

the Chamber.[4] The Chamber was unequivocal in its response that a gold subsidy for local jewellery manufacture was unjustified as the industry lacked the necessary organisation, craftsmanship, and business methods to successfully compete with overseas producers.[5] The gold producers did, however, recognise the need for the South African industry to expand through exports. More importantly, the mining houses were keen to accelerate jewellery consumption as a means of increasing gold offtake and were prepared to assist the industry in ways other than the provision of cheaper bullion. One of the ways in which the Chamber was prepared to play a role was in the activity of marketing. Specifically, the Chamber aimed at organising a system of local and international seminars with the purpose of educating the manufacturing and retail sectors of the industry in moving jewellery "across the counter in the desired volume".[6]



Mr. S. S. Nxumalo, Minister of Commerce, Industry and Mines of Swaziland addressing the symposium. Seated are Mr. John Shilling, President of the Chamber of Mines of S.A. and Mr. Graham Hughes, Art Director the Worshipful Company of Goldsmiths, London, who was chairman of the symposium.

Plate 6.1 Swaziland Symposium, August 1971

The Chamber's decision to assist the South African jewellery industry in its marketing activities was supported by De Beers and the Swiss watchmaking industry which were also intent on increasing sales of their respective products.[7] The co-operation of the three suppliers in support of augmenting jewellery and watch sales comprised a formidable force in the promotion of the industry, and was acknowledged by the trade as a "most welcome shot in the arm".[8] One of the first initiatives undertaken through the liaison of the three enterprises was the hosting of a symposium for South African jewellers in Mbabane, Swaziland, with the objective of exchanging ideas and improving communication in the industry (Plate 6.1). To ensure the full support of the industry, the organisers of the event made a concerted effort to contact as many

members of the jewellery industry as possible, whether they were affiliated to the Jewellery Association or not. The Chamber was determined to bring together all participants in the industry and went so far as to tour the country, making direct contact with jewellers. This attitude was in stark contrast to the feeble efforts of the SA Jewellers' Association to secure member support for its activities, which efforts amounted to no more than pleas and exhortations through the trade journal and internal correspondence. This difference in approach to drawing jewellers to an event was noticed by other observers who commented that "the Swaziland Symposium (was) not organised by sending out written invitations. Intergold and de Beers men travelled to all centres calling on individual firms as well as approaching association officials. They have shown how it is possible to be successful by really trying".[9] Consequently, the symposium, held in August 1971, had an overwhelming attendance as "the response from retail jewellers and manufacturers in all provinces and SWA (South West Africa), and even further afield, could not have been better".[10] One of the factors prompting jewellers' enthusiasm for the symposium was disillusionment with the organisation of the industry, the SA Jewellers' Association, and the opportunity that this meeting offered to vent their feelings and induce some change. Some of the discussions at the symposium therefore turned into stormy debates with accusations that the SA Jewellers' Association had done nothing for the jewellery trade except to restrict members' freedom to trade.[11] From the allegations made at the gathering, it was clear that the Association was unable to represent the divergent needs of the various constituencies under its auspices, and had to transform to make way for the formation of a federation of industry sectors acting in the interests of the industry as a whole.

Intergold, the promotional arm of the Chamber of Mines, endorsed the change to a stronger, national organisation that was capable of ensuring greater co-operation among the mining companies, manufacturers, and retailers. Intergold stressed, however, that the initiative for change had to come from jewellers themselves, albeit with guidance from the Chamber.[12] Consistent with the passivity of the industry which often manifested itself, there was no action on the part of jewellers, subsequent to the symposium, to establish the proposed new body for the industry. The SA Jewellers' Association therefore continued to function as the representative body of the industry but this pertained to representation of retailers and wholesalers only, as the Manufacturers' Association had long dissociated itself from the overall governing body. At the eleventh national conference of the SA Jewellers' Association, held shortly after the Swaziland symposium, in 1972, the issue of a federation versus the

continuation of the Association was hotly contested (Chapter Five). The final decision was in favour of the continuation of the *status quo*, albeit with some modifications. Nevertheless, even after restructuring the Association failed to unite the industry. Despite membership being extended to chain store retailers and others previously excluded form the SA Jewellers' Association, the organisation remained the representative only of retailers and wholesalers. A significant section of the industry still preferred a federated structure for the industry rather than an industry association. It was not until almost a year later, however, with the intervention of De Beers and Intergold, that a new organisation for the industry was formed.

The change to a new representative body for the industry arose from an initiative by De Beers to form a national watchdog council to uphold standards in the industry and to protect the public. The De Beers proposal was met with strong support from jewellers, especially those from the Cape who, at the national conference, had been in favour of a federal council to lead the industry. The idea for the council was consolidated at a meeting held in Cape Town in August 1972, organised jointly by De Beers and Intergold. A discerning feature of the meeting was that all sectors of the jewellery industry were represented, including gold and diamond mining, diamond cutting, jewellery manufacture, retailing, watchmaking, and education.[13] The result of the meeting was the formation of a co-ordinating council to speak for the interests of all its affiliates, called the Jewellery Council of South Africa (JCSA) (Plate 6.2). The establishment of the body marked the third turning point in the evolution of the industry.



Members of the executive of the Jewellery Council of South Africa are (from left): Mr George Pickard, South African Jewellery Manufacturers' Association; Mr Narandas Valabdas and Mr Damjee Nathoo, the South African Indian Jewellers' Association; Professor Otto Schröder of the Department of Gemmology and Jewellery Design at Stellenbosch University; Mr Errol Fyfe of De Beers, who is the interim chairman; Mr Clive Hirschen of the South African Jewellers' Association (retail division); Mr Jacques Guignard of the Swiss Watch Federation; Mr Greg Cooper of Intergold, the gold marketing arm of the Chamber of Mines; Mr Icky Kurgan of the South African Jewellers' Association (wholesale division); and Mr Philip Swerdlow of the South African Master Diamond Cutters' Association and the Diamond Club.

Plate 6.2 Members of the executive of the Jewellery Council of South Africa, 1972

6.2.2 Role of the Council in the industry

The Council, it was claimed, was not intended to restrict or usurp the positions of the existing jewellery associations. Indeed, access to the Council was only through member organisations and not as individuals.[14] Each association was to have a representative on the national executive. Due to the all-inclusiveness of the original meeting in Cape Town, the Council had under its auspices a broad spectrum of the sectors pertaining to jewellery. These included the SA Jewellers' Association (representing the retail and wholesale sections) and the Manufacturing Jewellers' Association, the South African Diamond Cutters' Association, the Diamond Club, the Indian Jewellers' Association, Intergold (including Chamber of Mines), De Beers Consolidated Mines, and Stellenbosch University.[15] In the past, some of the groups which were now being brought into the fold under the Council had either been ignored, such as the Indian jewellers of Natal, or had operated as distinct, unrelated entities to the jewellery sector, such as the mining houses and educational institutions. The JCSA, like its predecessor the SA Jewellers' Association, was based in Johannesburg where the principal jewellery cluster in the country was still located. Moreover, the mining companies, which were now members of the Council,

were also situated in Johannesburg. As co-ordinating body for all facets of the jewellery industry throughout the country, however, the focus of the Council was national. Hence, whereas the SA Jewellers' Association had been primarily concerned with the cluster in Johannesburg as this represented the industry nationally, the Council, although part of the cluster in Johannesburg, directed its activities to include the industry at the national level.

The broad objectives of the Council coincided, in some respects, with those of the previous Association, but were more encompassing. As with the Association, one of the main concerns of the Council was to bring cohesiveness to the industry through increasing communication and co-operation among the different constituencies. Similarly with the previous body, liaising with government was an important objective, to ameliorate the legislative and tax constraints that impeded the development of the industry. In addition to these objectives, the Council prioritised the establishment of an education and training base for the industry, and the introduction of marketing activities to promote the development of the sector.

One of the most pressing issues that the Council had to address was the tax on jewellery. The Council approached this by forming a special committee to lobby government and make recommendations. Results in this area were to be slow in coming and the process arduous. The matter of education and training, and marketing of the industry was more within the Council's control to effect changes. The intervention of the Jewellery Council in these specific areas will be examined in more detail.

6.2.2.1 *The state of education and training in the jewellery sector*

At the time that the Council came into being there was no formal training programme for the jewellery cluster in Johannesburg. Indeed, the only jewellery training available to the industry as a whole was the design course offered by the University of Stellenbosch in the Western Cape. Training in jewellery manufacturing was primarily through a five year apprenticeship system, subject to the personal evaluation of the apprentice's employer. Only in 1965 was a trade test for apprentices introduced, albeit only in the Cape, to more objectively evaluate qualified apprentices and to set a standard for South African jewellers. The test was for practical work only as theoretical course material to complement practical experience was still to be introduced in the technical colleges.[16] In Johannesburg, a Jewellers' Apprenticeship Committee was only approved for the first time in 1974. Prior to that

date there was no standard system for evaluating apprentices in the Johannesburg area.[17]



Plate 6.3 St Vincent's school for the deaf

Only in the watchmaking sector of the industry had some effort been made to provide training opportunities. The credit for introducing this type of training, however, once more goes to external agents rather than the jewellers themselves. Some of the earliest courses in watchmaking in South Africa were started by the state at charitable institutions, such as the St Vincent School for the Deaf in Rosebank, Johannesburg,[18] and the Elizabeth Conradie School for the handicapped in Kimberley (Plates 6.3 and 6.4).[19] Watchmaking in these institutions was only one of several activities taught to enable students to become employable, and therefore was not a professional qualification.

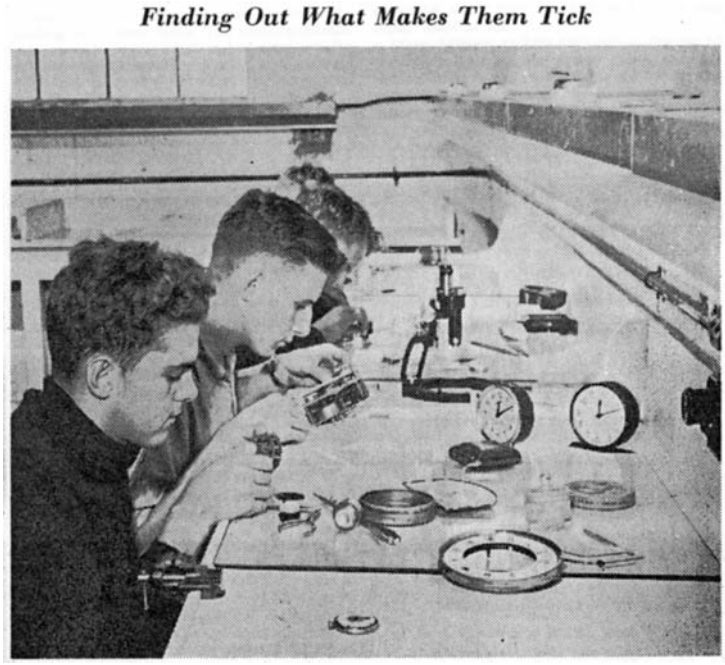


Plate 6.4 Vocational high school for boys at Kimberley

It was the Federation Horlogere Ebauches Ltd (FH), the Swiss watchmaking federation, which, in 1966, took the initiative to open a dedicated school for watch

repairs in South Africa (Plates 6.5 a; b). This conformed to the organisation's aim of expanding after-sales service for Swiss watches through the establishment of technical schools in various countries.[20] When the school was first proposed it raised an outcry from the SA Jewellers' Association in response to the FH's stipulation that it be a multiracial school. The then Ministry of Bantu Affairs was the only government department to show any interest in the project, and, in collaboration with the FH, the school was established in Vlakfontein (Mamelodi), a black township east of Pretoria. The SA Jewellers' Association was vehemently opposed to a watchmaking school in a black area as this precluded whites from attending and, according to the industry body, there was an urgent need for training "European" and not "Bantu" watchmakers. It was not only the exclusion of whites from the school that the Association objected to; it rejected the notion of training blacks in watchmaking at all, as is clear from the sarcastic comment that "the idea of a watchmaker was that of an intelligent educated man with a background of European technical skills. Did the FH expect a Bantu to write a thesis on the oscillation of a watch movement?"[21] Coupled to the prejudice against blacks as watchmakers or repairers, there was a consistent fear of competition from Blacks in the trade, as evidenced in the view expressed that "qualified Bantu watchmakers could go from one jeweller to another offering a repair service at cut prices in competition with white repair men".[22] From this viewpoint it was deduced that "the social and political repercussions will be that watchmaking will become a purely African skill".[23]

Despite the Association's protests, the school was established as a joint venture between the Department of Bantu Education and the Swiss watch industry, with the state providing the furniture and air conditioning (to ensure a dust-free environment), as well as paying the instructors' salaries, and the Swiss industry supplying the tools, equipment and instructors. The school could accommodate 45 pupils, and the course duration was three years, with tuition primarily in English. It should be understood that in supporting a training school for blacks, the State by no means intended them to compete with whites in the trade. Indeed, significantly it was stated that school graduates were expected to practice their skills in "their homelands" and not the designated white areas under apartheid legislation.[24]

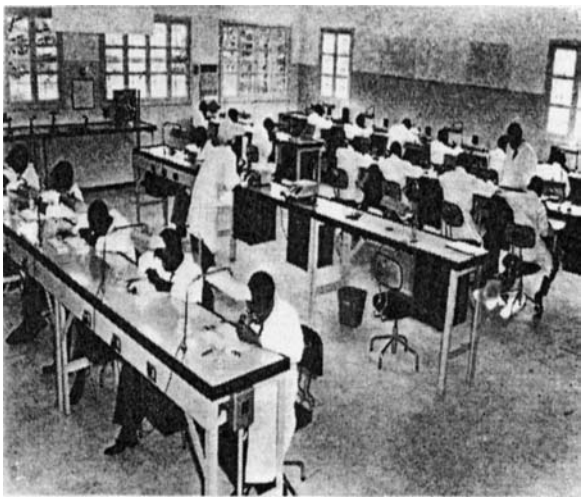


Plate 6.5a Vlakfontein technical High School

Although located in a black township, the school did not remain racially exclusive, but instead stretched its functions to include technical courses for other races as well.[25] With the closing down of the Watchmakers of Switzerland Information Centre (formerly a part of FH) worldwide, including the one in South Africa, the scope of the school was broadened and it became a technical centre, one of 22 in the world.[26] As such the centre catered for the whole of the Southern African region, including Mozambique, Angola, South West Africa (Namibia), and Rhodesia (Zimbabwe).[27] Tuition offered at the school was also extended beyond full-time training to include also short-term refresher courses and seminars for those in the industry wanting to improve or complete their knowledge. The original agreement between the South African government and the Swiss industry was set to expire in 1975. At a meeting in 1973 to assess the continuation of the school, the South African government indicated a commitment to continue with the bilateral arrangement. The Swiss were also prepared to extend the agreement but wanted the government to shoulder a larger share of the expense of running the school which, in the five years since its existence, had cost the FH over R300 000.[28]

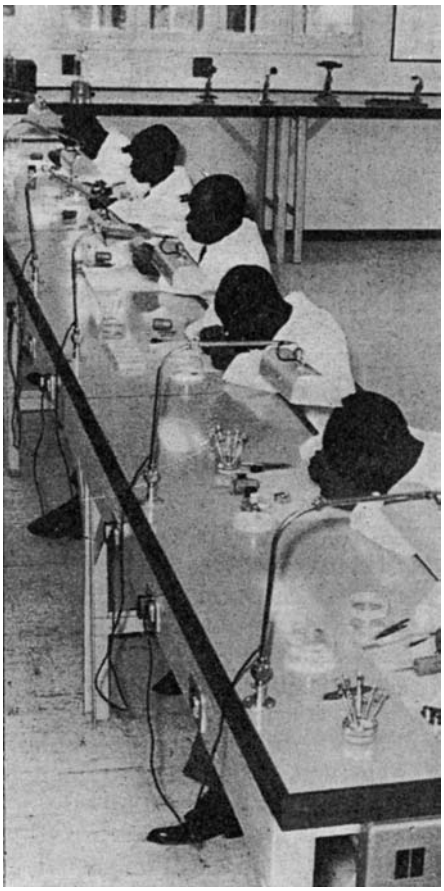


Plate 6.5b Students at the watchmaking school in Vlakfontein

Apart from initiating the watchmaking school, the Swiss watch industry had been proactive in introducing courses for the watch trade and for overcoming the industry's initial resistance to attend them.[29] The

establishment of the school did not signify a halt to additional training as the Swiss industry continued to organise courses in the various centres to enable as many jewellers as possible to attend.[30] Unfortunately, these efforts to extend training to jewellers often met with disappointing results, as the courses were not always well attended or financially supported.[31] At one point, in 1976, the watch education programme in South Africa, outside of the school in Vlakfontein, was in danger of closing due to lack of financial contribution from the industry.[32] Indifference from the industry was also evident when two jewellery training courses to be presented by highly qualified Swiss instructors elicited a very poor response from jewellers countrywide. The passivity of the industry in this instance was the more frustrating in that the instructors came to South Africa to present the course by special agreement; usually, interested jewellers travelled to Switzerland to attend the courses.[33] In an address to the industry in 1973, the manager of the FH Technical Centre claimed that only one-third of the approximately 1000 watchmakers in South Africa had shown any interest in improving their skills or knowledge by attending any of the courses offered.[34]

Excluding the efforts of the FH whose education courses were principally related to watches, training in the broader jewellery industry was based on the apprenticeship system. It was not until the beginning of the 1970s that efforts were made to introduce more training options in the industry. In the Western Cape, the Ruth Prowse School of Art was opened in 1971. Although not exclusively a jewellery school, it did include jewellery design and techniques in its curriculum. The school was not a jewellery sector initiative, however, and therefore never received support, financial or otherwise, from the industry.[35]

The first effort to provide a formal training facility for the cluster in Johannesburg was in 1972 when two of Johannesburg's most prominent jewellers launched a Jewellery Design School for apprentices, in association with the Johannesburg technical college.[36] The programme was "an immediate success", and even qualified jewellers applied for admission.[37] Less than six months after the launch of the school, however, low attendance levels called into question the sustainability of the school, exacerbated by the fact that one of the co-founders had already withdrawn from the initiative. One of the suggested explanations for the lack of interest was that local jewellers were doing well and therefore did not feel the need to learn anything different. This attitude on the part of jewellers was not new. As indicated in the previous chapter, jewellers demonstrated little interest in the development of the

industry unless dire circumstances prompted them to act beyond the ambit of their individual business needs. Rivalry among jewellers also did not seem to extend to competition based on innovation and development of new techniques and processes. The founders of the school criticized this apathy in jewellers', saying that "the attitude of South African manufacturing jewellers is wrong…when so much is going on in the trade with the help of giant organizations such as de Beers and Intergold, South African jewellers are still content to follow European designs which are five years old".[38] They warned further of the risk of such complacency in an increasingly global environment, saying that "if South African jewellers were to ever create an export market…they should lose no opportunity to improve their standards".[39] It would seem that jewellers of the Cape cluster were more committed to furthering their knowledge and skills, as a similar training venture started in the Cape fared considerably better than the Johannesburg centre.[40]

6.2.2.2 *JCSA intervention in the area of education and training*

The Council approached the problem of inadequate training in the jewellery sector from a national and cluster perspective. At the national level the Council introduced a graduate course in gemmology and diamond grading at the University of Stellenbosch, to complement the graduate studies in jewellery design and manufacture already on offer there.[41] To cater for jewellers in the Natal area, a three-year training course was to be introduced at the Natal technical college (Technikon). In Johannesburg, the Council planned to establish a watchmaking and jewellery school, together with a diamond certification laboratory. With financial assistance from De Beers, Intergold, and Rustenburg Platinum mines, the Johannesburg school came into operation in 1976.[42] The aim of the school was to provide advanced tuition for those already in the trade, and therefore did not cater for new entrants into the field. In addition, to complement the institutionalized training the Council, in addition, arranged for international instructors to come to South Africa to give short-term courses focussed on different aspects of the jewellery retail trade.[43] As with previous attempts at organising training opportunities for the industry, however, the response from jewellers to these short term courses was disappointing, alerting the Council for the first time to the disquieting realisation that it was now in the "post-honeymoon period" since its formation, and the trade was now preoccupied with other things.[44]

Any misgivings that the Council may have had about jewellers' reaction to the short-term courses must have been allayed by the enthusiastic response to the Jewellery

Council School in the first six months of its operation.[45] Once more, however, initial interest shown by the industry was not sustainable. Although the diamond grading and gemmology courses at the school were well supported, there was a general lack of interest in courses outside these fields, especially with respect to retail training.[46] Notwithstanding the poor interest in this aspect of the training, the Council persevered with its focus on retailing when it came to establishing the three-year jewellery course at the Natal Technikon.[47] At the time that the plans for the course were being mooted, suggestions were made to introduce a jewellery design facility. This idea was discouraged by the Council on the grounds that "the South African market is not sufficiently sophisticated or advanced to cope with such an individual".[48] By contrast, it was believed that the "retail industry is now sufficiently advanced to be able to absorb a person who is given a solid and broad basic grounding in all aspects of jewellery retailing".[49] The Council emphasised the retail training needs of the industry above its manufacturing requirements. In so doing the Council also ignored another important facet of the industry, that of design, which is one of the key competitive factors in the jewellery field.

It is ironic that despite the Jewellery Council's insistence on a jewellery retail course for the Natal Technikon, the course turned out to be of little benefit to retailers. Instructors who volunteered for the course were jewellery manufacturers who imparted manufacturing and not retail skills to students, thereby inadvertently making the course a manufacturing and not a retail training one.[50] Unfortunately, if the technikon course was of little satisfaction to the retail sector, even less did it benefit the students who, despite the unwitting change in syllabus, did not emerge as skilled artisans and were still required to serve an apprenticeship when they sought employment in manufacturing[51]. Despite frequent complaints from the retail sector, the jewellery course at the Natal college remained focused on design and manufacturing, and similar type courses were eventually introduced at other technical colleges throughout the country in Pretoria, Cape Town and Johannesburg.

Criticism of the training provided by the Technikons was not only from the retail sector. Manufacturers were equally disparaging of the graduates emerging from the colleges, citing them as deficient in practical skills, which made it necessary for the employer to train them anew.[52] The discrepancy between employers' expectations of graduates and the training available at the technical colleges and university is indicative of the lack of communication and interaction between the industry and the training institutions to ensure that the training provided was commensurate with the industry's needs. It also points to employers' preference for students proficient in the

skills of making jewellery according to set designs, rather than students with creative flair, keen to indulge their creativity. Manufacturing jewellers' preferences and tendencies notwithstanding, however, there seem to have been legitimate concerns about the inadequate practical training at the colleges that often produced students with poor skills. One of the problems in this regard was the poorly resourced state of the technical colleges, which limited the quantity and quality of equipment and materials available for training, and negatively affected the training provided.

Despite the emphasis on retail training, the Jewellery Council did not entirely ignore the manufacturing skills requirements of the industry. Its contribution in this respect was to open a manufacturing school in Johannesburg in 1982, offering short-term courses on specific techniques of the trade.[53] The school was similar to one started in the Cape in 1976 by the Industrial Council and Cape jewellery manufacturers, but with capital provided by the Jewellery Council. The Cape school was highly successful and, since its formation, had already moved to larger premises to accommodate increased demand from the industry. The Johannesburg venture, unfortunately, did not emulate the success of the Cape school and seemed to be succumbing to the fate of other, similar efforts in the past at introducing jewellery training in Johannesburg. The school showed signs of financial instability even before the first year was over, and it was suggested that the Jewellery Manufacturers' Association take over the running of the school as it was proving to be too burdensome on Council resources. By the end of 1983, scarcely two years after its opening, the school closed down. Some of the reasons for the failure of the venture was the lack of training incentives, especially in the context of the economic recession at the time, and the inadequacy of the school to provide fully-qualified apprentices.[54]

6.2.2.3 *Promotion of the industry*

Alongside the aim of establishing an education foundation for the industry, the Jewellery Council's other, principal objective for the sector was to mount a publicity campaign to promote the Council and raise awareness of jewellery.[55] As with education, the industry in the past had engaged in very few promotional activities, and when it had it was reluctantly, at the cajoling of the Jewellers' Association for support of its advertising initiatives. As far as exhibitions and shows of jewellery were concerned, there had been none. The only forum where designers and manufacturers could exhibit their work was at the Rand Easter show, one of South Africa's largest fairs, in a display called the Jewel Box. The display, which included foreign exhibits of historic stones and world famous collections as well as jewellery

pieces, was sponsored by De Beers, which also made it possible for South African jewellers to participate in the exhibition. Annually for four years, manufacturers had the opportunity of show-casing their work without expense, in a setting of international recognition.[56] When Jewel Box was discontinued in 1967, there were no immediate efforts from the industry to collectively exhibit or otherwise advertise its products to the public.[57] The next opportunity the industry had of promoting its wares is again credited to De Beers who paved the way for jewellers to participate in its diamond publicity campaign. Aside from increasing diamond jewellery sales throughout the industry, the campaign also offered jewellers the opportunity to promote themselves individually in some of the advertising.[58] Testimony to the apathy that still underpinned the industry is that this "shot in the arm for a trade whose long-standing doldrums had induced a state of lethargy that it seemed only jewellers could afford", was insufficient to raise more than a thirty percent response from the industry to the De Beers offer.[59] Likewise, a marketing programme for Swiss watches by Switzerland's FH organization received very disappointing co-operation from the industry.[60]

Under auspices of the Council, marketing activities for the sector increased and were organized on a more co-ordinated basis than previously. The Council's resources did not stretch to more than local press advertisements of jewellery. It was imperative, therefore, to ensure the participation of other stakeholders, including industry members. Commitment from the industry was important not only in terms of securing funds, but also because the Council felt that "the spoon-feeding of the jewellery industry in this country is running at an exceptionally high level".[61] In conjunction with De Beers and Intergold, substantial marketing initiatives were launched, and were organised to coincide with peak selling periods for the industry.[62] After nearly a decade of the Jewellery Council being in existence it had spent approximately R100 000 of its own funds in advertising for the industry.[63] Together with De Beers and Intergold's contributions over the years, the combined total spent on advertising for the industry amounted to R1.3 million by 1984.[64] It would seem, however, that the more resources that were diverted into stimulating the industry, the more the industry resisted participation, confirming to the Council and industry sponsors that "there is not much aggression about the jewellery trade in this country".[65]

The one initiative to which the industry did respond with alacrity was the jewellery trade fair organised by the Council. The last trade fair the industry held was in 1970 and, although this was a success at the time, the event was not repeated due to the

prevailing economic downturn and low morale in the industry. The first trade fair under Council leadership took place in 1979, almost a decade after the first such event, and was an immediate success. The Council director at the time lauded the event as an example of collective achievement by the industry. He described the industry as "profoundly powerful when it unites and does things together. When it is desperate and not united, it will get nowhere".[66] The trade exhibition became firmly entrenched as an annual occurrence and was so well supported that the venue had to change several times to meet demand from the increased numbers of exhibitors. The exhibitors ranged across the value chain of the industry, from primarily jewellery manufacturers and wholesalers to a variety of service providers supplying jewellery boxes, display material, books, and electroplating equipment and services to the industry.[67] As the fair expanded it also attracted international participants, from centers in Europe, Hong Kong, Australia, India and Sri Lanka.[68] The success of the fair prompted the Council to make provision for two additional fairs – a jewellery watch and clock exhibition for smaller-sized jewellers in particular, and an autumn fair, to be held about three months prior to the main fair, to cater for those jewellers unable to exhibit at the larger function.[69] Neither of these additional events attracted sufficient interest, however, and the idea was not pursued.

The trade fair was an important forum for manufacturers to display their goods and to observe trends in the industry.[70] Insofar as overseas exhibitors participated in the fair, this provided some opportunity for South African jewellers to take cognisance of overseas developments in the field. The exhibit of goods from abroad often highlighted the discrepancy between South African jewellery preferences, and international manufacturing trends. Foreign exhibitors at times "misjudged the South African and brought distinctly upmarket wares to show".[71] In comparison to overseas styles and fashion trends, local jewellery tended to be conservative and predictable. There were often comments from overseas and local observers to the effect that South African jewellery was "too commercial", "old-fashioned and uninteresting", and that it lacked individuality, "making it difficult to identify the manufacturer".[72]

6.2.2.4 *Achievements of the Council in the industry*

Overall, the objectives of the Jewellery Council to ensure cohesiveness and stimulate growth in the jewellery sector at the cluster and national level, were only partially met. There is no doubt that the formation of the Council did, initially, build "a spirit of harmony and put new life into the industry".[73] Prior to the establishment of the Council the industry had been divided internally with very tenuous links upstream

along the value chain. The Council succeeded in bringing together the various sections of the trade - "the diamond cutter, jewellery manufacturers and the retailers who for the first time in their history now sit down together and are seen to speak with one voice".[74] Importantly also, the Council succeeded in bringing De Beers and Intergold into direct contact with the industry. The only sector of jewellery not affiliated to the Council was watchmaking, which did not have its own representative structure. This issue was addressed when the South African Watchmakers Association was formed in 1980 and joined the Council, thus completing the full spectrum of the industry in the Council. The Watchmakers Association did not endure for longer than four years, however, at the end of which time the Council again had no watchmaking representation.

The renewed vigour instilled in the industry through the Council inspired a more concerted effort to challenge some of the government restrictions afflicting the industry, with some success. For example, representations from the Retailers' Association finally convinced government to reduce the required deposit for diamond rings on hire purchase from 25 to ten percent.[75] Council intervention also lead to government relenting marginally on the issue of sales tax on jewellery, by exempting repair work on jewellery from tax.[76] On the question of the *ad valorem* tax on the industry the Council made valiant efforts to reverse government's policy in this regard but, as is discussed later in the chapter, this made little impact on government at the time.

Notwithstanding the achievements of the Jewellery Council, its interventions in the industry did not result in significant growth of the industry nationally, or of the Johannesburg cluster in particular. On the contrary, the growth of the jewellery cluster in Johannesburg decelerated, at the same time as jewellery clusters elsewhere in the country, especially the Western Cape, strengthened. The reasons for the stagnation, rather than development, of the Johannesburg-based industry stem from issues that are both intrinsic, and external to the jewellery sector. Each of these set of factors will be examined separately.

6.2.3 Internal factors impacting on the industry

6.2.3.1 *The neglect of design training*

One of the internal issues that affected the growth of the sector is that of a lack of design innovation. Reference has already been made to the emphasis placed on

retail, as opposed to design, training. South Africa's jewellery industry was traditionally retail-oriented, with manufacturing coming into prominence only during the Second World War. At that time manufacturers' competence was assessed primarily on the basis of craftsmanship, regardless of uniqueness or innovativeness of design. Even as the manufacturing capabilities of the industry strengthened, the tendency to focus on the technical aspects of the craft and ignore the design component, persisted. Indeed, in 1961, when the idea of a design competition was first broached by manufacturers, it was summarily dismissed as being "of no practical advantage to members of the Association".[77] This viewpoint persisted even with the change in leadership from the Association to the Jewellery Council. Although the Council fully supported initiatives that encouraged design creativity, these initiatives were usually introduced by other stakeholders and not by manufacturers themselves.

As with prior ventures, intervention in the area of design was from the Chamber of Mines which raised design consciousness among manufacturers with the introduction of a design competition in 1970, the first of its kind in the country.[78] Response to the competition was enthusiastic, but the results highlighted jewellers' overwhelming preoccupation with craftsmanship as opposed to design. Judges of the competition were criticised for valuing originality in design above craftsmanship in their selection of winning pieces. In response to some of the disgruntled comments that "too many awards went to articles of crude workmanship and vulgar taste", the Chamber of Mines referred to the objective of the competition which was to stimulate interest in improving design in gold jewellery, ultimately making good design the norm rather than the exception.[79] Even more importantly, the organisers stated that if South Africa was to succeed in jewellery exports, it should have its own unique products and not copies of overseas originals.[80] Indeed, so accustomed were South African jewellers at following trends from abroad that two identical jewellery pieces were entered in the competition by different firms.[81]

Despite controversy in the first competition, it did have some effect in stimulating creativity in jewellery as, the following year, competitors produced much finer jewels and "the trend was toward the change that most manufacturers were not prepared to accept a year ago".[82] The design competition even had the effect of encouraging the formation of a Jewellery Design Council to exhibit South Africa's creative flair internationally. The Chamber of Mines' annual competition which initially seemed to succeed in the aim of unlocking South Africa's design potential, was halted after six years as the strategy was not resulting in improved creativity and design.[83] Although

the competition was said to each year attract a higher standard of design and more competitors, a new design culture was not permeating through the industry to effect a change in style for South African jewellery. Much as competition judges urged competitors to draw upon "primitive Africa" for inspiration in creating more exciting jewellery pieces, this recommendation was dismissed by manufacturers who assumed that it was "not referring, of course, to African craftsmanship".[84]

The lack of a design style specific to South Africa had implications for the development of the jewellery industry as an international competitor. Key sponsors of the industry, such as the Chamber of Mines and De Beers, tried to impress upon jewellers that for the country to be recognised as a producer of precious jewellery and not just precious metals, "we will have to develop a distinctive style of South African jewellery".[85] Such admonitions were endorsed by jewellery experts from abroad who bluntly observed that "South Africa is a little backward in original designs for jewellery".[86] Part of the problem was that South African jewellers relied on following other jewellery-producing countries' designs, rather than developing their own cultural identity derived from South Africa's unique features. Consequently, local jewellery could be described as largely imitative, based as it was on variations of European, American and British styles. To improve the industry's design skills and ultimately to gear it towards international recognition, it was crucial to establish schools on craftsmanship and design.[87] As described earlier, however, the Council prioritised the retail selling needs of the industry above design innovation. Illustrative of the low importance it attached to design is the Council's comment about the design course at the University of Stellenbosch, the only one at the time, as "an exercise in creativity but…of not much worth for the industry".[88]

6.2.3.2 *Lack of an export base*

Another reason for the poor performance of South Africa's jewellery sector in this period is the low incidence of exports and the lack of interaction between South African manufacturers and their international counterparts. According to the literature on industrial clusters, a critical impetus for product changes and development is often derived from trading partners or agents based abroad, or which represent a different consumer market to that usually catered for by the manufacturer (Chapter Two). The absence of the South African jewellery sector from the international market meant that manufacturers were not exposed to new product ideas, nor did they have the incentive to produce new ranges in keeping with international trends. In part, South Africa's staid design styles were attributable to

the lack of, or minimal, interaction that local manufacturers had with competitors outside the country.

For many years the local industry was denied the opportunity to export gold jewellery (Chapter Five), and therefore lacked a legacy of close export ties with foreign markets. Trade fairs and organized visits, however, were other means of promoting South African jewellery and developing export networks with other countries. In this respect the Council did make some progress but, as with training courses, the industry did not always avail itself of the opportunities, either in terms of making visits abroad, or receiving visitors. There were times when groups of jewellers would visit South Africa and the local industry would do little to initiate trade linkages. For example, a visit to South Africa by UK jewellers in 1965 was described by the Jewellers' Association at the time as "not strictly a study tour in the sense that the visitors will learn anything from us".[89] Unless the visiting group from abroad made overtures to meet South African jewellers, the local industry did not initiate any contacts with the visitors.[90] Indeed, the Jewellers' Association raised the issue of visiting jewellers at one of its conferences, questioning the value of entertaining groups of overseas jewellers as a means of fostering trade relations.[91] Even when foreign jewellers did make a trade visit to South Africa, this did not always elicit an enthusiastic reaction from the industry; at times jewellers expressed a mild interest but few engaged in business contacts.[92] There were instances, however, when trade missions to South Africa did meet with success, illustrating the positive effect of establishing trade links and information exchanges with outside companies.[93]

Reluctance to engage with jewellers visiting South Africa matched a similar indifference from local jewellers to visit jewellery centres abroad. A planned tour of Europe in 1967 to enable South African jewellers to trade and also study the latest manufacturing techniques, did not generate sufficient response to occur. [94] Likewise, in 1974, a proposed visit to the Basle fair in Switzerland, organized by the newly formed Jewellery Council, had to be abandoned as a result of negligible interest.[95] The poor response from industry in this particular instance could be partly attributed to the short notice given of the trip. In addition, however, apathy and poor communication were factors resulting in the cancellation. Apathy still dogged the industry, especially the retail sector, despite Council efforts to stimulate interest and enthusiasm among members.[96]

6.2.4 External factors impacting on the industry

6.2.4.1 *Economic recession*

One of the principal factors hampering the growth of the jewellery sector despite the efforts of the Jewellery Council was the effect of international economic sanctions on South Africa. Sanctions played a role in the economic downturn experienced in South Africa from the mid-1970s. One of the manifestations of the recession was the devaluation of the Rand in 1975.[97]Although reaction to the devaluation of the currency was at first philosophical, based on the assumption that this would induce greater investment in gold and diamonds, the detrimental effect of the devalued Rand on imports and cost of living soon dispelled this complacency.[98] As South Africa slid deeper into a recession, jewellers lamented the "onerous difficulties" they faced as the decreasing value of money and concomitant rise in cost-of-living index caused the price of basic commodities required by the trade to increase alarmingly.[99] Labour costs were said to have increased threefold their value in 1969, and overheads to have doubled in the same period.[100] The downturn in the economy was felt particularly by the diamond cutting industry which experienced a 35 percent drop in employment from 1980 to 1981, coupled to a 37 percent drop in exports.[101] The decline of the local cutting industry was caused not only by local economic conditions but was also linked to the depressed state of the diamond market worldwide. Conditions for the diamond manufacturing industry in South Africa were only slightly ameliorated by the lifting of the restriction, in 1982, on the number of black operators that could be recruited into the industry. Any number of black operators could now be employed as opposed to only a stipulated number previously allowed.[102]

One of the manifestations of the economic recession taking its toll on the jewellery sector is the financial instability of the Jewellery Council, within which organization problems came to the fore in 1982. Funding of the Council was through membership fees and income from services provided, specifically through the diamond and coloured stones laboratories and the education centre. Yet another endeavour, a jewellery shop run by Intergold and the Council on the premises of the Gold Mine Museum established by the Chamber of Mines, was a further income source for the Council.[103] Additionally, the Council was supported by De Beers and Intergold, both of which contributed financially to the launch of the Council and continued to make "large contributions" to its operating expenses.[104] Of the income-generating facilities managed by the Council, it relied most heavily on the Diamond Certification laboratory to meet its budget, as subscriptions from the industry were said to constitute less than 10 percent of the organisation's income.[105] The education centre

recorded a profit shortly after it was started, in 1979. Otherwise, the centre ran at a loss which was compensated for by the cross-funding from the Diamond Certification Laboratory.[106] By the end of 1983, however, not even the Diamond Laboratory could compensate for the running expenses of the Education Centre, and it was privatised.[107] The Coloured Stones laboratory produced an erratic income, and the dividend from the store at the Gold Mine Museum was also uncertain.[108]

Despite the erratic financial support, the Council maintained solvency until 1982 when financial difficulties became evident. The Council's financial predicament stemmed, directly or indirectly, from the economic recession and was attributed to, among other factors, reduced income from the certification laboratory, and the higher costs and less income from the Education Centre. Together with the increasing problem of obtaining member subscriptions, these difficulties combined to make 1982 "the most difficult and challenging period (the Council) had ever experienced", as it failed to meet its financial obligations.[109] The Council tried to resolve some of these issues by trimming expenses and halving its budget for 1982. Cost-saving measures included retrenching staff at the certification laboratory, reducing the salaries of senior staff at the Council, and restricting Council executive meetings to Johannesburg.[110] These measures, coupled to increased subscription fees and renewed activity in the Diamond Certification Laboratory, had some effect in improving the Council's financial situation over the ensuing year.[111] Ultimately, however, the Council was extricated from its financial predicament by a generous contribution of over R40 000 from Intergold.[112] Overall, therefore, the industry had once more had to rely on the assistance of the mining companies, external agents to the cluster, to resolve its problems.

6.2.4.2 *Taxes*

Arguably, the factor that most impacted on the industry's development was the various forms of tax which every year further burdened the industry and distanced the product from the consumer. As already mentioned, a sales duty of 20 percent was first imposed on the industry in 1969, and was subsequently converted to an *ad valorem* excise duty.[113] This duty, imposed purely as a fiscal measure, applied to both locally manufactured and imported jewellery, and vastly increased the costs and administrative requirements for retailers and wholesalers.[114] Persistent representations to government to withdraw or ameliorate the tax made no difference; if anything, government tightened its hold on the industry by increasing the tax to 25 percent less than a year after it was introduced, and extended it to watches which previously had been exempt.[115] Barely six months after this increase the tax was

raised again by five percent.[116] Although jewellers resigned themselves to the increase, it had repercussions on the trade which demonstrated a five percent drop in turnover since the announcement.[117] The effect of the new tax level on the industry was exacerbated by the introduction, at about the same time, of hire purchase restrictions to reign-in spending on luxury goods. The retail trade, which rarely extended credit, was not much affected by this restriction but the diamond jewellery manufacturing and cutting industries, which had had to resort to long term credit to stay viable, faced ruin under the 40 percent deposit requirement.[118]To the relief of hire purchase firms, the severity of this measure was tempered, three months later, by a reduction of the minimum deposit to 25 percent.[119]

With the establishment of the Jewellery Council, hopes were high that a more powerful representative body of the industry would succeed with government on the issue of *ad valorem* excise duty where the Jewellers' Association had failed.[120]For all its more authoritative status, however, the Council was unable to sway government which remained obdurate on the matter of the tax except for altering the basis of its implementation,[121] a change which only served to heighten the administrative problems for jewellers, not lessen them.[122] Indeed, national government was less inclined than ever before to lift the tax on jewellery given the escalating gold price which boosted the revenue accruing to the state. In 1978 the Jewellery Council drew attention to the 500 percent escalation in sales duty since its introduction in 1969. Whereas an ounce of gold then cost R25.75 and attracted a tax of R8.30, the same amount of gold in late 1977 cost R140.00 and was liable for R47.00 tax.[123]

In 1978, pressure on the industry intensified with the introduction of General Sales Tax (GST) which, in the case of jewellery, was applicable after the excise had been calculated into the price. GST started at four percent but its real effect on the industry became noticeable in 1982, amidst a series of other tax hikes. In that year GST rose to five percent and the *ad valorem* duty on jewellery climbed to 30 percent and 25 percent for imported and locally made products respectively.[124] Two months later, a further five percent excise duty was levied on the industry, translating into a 36,5 percent tax rate for jewellery when considered in combination with GST.[125] The Council condemned the measure vehemently, stating that its purpose would be counterproductive as it would result in shrinking revenues both for the industry and the fiscus, and would deflect interest in jewellery exports from South Africa. A system of incentives to encourage development of the local industry and beneficiation of locally produced raw materials, it was argued, would prove a more

lucrative source of long term income to the country.[126] The government, having collected R23 million in taxes from the industry in 1983, clearly believed that imposing ever-increasing tax rates on the industry was lucrative, and persevered with its policy, raising the duty to 35 percent in 1984.[127] In effect, however, the government was collecting less revenue from the tax due to the drop in demand for jewellery. The decrease in the Rand value of *ad valorem* excise duty collected between 1980 and 1986 was calculated at 40,8 percent. This decrease occurred despite several increases in the rate of excise duty between 1981, when it was 20 percent, to its peak level of 35 percent in 1985.[128]

The Jewellery Council continued making supplications to government to review the tax as it was having an adverse effect on tourist as well as local spending.[129] South African jewellery was now among the most expensive in the world, resulting from an almost 50 percent surcharge on the product which emanated from the combined effect of *ad valorem* and GST, the latter having augmented to 12 percent by 1985.[130] When the Margo Commission of Enquiry into Taxation in South Africa was appointed in 1985, the Council welcomed it as an opportunity to highlight the plight of the jewellery industry and to elicit a more positive response from government. In a memorandum to the Commission, the Council requested exempting tourists from GST to make South African jewellery more internationally competitive, and also suggested exempting the industry from *ad valorem* for a trial period of two years to allow the industry to demonstrate its effectiveness if left to grow unhindered.[131] Although the Council's memo had little effect in easing the taxes on jewellery, a system was introduced allowing tourists to be rebated the *ad valorem* on jewellery.[132] Sales to tourists were therefore facilitated by the adjustment of the excise duty requirements but the tax grip on jewellers tightened even further with the government announcement of a ten percent surcharge on imports, as of September 1985.[133]This latest measure was stated to be in the interests of raising R400million to ease the unemployment crisis in the country, a move which, ironically, was at the expense of "putting the jobs of people in the jewellery industry on the line".[134] The Council's persistent appeals to government to abolish the tax on jewellery did eventually induce a change in government thinking, albeit not until the late 1980s when the industry had declined by at least 47 percent in volume production since the beginning of the 1980s, and fine gold used in jewellery dropped by 75 percent in the same period.[135]

6.2.4.3 *Price of gold*

The pressures on the industry exerted by the *ad valorem* and other taxes were greatly compounded by the escalating price of gold, the other factor arresting the development of the industry. Up until 1968, gold was sold at the ceiling price of R35 an ounce in South Africa.[136] With the advent of the free market for gold, standardisation of the gold price made way for daily fluctuations on overseas stock exchanges and bourses. In the initial stage of gold being subject to free market conditions, South African jewellers were spared the daily vacillations of the gold price in that the South African Treasury fixed the local price based on a monthly review of the average free market price over the preceding month.[137] With time this practice ceased and local jewellers were exposed to the same vagaries in the gold price as their counterparts elsewhere in the world. It was from the early 1970s that the price of gold leapt to heights beyond the reach of many jewellers (see Chapter Three). From a price of $35 an ounce in 1970, gold moved to $178 an ounce in 1974, a four-fold increase in a period of four years.[138]

The rapid increase in the gold price had a negative effect on gold consumption worldwide; the president of the Chamber of Mines declared that the pattern of gold consumption in the world changed dramatically in 1973, with the quantity used for fabrication amounting to less than two-thirds of new supplies. In this year jewellery absorbed little more than half of the previous year's level.[139]The effect on the jewellery industry internationally was also sobering as retail purchases dropped and manufacturers were forced to reduce production correspondingly, with the inevitable consequences of shortened working hours, staff lay offs, and even factory closures.[140] South Africa was not exempt from the decelerating effect of the gold price on the jewellery industry with unemployment rife in the manufacturing sector, and many of the large manufacturing companies going on short time to cut expenses.[141]Tiessens, one of the largest and oldest manufacturing jewellers in Johannesburg, closed its doors in 1981, citing low profit margins and the heavy capital investment required as a result of the gold price increases, as reasons.[142]The demise of Tiessens was reflective of the general shrinking of the industry in Johannesburg. Whereas South Africa in 1973 used three tons of gold in jewellery, a decade later this volume had been reduced to one ton.[143]Not all of this shrinkage was attributable to diminished production as the inexorable taxes on the industry forced many manufacturers underground, but it was inevitable that escalating taxes and gold price would take their toll on the industry. It is not surprising, therefore, that the Jewellery Council, at the height of the gold price and tax levels in 1982, struggled to

collect members' subscriptions and consequently fell into financial difficulties. By the beginning of 1984 the gold price reversed its upward climb and started sagging, but this was too late to enable the local industry in South Africa to recover; economic conditions in the country, exacerbated by political events, outweighed the advantages of an improved gold price.

The internally and externally induced forces had the effect of stunting the growth of the industry from the late 1970s and throughout the 1980s. In addition, these pressures undermined any cohesiveness that the Jewellery Council had generated in the industry. The resultant fragmentation of the industry was evident especially at the level of the cluster in Johannesburg. The broader economic factors impacting on the industry combined with local developments to cause the decline and eventual demise of the jewellery cluster in the CBD. These issues are further elaborated upon in the section that follows.

6.2.5 Decline of the cluster

6.2.5.1 *Fragmentation of the industry*

As the jewellery industry struggled to cope with the vicissitudes of an unstable economic environment and punitive government measures, so the Council's cohesive influence on the industry waned. One of the Council's foremost successes when it came into existence was in overcoming the inherent fragmentation of the industry by emphasizing the interdependence of each sector and creating a common goal for all. In particular, the Council had been successful in co-opting Indian jewellers from the Natal province, into the broader jewellery network. In one of the Council's monthly meetings held in Natal it was observed that Indian jewellers formed a large percentage of the attendees, making Durban "one of the strongest centres of the South African Jewellers Association".[144] As pressure on the Council mounted, however, and demands on its resources increased, so less attention was given to affiliate bodies. In early 1982 it was reported that the Natal Indian and Goldsmiths' association had not had a meeting for over a year.[145] An effort was made to co-ordinate jewellers' activities in Natal and establish a link with the National Council by the appointment of a secretary in the region.[146] Although initially this option seemed to provide a solution, this was only temporary as, less than a year later, the Natal branch office of the Council closed "due to the present financial climate".[147] With no support from a regionally based Council branch, the South African Indian and Goldsmiths' Association lost momentum and in 1985 was assumed to no longer

exist.[148] There were still some efforts to restore the links between the Indian association and the Council but these endeavours eventually ceased and the interaction between the Indian body and mainstream jewellery industry petered out.[149]

The Council's constituent base was further weakened by the resignation of representatives of the Watchmakers of Switzerland from the Council.[150] Although the decision for this was based on administrative changes in the Swiss organisation, it nevertheless depleted the Council of an international body which represented a key element of the industry. The watchmaking section of the industry ceased to have separate representation on the Council altogether with the resignation, in 1984, of the South African Watchmakers' Association. Not only was the Council's constituent base diminishing but member participation overall was also at a low ebb. From 1984 attendance at Council meetings diminished and the Council was said to be experiencing "one of the quietest years of its existence".[151] Although the Council tried to ensure representation of all constituents at meetings and to increase membership,[152] it was clear that enthusiasm in the industry was waning and the strength of the cluster was faltering.

Nowhere was the waning interest of jewellers more apparent than in the response to the annual trade fair, previously one of the most successful events organised by the industry body. The fair was still popular but the economic climate mitigated against sales, and consequently, fewer manufacturers felt inclined to attend.[153]Cape manufacturers, in particular, felt that turnover did not justify the effort and expense involved in attending the fair.[154] In the case of the Cape manufacturers, economic feasibility was not the only issue in their reluctance to attend the fair; there was also resentment at being excluded from Council matters which were perceived to be primarily centred on Johannesburg.[155] This indicates that the schisms in the industry which the Council had at first bridged were rupturing. Intergold, originally a strong supporter of the Council and the fair, in 1985 decided not to participate further in the exhibition as they believed they had nothing to sell to the public.[156]Adverse economic circumstances also affected the nature of the merchandise on offer at the show; unusual, expensive pieces gave way to more conservative jewellery, largely because of price. The "bread-and-butter" nature of the show reflected the "metamorphosis in the jewellery industry, due to the collapse of the rand and the exorbitant prices that imported merchandise would have to fetch".[157]As a result of sanctions and the poor economic climate, overseas exhibitors, who previously had contributed to the

significance of the fair, also ceased to participate from about the mid 1980s, with only two representatives making an appearance by 1991.[158]

6.2.5.2 *Advent of department stores*

The depressed economic climate had repercussions on the functioning of the Council and its cohesive hold on the industry, but, there were additional developments that impacted on the nature of jewellery operations and of the cluster itself. The industry cluster in Johannesburg was initially characterised by mainly retail jewellery outlets run on an individual, small scale basis, also popularly referred to as "Mom and Pop" stores. The emergence in the 1960s of department stores trading in jewellery posed a threat to the individual jeweller but, at first, was not sufficient to undermine his domain as the department store goods were mostly confined to low- and medium-priced watches and costume jewellery.[159]The more serious threat was from jewellery chain outlets which had the advantage of offering credit facilities unavailable from individual retailers who only sold on cash terms. In Johannesburg the two main chain stores were Sterns and American Swiss, both long-standing businesses which started as individual enterprises and expanded into multiple stores. Growth of the chain outlets was at first moderate, with both Sterns and American Swiss combined numbering less than 50 stores in 1970.[160]Twenty years later the number of jewellery outlets of both companies was over 200 in total.[161] By the beginning of the 1990s the two major chain stores had been joined in the marketplace by other chain outlets and, more specifically, by department stores who seized the opportunity of broadening their range of jewellery to include precious metal items in the wake of increased mass production and the accompanying sharp drop in unit costs.[162]By concentrating on lower priced, popular items with a rapid turnover, the department stores were able to woo customers by means of their lower mark-ups, reinforced by credit facilities and attractive discounts during sales periods.[163] For example, Edgars department store, which entered the fine jewellery business in 1976, 14 years later had 61 stores stocking 'fine jewellery'. This pattern was also reflected in the growth of Truworths department store which, despite a late exposure to the precious jewellery market in 1988, two years later had 59 stores selling jewellery, with more planned.[164]

The resulting change in buying habits was a severe blow for many small jewellers, the so-called Mom and Pop stores, who had relied on the lower priced items for their basic day-to-day sales, without being overly concerned about attracting customers. In some ways the individual retail jewellers were too complacent, unwilling or unable

to heed warnings from agents in the industry that "unless the independent jeweller makes a concerted effort to bring himself up-to-date in his marketing methods he is going to be overtaken by the energetic and voracious multiple operator".[165]As has been noted, jewellers were often criticized for not being "aggressive" enough in their marketing strategies, and retail jewellers, in particular, were notoriously averse to collaborating with other retailers in the industry in counteracting challenges in the marketplace. Consequently, many small businesses, lacking both expertise and resources to maintain their competitiveness in the face of the overwhelming influence of department stores, closed shop.[166]

The growing influence of department and chain stores was reinforced by another phenomenon that hastened the exodus of jewellers from the cluster in the centre of town, namely the increasing popularity of suburban shopping centers. The move away from the city centre first became apparent in the late 1960s as businesses gradually relocated to new decentralised residential and commercial developments north of the CBD.[167]The trend towards out-of-town locations gained momentum in the 1970s and 1980s with the rise of large-scale shopping malls catering to consumers' shopping and entertainment needs under one roof, and with the added advantages of security and ample parking that this afforded. With the growing attraction of decentralised shopping centres and consequent dwindling of businesses in the CBD, the identity of the downtown area changed and it no longer attracted the "smart and the wealthy" clientele which would be likely to frequent jewellers' stores.[168] Jewellers felt that they had "the wrong merchandise for what the area had become" and therefore moved to more fashionable areas.[169] Indeed, when one of Johannesburg's more upmarket shopping complexes, Sandton City, commenced its second phase of development in 1983, it was said to "signify the death knell of prestige jewellers in Johannesburg's central business district".[170]

6.2.5.3 *Degradation of the city centre*

It was not only shopping malls that were enticing jewellers away from the CBD; creeping degradation and rising crime levels in town gave impetus to the relocation trend. One of the jewellers who moved from the centre of town after having been based there for 40 years, gave as reasons for leaving the 'deterioration' of the area which was adversely affecting her creativity as a jeweller.[171]The Diamond Club, one of the earliest establishments in the jewellery cluster in Johannesburg, relocated, after more than 50 years, to new premises further away from the city centre because "crime levels in the CBD were becoming too grave for the dealers to feel safe".[172]In

1993, the Jewellery Council, one of the few remaining jewellery establishments in town, was also motivated to leave, along with the Diamond Certification Laboratory. It was announced by the Council that it would “do its best to accommodate all facets of the industry no matter where it is located”, but this was to prove difficult with the growing disintegration of the industry cluster, both through internal schisms and the relocation of businesses from town.

6.3 Conclusion

The formation of the Jewellery Council marked a critical phase and third turning point in the industry's development in that it revived interest among jewellers and bridged the sectional rifts that had developed in the sector. Importantly, also, the Council aimed at uniting the industry at the national level by creating network linkages that stretched vertically from the mining companies to the retailers, and horizontally across provinces. The cluster was still central to the industry, but was perceived within the context of the national jewellery sector and not in isolation.

An important element that is highlighted in the chapter is the role of external agents in inducing change in the jewellery cluster. These crucial agents were in the form of the mining companies, specifically De Beers and the Chamber of Mines, the latter representative of the precious metal producers. It was through the initiative of these agents that the Jewellery Council was formed, although it was not only on this front that the mining sector made an impact on the industry. The mining companies assisted in the promotion of the industry, both financially and in providing exposure, and also tried to heighten design awareness and improve design skills through competitions sponsored by them.

Under auspices of the Council, significant changes were introduced in the industry; an educational base was established for the first time, and specific attention was given to promotion of the sector. Promotional activities were in the form of advertising campaigns and, of particular importance, the introduction of an annual trade fair that reinforced the interaction between manufacturers and retailers. Aside from these interventions, the Council also played a lobbying role, consistently prevailing upon government to abolish the *ad valorem* tax that acted as a stranglehold on the industry.

It is unfortunate that, despite the efforts of the Council and the mining companies, elements intrinsic to the industry as well as external pressures, prevented the industry from realising its competitive potential. Of the shortcomings in the industry that inhibited its development, apathy and individualism were significant factors. Apathy was evident in jewellers' poor response to training initiatives, and their reluctance to establish relations with their counterparts abroad. This had repercussions on the competitiveness of the industry, given that interaction with overseas buyers has been identified as vital for keeping abreast of new trends and

developments in the sector. It is one of the reasons that jewellers failed to recognise the importance of design in jewellery marketing.

The isolation of the industry that resulted from jewellers' reticence to engage in networking relations was exacerbated and entrenched by political and economic circumstances that effectively severed South Africa from the rest of the world. Additional pressures arising from currency devaluation, an escalating gold price, and ever increasing taxes, gradually eroded the competitiveness of the sector and the cohesive influence of the Council on the industry. Under the impact of adverse circumstances the industry, rather than relying on collaborative strategies to overcome problems, became ever more fragmented. The splintering of the industry is especially evident in the case of the cluster in Johannesburg which was affected not only by the broader pressures bearing on the industry, but also by the threat of a deteriorating city centre and growing popularity of suburban department and chain stores. Under impact of these challenges the network of jewellers operating in the CBD gradually unravelled, resulting in the geographical disintegration of the cluster.

It is ironic that the decline of the industry and the demise of the cluster in Johannesburg should coincide with a change in government's attitude to the jewellery industry, from resisting its development to supporting its potential for growth. Government's interest in the industry began in the closing years of the apartheid government and was reflected particularly in the Board of Trade and Industry (BTI) Report. The period of the late apartheid forms the focus of the first government support interventions for the jewellery industry (Chapter Seven). This phase, however, was short-lived and was superseded in the post-1994 period by intensified government attention on the industry. Government's increased preoccupation with the jewellery sector, and the initiatives it introduced to spur its development, forms the focus of discussion in Chapter Eight.

Notes for Chapter Six

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[2] *Ibid*
[3] Memo: Application for a Gold Subsidy, by the Jewellery Manufacturers' Association of South Africa, 2/4/1970, TES 380 156/6/4
[4] *Diamond News and SA Jeweller*, September 1970
[5] Letter from Chamber of Mines of South Africa to Secretary for Finance, 28/7/1969, TES 380 156/6/4

Note on a meeting between the Chamber of Mines and Treasury, 19/4/1971, TES 380 156/6/4
[6] *Diamond News and SA Jeweller*, June 1971, p 35
[7] *Diamond News and SA Jeweller*, June 1971
[8] *Diamond News and SA Jeweller*, June 1971, p 35
[9] *Diamond News and SA Jeweller*, September 1972, p 28
[10] *Diamond News and SA Jeweller*, September 1971, p 31
[11] *Diamond News and SA Jeweller*, September 1971
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[14] *Diamond News and SA Jeweller*, September 1972
[15] *Diamond News and SA Jeweller*, November 1972
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[18] *Diamond News and SA Jeweller*, September 1962
[19] *Diamond News and SA Jeweller*, August 1956; July 1974
[20] *Diamond News and SA Jeweller*, April 1966
[21] *Diamond News and SA Jeweller*, April 1966, p 51
[22] *Diamond News and SA Jeweller*, April 1966, p 51
[23] *Ibid*
[24] *Diamond News and SA Jeweller*, May, 1969, p 37
[25] *Diamond News and SA Jeweller*, October 1973
[26] *Ibid*
[27] *Diamond News and SA Jeweller*, March 1974
[28] *Diamond News and SA Jeweller*, October 1973
[29] *Diamond News and SA Jeweller*, April 1968
[30] *Diamond News and SA Jeweller*, December 1967
[31] *Diamond News and SA Jeweller*, March 1974
[32] *Diamond News and SA Jeweller*, May 1976
[33] *Diamond News and SA Jeweller*, July 1972; March 1973
[34] *Diamond News and SA Jeweller*, July 1973
[35] *Diamond News and SA Jeweller*, March 1981
[36] *Diamond News and SA Jeweller*, August 1972
[37] *Diamond News and SA Jeweller*, August 1972; October 1972
[38] *Diamond News and SA Jeweller*, December 1972, p 35
[39] *Ibid*
[40] *Diamond News and SA Jeweller*, May 1976; December 1976
[41] *Diamond News and SA Jeweller*, October 1973
[42] *Diamond News and SA Jeweller*, November 1975
[43] *Diamond News and SA Jeweller*, June 1975
[44] *Diamond News and SA Jeweller*, December 1975, p 9
[45] *Diamond News and SA Jeweller*, March 1977
[46] *Diamond News and SA Jeweller*, October 1977
[47] *Diamond News and SA Jeweller*, August 1976
[48] *Diamond News and SA Jeweller*, March 1976, p 5
[49] *Ibid*
Diamond News and SA Jeweller, October 1981
[50] *Diamond News and SA Jeweller*, June 1984
[51] *Diamond News and SA Jeweller*, December 1984
[52] *Diamond News and SA Jeweller*, June 1983
[53] *Diamond News and SA Jeweller*, February 1982
[54] *Diamond News and SA Jeweller*, January 1984
[55] *Diamond News and SA Jeweller*, January 1973
[56] *Diamond News and SA Jeweller*, April 1967
[57] *Diamond News and SA Jeweller*, December, 1969
[58] *Diamond News and SA Jeweller*, July 1968
[59] *Diamond News and SA Jeweller*, February 1969, p 35
[60] *Diamond News and SA Jeweller*, July 1967; February 1969
[61] *Diamond News and SA Jeweller*, August 1974, p 8

[62] *Diamond News and SA Jeweller*, August 1974; September 1974; April 1981; July 1981
[63] *Diamond News and SA Jeweller*, October 1981
[64] *Diamond News and SA Jeweller*, September 1984
[65] *Diamond News and SA Jeweller*, February 1976, p 5
[66] *Diamond News and SA Jeweller*, September 1979, p 12
[67] *Diamond News and SA Jeweller*, April 1983
[68] *Diamond News and SA Jeweller*, June 1984
[69] *Diamond News and SA Jeweller,* December 1981
[70] *Diamond News and SA Jeweller*, April 1984
[71] *Diamond News and SA Jeweller*, July 1983, p 1
[72] *Diamond News and SA Jeweller*, August 1986, p12
[73] *Diamond News and SA Jeweller*, September 1974, p 23
[74] *Diamond News and SA Jeweller*, September 1974, p 23
[75] Diamond News and SA Jeweller, November 1972
[76] *Diamond News and SA Jeweller*, January 1973
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[81] *Ibid*
[82] *Diamond News and SA Jeweller*, April 1971, p 35
[83] *Diamond News and SA Jeweller*, July 1981
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[85] *Diamond News and SA Jeweller*, October 1974, p 29
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[87] *Diamond News and SA Jeweller*, November 1974
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[89] *Diamond News and SA Jeweller*, January 1965, p 43
[90] *Diamond News and SA Jeweller*, May 1965
[91] *Diamond News and SA Jeweller*, April 1966
[92] *Diamond News and SA Jeweller*, January 1984
[93] *Diamond News and SA Jeweller*, January 1981; September 1982; February 1983
[94] *Diamond News and SA Jeweller*, March 1967; December 1966
[95] *Diamond News and SA Jeweller*, March 1974
[96] *Diamond News and SA Jeweller*, January 1973; December 1974; January 1986
[97] *Diamond News and SA Jeweller*, November 1975
[98] *Diamond News and SA Jeweller*, August 1976
[99] *Diamond News and SA Jeweller*, February 1978, p 27
[100] *Diamond News and SA Jeweller*, February 1978
[101] *Diamond News and SA Jeweller*, August 1982
[102] *Ibid*
[103] *Diamond News and SA Jeweller*, October 1981
[104] *Diamond News and SA Jeweller*, April 1981, p 1
[105] *Diamond News and SA Jeweller*, October 1981
[106] *Diamond News and SA Jeweller*, December 1979; February 1980
[107] *Diamond News and SA Jeweller*, January 1984
[108] *Diamond News and SA Jeweller*, October 1981; July 1982; August 1983
[109] *Diamond News and SA Jeweller*, July 1982, p 2
[110] *Diamond News and SA Jeweller*, July 1982; March 1983
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[112] *Diamond News and SA Jeweller*, August 1983
[113] Board of Trade and Industry: 1988: Investigation into the development potential of the jewellery industry, Report No. 2576, Government Printer, Pretoria
[114] *Diamond News and SA Jeweller*, May 1965; August 1969
[115] *Diamond News and SA Jeweller*, September 1970
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[117] *Diamond News and SA Jeweller*, May 1971
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[131] *Diamond News and SA Jeweller*, August 1985
[132] *Diamond News and SA Jeweller*, October 1985
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[135] *Diamond News and SA Jeweller*, August 1988, p 3
[136] *Diamond News and SA Jeweller*, March 1973
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[138] *Diamond News and SA Jeweller*, October 1974
[139] *Diamond News and SA Jeweller*, October 1974
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[143] *Diamond News and SA Jeweller*, September 1984, p 36
[144] *Diamond News and SA Jeweller*, November 1975, p 5
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[147] *Diamond News and SA Jeweller*, August 1983, p13
[148] *Diamond News and SA Jeweller*, March 1985
[149] *Diamond News and SA Jeweller*, May 1985; August 1985
[150] *Diamond News and SA Jeweller*, April 1984
[151] *Diamond News and SA Jeweller*, June 1984, p 21
[152] *Diamond News and SA Jeweller*, June 1984; May 1985; August 1985
[153] *Diamond News and SA Jeweller*, May 1990; August 1990
[154] *Diamond News and SA Jeweller*, September 1984
[155] *Diamond News and SA Jeweller*, March 1985
[156] *Ibid*
[157] *Diamond News and SA Jeweller*, August 1986, p12
[158] *Diamond News and SA Jeweller*, August 1981
[159] *Diamond News and SA Jeweller*, March 1961; January 1966; December 1967
[160] *Diamond News and SA Jeweller*, October 1969; August 1971
[161] *Diamond News and SA Jeweller*, November 1989; July 1991
[162] *Diamond News and SA Jeweller*, June 1984
[163] *Diamond News and SA Jeweller*, October 1982; November 1988
[164] *Diamond News and SA Jeweller*, November 1988; May 1990
[165] *Diamond News and SA Jeweller*, October 1982, p 8
[166] *Diamond News and SA Jeweller*, June 1984
[167] *Diamond News and SA Jeweller*, January 1966
[168] *Diamond News and SA Jeweller*, January 1983, p 9
[169] *Diamond News and SA Jeweller*, January 1983, p 9
[170] *Diamond News and SA Jeweller*, January 1983, p 9
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CHAPTER SEVEN

Re-energising the industry cluster: 1987-1994

7.1 Introduction

This chapter begins a discussion of the modern period of the jewellery industry. This stage of the industry's evolution is characterised by initiatives aimed at strengthening the ailing industry. The period commences in the late 1980s with the publication of the Board of Trade and Industry (BTI) report, which was the first manifestation of the apartheid government's interest in the economic potential of the jewellery sector. The BTI investigation into the jewellery sector represents a radical shift by government to an industry that it had previously dismissed as a hindrance. The report from the investigation became the basis for introducing the first government-related initiatives for assisting the development of the jewellery industry.

The effect of these initial supportive measures on the industry was ultimately disappointing, primarily due to the existence of factors internal and external to the industry which outweighed the newly-introduced benefits of a less restrictive operating environment for jewellery manufacture. Nonetheless, government interest in the industry had been sparked and this was strengthened by the efforts of the private sector to stimulate the growth of the jewellery industry as part of a broader programme for local economic development.

The discussion on the contemporary phase of the industry's development is structured into four sections. Following the introduction, the first section traces the growing interest in the developmental prospects of the jewellery industry as first manifested in the BTI investigation. Based on the BTI report, a number of concessions were granted to the jewellery sector, albeit the effect on the industry's transformation was negligible. The second section of the discourse is centred on South Africa's potential for downstream beneficiation of its mineral resources. Proponents of the beneficiation debate served to intensify the focus on the jewellery sector as a key factor for realising the full benefit of South Africa's mineral resources. Sections three and four highlight the role of the private sector in assisting the

jewellery industry, and the initiatives that were launched, in conjunction with local government, to reverse the decline of the industry.

7.2 1988-1994: The Board of Trade and Industry investigation

It is ironic that the first indications of a reversal of government policy towards the South African jewellery industry occurred at a time when the cluster in Johannesburg was collapsing, and the jewellery industry nationally was in a state of decline. It was at the end of 1986, with the publication of the government White Paper on mineral policy, that the need to beneficiate the country's minerals was recognised. Realisation of the importance of adding value to South Africa's natural resources prompted the apartheid government to reassess its policy towards the jewellery industry. At a *Gold 100* Conference in Johannesburg in 1986, the then Director General of Mineral and Energy Affairs acknowledged the discrepancy between the government's supportive policy towards the mining industry, and its punitive approach to the jewellery sector.[1] This situation was about to change, it was stated, as the government adopted "a sympathetic new approach" to the jewellery sector, based on "the increased economic activity and associated job opportunities and concomitant reduction in black market activities that will arise from this type of industrial growth".[2]

Arising from this new perspective on the local jewellery sector, the government in 1986 commissioned a study into the development potential of the jewellery industry, with specific reference to the interventions required to develop the industry to its full potential. The study, which was undertaken by the Board of Trade and Industry (BTI) with the participation of Mintek and the IDC, may be considered a watershed in the history of the jewellery industry. The report, issued in 1987, confirmed many of the issues and problems that the industry had tried to communicate to government over the years. Additionally, the investigation brought into perspective the notion of South Africa having a comparative advantage in the field of jewellery manufacturing by virtue of its status as a major producer of diamonds and precious metals. The Board's conclusion on this issue was that South Africa did not have the potential of becoming a leading producer of polished diamonds and jewellery on the basis of comparative advantage. The sector did have a natural potential for growth, it was stated, but this was hampered by various constraints, the majority of which were legislative and stemmed from the government's overwhelming concern with protecting the balance of payments[3].

The BTI report elaborated on the factors that had inhibited the growth of the industry, identifying the *ad valorem* tax as the most detrimental to the industry's development. According to the report the *ad valorem* tax, in combination with an escalating gold price and South Africa's poor exchange rate, had rendered local jewellers uncompetitive in the world market, and placed jewellery purchase beyond the reach of the average consumer. The suppressive effect of other legislative restrictions on the industry was also highlighted in the report. In particular, the requirement of 25 percent minimum value-added to gold (gold ratio) prevented manufacturers from producing low value-added jewellery for export. Likewise, the limit of 125g gold per day that was allowed to be manufactured excluded local jewellers from competing in mass-produced jewellery and from using the latest production technology. Further impediments were the restricted access to gold, which was only obtainable through the Mint, and the prohibition of gold-based transactions between jewellery manufacturers.[4]

Whilst acknowledging the role played by government policies in obstructing the growth of the jewellery industry, the BTI report also drew attention to the negative influence of factors inherent to the industry. Apathy was one of these factors, and this was manifested to the Board in the dismal response to the questionnaires that were circulated to the industry as part of the investigation. Out of 80 questionnaires distributed, only ten were returned, of which only seven were usable. Such uncooperative attitude from the industry was strongly reminiscent of previous government efforts to address problems in the industry, and jewellers reluctance to engage in the proceedings. This disappointing response from members of the industry to matters concerning them only served to undermine the credibility of their grievances. Additional industry shortcomings that were noted in the report were the lack of a co-ordinated approach to promotional activities, the general unawareness among jewellers of relevant government assistance and incentive measures, and the complete absence of any statistics or records pertaining to the industry[5].

Arising from the BTI's investigations, its recommendations to the industry centred on the removal of the major legislative impediments, which entailed the following measures:

- Abolishing the *ad valorem* excise and customs duty on jewellery and precious stones;
- Making gold available at reduced interest rates for export jewellery;

- § Reducing the gold ratio from 25 to 15 percent;
- § Removing the limit on the amount of gold to be worked per day;
- § Allowing the free transport and exchange of gold between jewellers; and
- § Facilitating access to gold by making it available from more than one source.

7.2.1 Introduction of legislative reforms

It was on the basis of these recommendations that government agreed to certain legislative reforms with respect to jewellery manufacture. Thus, from mid-1988, jewellers were allowed to operate free of the restrictions that limited the amount of gold that could be possessed, and that which was allowed to be worked in one day. Moreover, it was possible for them to obtain gold from fellow permit holders, and to transport the metal without a permit. Jewellers still had to keep a register but this no longer had to be submitted to the police every month; rather, it only had to be produced upon request of the police. Access to gold was also facilitated, especially for jewellers based outside of Johannesburg or Pretoria who could now obtain gold from Reserve Bank branches in different parts of the country. In addition, the gold ratio for finished jewellery was reduced from 20 to 15 percent, with the possibility of a further five percent reduction on jewellery for export. The government measures with the most bearing on the industry, however, were the provision for a gold loan scheme to manufacturers, and the reduction of *ad valorem* from 35 to 20 percent. Another significant move for the industry was the repeal of the prohibition on jewellers' permits to blacks, which, for the first time, opened up the industry to all races.[6]

Although the legislative reforms were significant in liberating the environment within which jewellers were allowed to operate, the retention of *ad valorem*, albeit at a reduced rate, was a bitter disappointment to the industry. Consequently, response to the new measures was subdued, with jewellers going so far as to say that the proposed changes would "not have a major effect on the jewellery manufacturing industry".[7]The Jewellery Council, responding to the government's concessions, noted the state's more conciliatory attitude towards the industry, but declared that the industry would intensify its lobbying efforts with government until *ad valorem* was removed altogether.

Concerning the lifting of *ad valorem*, the government was not prepared to conform on this issue despite numerous representations from the Jewellery Council, Mintek, the Industrial Development Corporation and the Chamber of Mines, to this effect. The Margo Commission, in its report on the tax system in the country wherein it

recommended that the list of *ad valorem* duties be re-evaluated and the tax abolished as soon as possible, was unable to change the view of the government.[8] The finance authorities were not convinced that a thriving jewellery industry would generate more tax revenue to the state than a commodity tax on an ever-dwindling industry.[9] In a government White Paper issued in parliament on the 16 March 1988, government insisted on the importance of *ad valorem* duties as a source of state revenue, referring to the R380 million recovered by the state from these duties in the period 1986 to 1987. How much of this was attributable to manufactured jewellery was not specified. Government further justified the retention of *ad valorem* by maintaining that it applied to non-essential imported goods.[10] It was argued that government would only go so far as to agree to the possible adjustment of the tax in future years, but not to its repeal.[11]

7.2.2 The effect of government concessions to the industry

The decrease of *ad valorem* duty on jewellery from 35 to 20 percent was regarded as a magnanimous gesture by government which consequently expected immediate positive repercussions to ensue from the concession. Accordingly, the Department of Finance, in 1989, a year after introducing the legislative and tax changes to the industry, requested a report from the Jewellery Council on the effect of the reduced *ad valorem* on the jewellery industry.[12] The Council, in its response, pointed to the negligible effect of the tax reduction on the trade, indicating that it was not the percentage of the *ad valorem* that was restricting growth but the existence of the duty at all.[13]

Aside from the limited effects of the adjustment to the excise duty, the other concession from government, notably the provision for a gold loan through the commercial banks, also had little impact on the industry as a result of delays in its implementation. Indeed, a year after the announcement of the facility, it had still not been put into effect.[14] The gold loan system was to operate by means of the Reserve Bank making gold available at a nominal interest rate to participating commercial banks, which would then on-lend it to the jewellery manufacturing sector at equally low rates. The scheme was designed to ease the cost burden of manufacturers which, at the time, were paying 20 percent prime rate on gold purchased, and having to bear this cost for 90 days, is the customary credit period for the trade.[15]

The gold loan facility was eventually introduced in November 1989, almost 18 months after its announcement by the Public Affairs Minister.[16] Once the loan

scheme was in force, the high expectations of its beneficial effect on the industry were soon quelled given the accompanying interest rates which were perceived by the industry as still too high to enable manufacturers to be competitive.[17] The higher than expected rates were hardly surprising given the risks that the commercial banks had to incur, and the low volume of the loans. The Reserve Bank, which had enabled the gold loan facility, was well aware of the limitations of the scheme. In a meeting between the Bank and the Chamber of Mines it was mentioned that the loan, when introduced, would not be as cheap as many wished.[18] There did not seem to be scope, however, to improve the lending rate. The Reserve Bank charged the commercial banks interest which fluctuated between two and three percent. Added to this, the commercial banks included a margin which was used to cover their risk. The amount of the margin was dependent on the customer and size of the gold loan, amounted to an additional 3.5 to 5.5 percent rate which was used to cover their risk. Jewellers had six months to pay the loan, with the option of rolling it over for another six months. Although payment and interest on the loan was based on the ruling gold price at the time of payment, the jeweller did have the option of repaying the loan when the gold price was lower during the loan period, or to roll the loan if a lowering of the gold price was anticipated in the near future.[19] Despite the higher than expected interest rates for gold loans, the Reserve Bank and Chamber of Mines still considered it a better alternative for financing work-in-progress than borrowing at prime overdraft interest rates.[20] To manufacturers, however, buffeted by continuing *ad valorem* costs and tightened economic circumstances, the expense of borrowing the gold did little to alleviate their situation.

Although the changes introduced through government, especially the reduced *ad valorem* duty and the gold loan option, represented improvements to the industry's operating circumstances, the years of high taxation had driven much of the industry underground, and legitimate jewellers struggled in competition with 'black marketeers'.[21] The skills base of the industry was severely depleted as the unpropitious working environment drove many jewellers out of the country. In the decade between 1980 and 1990, it is recorded that only one person in South Africa started a jewellery manufacturing business.[22] The severe erosion of the industry is further confirmed by reports from the Chamber of Mines illustrating how, despite Intergold's investment of over R3 million in gold jewellery promotion in South Africa, consumption of gold by manufacturers had declined from nearly three tons in 1976 to less than one ton ten years later. Nor could this decline in any way be ascribed to a global trend as gold consumption in jewellery increased significantly in other world

markets where Intergold was active (Chapter Three). In the period 1980 to 1986, per capita consumption of gold rose by 41 percent in France, 57 percent in Italy, 139 percent in the USA and 163 percent in Japan.

7.2.3 The repeal of *ad valorem* duty and its effect on the industry

With persistent submissions from the Jewellery Council and, especially, pressure from Mintek, on the crippling effect of *ad valorem* on the industry, the tax was finally abolished in March 1990.[23] The repeal of the tax was a grudging move by the Department of Finance. The Finance Minister at the time claimed that it entailed a loss of R37 million to the fiscus, and threatened to re-impose the tax should the industry not show significant improvement after three years.[24]

It was generally expected that the abolition *ad valorem* would catapult the industry to success, as the tax had been the industry's bone of contention for so many years. The tax relief was heralded by manufacturers as a "major shot in the arm for the jewellery trade", which now had free reign to expand and bring the cost of jewellery in South Africa on a par with the rest of the world.[25] Nevertheless, once the initial euphoria over the freedom from excise duty had subsided, it soon became evident that the industry's problems were far from over. Having given in to the industry's wishes, government was impatient to see increased volumes of jewellery production and exports. The industry's output did indeed increase dramatically. Gold consumption doubled from about two tons in the late 1980s, to almost 4.5 tons barely a year after the repeal of the tax. This gain, however, was not entirely attributable to additional production by the industry, but was said to also reflect the existence of previously 'underground business' which had come into the open after modifications to the legislation. From this perspective, growth of the industry post *ad valorem* was not spectacular; years of labouring under punitive taxes, and a depressed economy, had eroded the manufacturing base of the sector.

There are various reasons for the limited impact of the repeal of *ad valorem* on the jewellery industry. The removal of the tax did not result in increased jewellery exports, as had been expected. With no healthy domestic market to boost sales, the industry could not muster the considerable additional capital outlay required for exporting.[26] Sanctions had isolated South Africa from international contacts and, in the jewellery sector especially, exposure to international fashion and market trends, and links with overseas wholesalers and retailers, is critical for successful exports.[27] To compete on the international market, the industry needed recourse either to

cheap labour, or a capital-intensive manufacturing base capable of functioning on a 24-hour basis, neither of which was available to the industry. In terms of labour, two decades of stagnation had resulted in the neglect of training facilities and the industry was therefore desperately short of skilled artisans and a managerial entrepreneurial class. In-house training did not solve the problem of artisans either as the low profitability of the manufacturing sector precluded only the large, established manufacturers from training artisans. South Africa was known for its abundant labour but this was often less productive and more expensive than in other jewellery-producing countries such as Thailand, Taiwan or Hong Kong.[28] Design skills were, in some respects, of an international standard but this related to only a small component of the industry.

With respect to capital-intensive production, the industry was equally at a disadvantage. Aside from a weak currency, high duties and surcharges on imported machinery placed it beyond the reach of local manufacturers.[29] The industry therefore lagged substantially behind its international counterparts in access to, and use of, technologically advanced machinery for volume output. It was against these foreign competitors, however, that South Africa had to compete in jewellery exports. Government export incentives also did little to promote jewellery exports in that the gold or other raw material component of jewellery, which comprises the highest cost input, was excluded in the incentives offering, and only the added-value element of the product was taken into account.[30] The cost of gold in South Africa was another factor militating against local jewellery exports. The escalating price of gold, combined with a steadily depreciating currency, set the country at a distinct disadvantage *vis-à-vis* other, more prosperous, producers. In the period between the 1960s and 1990s, the price of gold multiplied eleven times. To South African manufacturers, however, the weak currency resulted in the gold price being 25 times more expensive than abroad.[31] The gold loan, as already mentioned, albeit introduced to allay the costs to jewellers, still fell short of assisting the majority of manufacturers; at a loan rate of seven percent, this compared woefully with the three percent charged in other jewellery markets.[32] Over and above this expense, however, the banks demanded 110 percent security from jewellers, effectively excluding all but a few of the very large manufacturers from the scheme. The repayment of the loan at the prevailing gold price further attenuated the benefit of the facility. When Treasury was approached on the matter with the suggestion that the loan repayment be fixed in Rands and not in gold, this was rejected on the grounds that it amounted to a subsidy for the industry.[33]

There were several other problems in the industry that the repeal of *ad valorem* could not address, such as the issue of fragmentation, and the small-scale nature of jewellery businesses. The industry was made up of mainly small concerns, and it lacked excess capacity, all of which often led to delivery problems. Retail buyers would complain of manufacturer's limitations, which left the retailers with little flexibility in who to deal with.[34] The small size of the industry had repercussions along the value chain, and not only for retailers. The costs of alloying and refining were expensive in comparison to overseas operations, and the supply of constituent components, in the form of semi-processed gold (semis) was unreliable, sometimes forcing jewellers to keep up to two months stock to prevent interruptions in their manufacturing process.[35] It is not surprising, therefore, that the removal of *ad valorem* had less than the desired impact on the industry. As noted by one of the manufacturing jewellers: "Changes in taxation appear to be for the better, but for a lot of people it's a little late in the day to make such a big difference that it will attract new people to start exporting".[36]

The problems undermining the jewellery industry's competitiveness stemmed primarily from the cumulative effects of taxation combined with an adverse economic climate. These external difficulties were compounded further by resistance from the industry itself to improve its competitiveness. The industry was known in some circles to have a "bad name" due to the large illicit component that existed.[37] Although the tendency towards illicit dealings was exacerbated by the untenable working environment created for jewellers, it has been a pervasive element in the industry as noted in earlier chapters (Chapter Five). The perception of the industry as clandestine, rather than being dispelled, was often reinforced by jewellers through their uncooperative attitude. One project, launched in 1987, to create a database of the industry, was unsuccessful "due to the reluctance of the members of the trade to divulge the required information" which, in this instance, referred to the legal gold usage in the jewellery trade.[38] After years of punitive action from the authorities, it is understandable that jewellers might be cautious in divulging information about their business activities, but unequivocally refusing to provide information requested by its own governing body, was confirmation for many that the industry operated through underhand means. Suspicions of this nature made potential allies of the industry, such as the mining companies, often less predisposed to assist when called upon.

There were also times when the industry refused to respond to opportunities aimed at its own benefit. For example, when the Council, in 1987, tried to organise training seminars for retailers, the proposal never came to fruition as industry members failed to reach agreement among themselves.[39] Likewise, efforts by the Council to encourage new designs from manufacturers by obtaining for them the 1988 Gold Fashion Trends book and exhibiting jewellery based on those designs, failed to spark sufficient interest to warrant the expense of the exercise.[40] The negative reaction towards the Trends concept illustrated South African jewellers' conservatism and their reluctance to change. Lack of co-operation from the industry was also evident in members' reluctance to even meet the editor of a jewellery trade journal from Tokyo when he visited South Africa in 1988 to obtain an overview of the jewellery industry in the country.[41] This attitude from jewellers can, in part, be attributed to the high level of protection enjoyed by the industry until the mid-1990s, when import duties on jewellery totalled 65 percent (25 percent duty and 40 percent surcharge). This protection created an insular industry, comfortable in its working environment and therefore intolerant of change.[42]

In 1993, three years after the lifting of *ad valorem*, an investigation of the industry was conducted by the Industrial Development Corporation (IDC) to determine the effect of previous legislative changes on growth trends. The study by the IDC confirmed that little change had occurred in the sector[43]. Despite the doubling of production which few believed was entirely the consequence of new businesses, South Africa still supplied only 0,2 percent of global jewellery demand.[44] A significant fact arising from the investigation was one previously noted by the BTI in its report, *viz*., that South Africa had no comparative advantage in jewellery production by virtue of its rich endowment of precious raw materials. Rather, competitiveness of the sector was contingent upon "the relative cost of raw materials, the design flair and workmanship of industry incumbents, entrepreneurship and individuality of manufacturers and of the available marketing skills and avenues".[45] Contrary to being more advantaged than countries lacking in precious metals resources, the South African jewellery industry required government intervention in order to compete with those countries. The interventionist measures required were recommended in the investigation as: adjusting the level of industry protection, introducing realistic export incentives, providing marketing cost assistance, and reducing the cost of gold loans locally to make the metal more accessible. Government did not act on these recommendations. The conviction, however, that South Africa possessed natural beneficiation potential, did not disappear; on the contrary, this belief intensified.

7.3 Debate on South Africa's beneficiation potential

Notwithstanding studies attesting to South Africa's lack of comparative advantage in jewellery manufacturing notwithstanding, there was a growing belief in some quarters that South Africa, as a leading producer of precious minerals, should excel in downstream beneficiation. The main proponent of this argument was Mintek, the state-owned Council for Mineral Technology, which referred to the phenomenal success of the Far Eastern countries in jewellery manufacture despite those countries not "being producers of the raw materials".[46] By contrast, it was argued, South Africa, which produced "40 percent of new gold supplies coming onto world markets, should not only sell more gold in the form of jewellery, but should do the same with platinum and diamonds"[47]. Not all stakeholders agreed with this reasoning, which overlooked the fact that the global pricing of gold, platinum and diamonds did not favour South Africa, and that the low value-added investment-type jewellery that underpinned the meteoric rise of the jewellery industry in the Far East, was not possible in South Africa because of the high value-added requirements and the cultural specificity of the jewellery (Goch, 1992). The Chamber of Mines, representing the gold mining companies in South Africa, made the point that "while South Africa may have a significant share of the raw product, an equitable share of the international market for the processed product is not automatically assured".[48] The Chamber indicated further, echoing the findings of studies to date, that "the benefit from expanding the beneficiation of South African minerals, will, to a large extent, be determined by the competitiveness of local producers compared with foreign producers who have access to similar minerals and processing facilities".[49] Ultimately, it was reasoned, if it were profitable to further beneficiate the country's resources, entrepreneurs would already have availed themselves of the opportunity.

Proponents of the beneficiation debate called for the intervention of government and the mining sector in overcoming the obstacles to downstream production in South Africa. It was proposed that government remove the fiscal and regulatory constraints hindering the production of jewellery, and that the mining sector sell gold at a discount to local manufacturers (Edwards, 1991). Mining companies rejected such a suggestion, the opinion being that if the removal of *ad valorem* and introduction of specific concessions had failed to stimulate the jewellery sector, it was unlikely that a raw material discount would be any more effective.[50]South Africa was perceived as considerably disadvantaged in the factor inputs required for beneficiation, and

government intervention in this sphere was therefore more likely to be counter-productive than beneficial.[51] Mining companies also dismissed the presumption that the mining sector should be involved in more downstream activities; this was considered to be outside the sector's field of expertise and moreover, the local market offered few returns to entice mining interests in this direction.[52] Although committed to promoting jewellery sales through agencies such as Intergold which, in 1986, spent "no less than R68 million…on promoting to consumers worldwide, the desirability of owning and giving gold jewellery", these efforts were focused on select international markets.[53] By contrast, the local industry was such that "the houses probably felt that there was no value to them in becoming involved in an industry as small, complex and unstructured as the jewellery industry in South Africa".[54]

An assessment by the World Gold Council (WGC) of the local industry in 1991 confirmed the mining sector's opinion that the country lacked most of the elements conducive to the creation and sustainability of a successful jewellery industry. A list of these elements as defined by the WGC ranged from labour, capital, infrastructural services and state incentives, to the cultural affinity and image of a country with respect to jewellery. Significantly, however, the list of requirements did not include natural availability of raw materials.[55] It is for these reasons that the mining sector rejected the frequently made proposal of diverting or reducing its contribution to the WGC in favour of investing such funds in the local jewellery industry.[56]

7.4 Mining sector involvement in the local industry

Although the mining sector strongly contested that it had any obligation towards the jewellery industry, it became increasingly difficult for the mining houses to distance themselves from the affairs of the industry. Moreover, as a constituent member of the Jewellery Council, the Chamber of Mines could not escape completely the problems of the industry and was often called upon for financial assistance. The Chamber responded to these appeals by making donations to the Council on a regular basis, but, as there was often little investment forthcoming from the industry, these contributions from the Chamber were eventually made dependent on matching amounts from members of the trade.[57]It was apparent, however, that financial contributions to the Council were not aiding the growth of the industry which continued to stagnate, prompting the mining sector to focus its efforts on creating an enabling environment to spur downstream activities. Some of the areas which the Chamber felt it could play a more meaningful role were in lobbying government,

facilitating access to global market-related information and contacts, and assisting with education and training. It was in the latter aspect that the Chamber was able to assist most directly, by contributing R100 000 in 1991 and again in 1992 for the introduction of a diploma course in jewellery design and manufacture at the Witwatersrand Technikon.[58] In terms of the arrangement with the Technikon, laboratory equipment was to be supplied by the jewellery industry, and it was in this respect that the Chamber's assistance was useful. The establishment of the diploma course was a significant move for the industry, given the dearth of skilled labour which had become a major inhibiting factor for the further expansion of the industry.

The Chamber was also approached for assistance and involvement in other areas, notably in funding and promoting new research and technology developments in jewellery manufacturing. These requests were not directly from the industry but from research institutions, such as the CSIR and Mintek, which had developed new jewellery alloys and sought a means of marketing them.[59] As the jewellery industry was unable to fund such technology, the mines were approached not only for their financial standing but also their influence with the World Gold Council. Such requests met with little success as the mines refused steadfastly to be drawn into downstream developments, and World Gold Council activities were focused on promoting jewellery and not technology transfers.[60]

7.5 Local initiatives to revitalise the industry

There were local initiatives to stimulate the jewellery industry as part of the broader local economic development planning which was a growing phenomenon in the late 1980s. In particular, two cities in the country were of interest to local stakeholders, Cape Town and Johannesburg. With respect to Cape Town, there were several discussions about starting a jewellery incubator, but these plans did not materialise. One of the most significant local initiatives that was started in this period was in Johannesburg, in the form of Jewel City.

7.5.1 Jewel City

In the absence of national government policies to assist the jewellery industry, it was left to the private sector and other stakeholders to play this role. One of the more significant industry initiatives on which the Chamber was approached for support in the early 1990s was that of erecting a Jewellery Trade Centre to accommodate all jewellery-related functions, from designers to manufacturers and exporters.[61] The

idea was proposed through a consortium headed by the then director of commerce and industry in the Johannesburg City Council, who foresaw the development of a "jewellery city", incorporating all facets of the industry including its representative structures, in the heart of Johannesburg's CBD. The Johannesburg City Council's involvement stemmed from its aims to revitalise the downtown area of Johannesburg and encourage theme park developments (da Silva, 1999a). As such, the City Council's priority was not necessarily the jewellery industry. This was the view of the Chamber of Mines in its statement that the Council's interest in the venture was "not so much the well-being of a Johannesburg-based jewellery industry as finding a viable use for the electrical workshops, a Jewellery Trade Centre being but one of several options". More committed to the idea of housing the jewellery industry in a single complex to unite industry players and ensure more co-ordinated development of the sector was Mintek, which envisaged a R35 million "jewelpark" near its headquarters in Randburg.

The Mintek proposal centred on the creation of a single, integrated complex comprising a jewellery training school and "hive" system for smaller manufacturers, and facilities for large-scale manufacturing. The perceived advantages of such a system were the secure, park-like environment, and economy of scale benefits derived from shared facilities and support structures such as secretariat, precious metal handling, bulk gold dispatching and refining operations, and group buying.[62] In addition, the project made provision for securing low interest gold loans on the basis of the centralised security system of the complex and the IDC's involvement.[63] Through the integration of the industry in a single establishment and the increased access to services and resources that this would allow, it was hoped to raise export production to 100 tons of gold jewellery a year, with further sales through a retail outlet to cater primarily to the tourist market. The increased production would simultaneously address the problems of employment creation and skills shortages in the sector[64]. In addition, it was hoped that agglomeration effects would overcome fragmentation of the industry and encourage co-operation among jewellers, who, since the demise of the cluster in the CBD, tended to relate to each other more through rivalry and competition than alliance.[65]

Given the similarity of the Mintek and Johannesburg City Council projects, these were eventually merged in 1993 to avoid duplication of projects and funding in the industry. Of the sites considered, the Johannesburg CBD was ultimately chosen for the complex (Fig 7.1). A major determining factor was the cost effectiveness of the

area. Another key factor was that the property to be used was owned by two diamantaires who formed part of the negotiating team. Some of the stakeholders in the initiative were strongly averse to the selected location, arguing that the nature of the industry in a crime-ridden area, which had been one of the factors behind the exodus of jewellers from the city centre, ran counter to the objectives of the initiative designed to attract tenants and tourist trade. The existence of infrastructure that lent itself for conversion into the complex, and the convenience of the location for workers based in Soweto, ultimately overrode opposing arguments and the choice of CBD remained.[66] The Johannesburg City Council, whose original plans for a jewellery centre were also based on the conversion of existing premises in the downtown area, strongly supported this decision.[67]

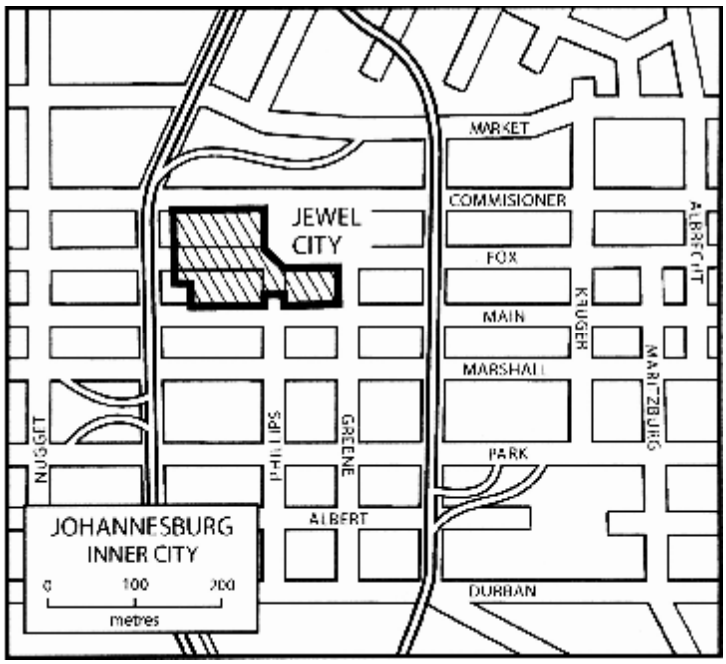


Fig.7.1 Location of Jewel City in the Johannesburg CBD

From the jewellery members themselves, there seemed to be little support for the venture. Many stakeholders favoured the centralisation of the industry in a single complex but lost interest in the development when it was decided to base it in the CBD. Other jewellers who had already moved out of the centre of town were opposed to moving back to an 'insecure' and 'decrepit' environment. The few manufacturers still operating in the Johannesburg city centre, if given the choice to relocate, preferred to leave the area altogether rather than return to another part of the same vicinity. Still others in the industry were not convinced of the benefits to the trade of grouping jewellers in one area, perceiving agglomeration advantages as

more relevant to the diamond than the jewellery side of the industry. Opposition to the development also stemmed, in some quarters, from resentment of a project believed to be primarily for private, commercial gain and not in the main interests of the jewellery sector (da Silva, 1998).

The centre, named Jewel City, was formally launched in 1994, with over 80 tenants from the diamond and jewellery sectors, housed in two, linked, buildings known individually as the SA Diamond Centre and SA Jewellery Centre. Although aimed at encompassing all facets of the jewellery industry, it was clear that the complex appealed more to the diamond than jewellery fraternity. From the start, the centre succeeded in attracting some of the key diamond organisations such as the Diamond Board, Diamond Bourse, and Diamdel, whereas only a few independent jewellers were located there. Despite the large contingent of diamond representatives in the complex, the controversy surrounding the establishment of Jewel City created initial rifts in the trade; the Diamond Club, with 55 of its members, refused to be based in the centre and, when relocating from its original premises, opted for a separate location away from the CBD. These differences in the industry were resolved, however, and, with the majority of the diamond trade operating from Jewel City, the Diamond Club, in 1993, re-established itself there as well.[68]

In addition to the jewellery- and diamond-related companies in Jewel City, a range of support services and structures are also accommodated, such as banks, depots, postal services and restaurants, making the centre almost completely self-sufficient.[69] One of the complex's main attractions to the industry is its stringent security, a factor, which, despite the centre's vulnerable location, renders it safer than most other premises in the CBD. The emphasis on security entails high costs to the tenants. These costs, however,are offset by the convenience of having all aspects of the trade and ancillary services under one roof. It is these agglomeration economies, together with the enhanced entrepreneurial opportunities provided through the clustering of related businesses, that ensures Jewel City its success. Already with the launch of the complex it was reported that the companies based there were noting increases in turnover and trading of between 30 and 200 percent.[70] Several tenants reported having "picked up a lot of new business since moving into Jewel City".[71]

Although the Jewel City complex has become a focal point for the diamond industry in South Africa, the original aims of the venture to unify the jewellery industry and significantly raise jewellery production and exports, have not been fulfilled. The retail

outlet for tourists never materialised, in part because the area is not conducive to frequent tourist activity and also because the complex is closed to the general public, leaving only manufacturers' clients to visit the premises. The training school and entrepreneurial hive for jewellers that formed part of the original plans for Jewel City also were not realised, albeit such facilities were developed for the diamond industry. As a strategy for unifying the industry, Jewel City has succeeded in the case of the diamond sector but the jewellery aspect of the industry remains fragmented with a few manufacturers based at the complex and the majority scattered throughout Johannesburg.

With the concept of Jewel City unable to regenerate industry growth, the jewellery sector continued to languish at production levels that had not changed since the initial improvement after the abolishment of the *ad valorem* tax. Poor local economic conditions militated against industry growth, but this was not the only reason for the stagnation of the industry. Jewellers remained unresponsive to initiatives aimed at promoting industry growth. One such initiative was that by the Jewellery Council, in 1991, to establish a jewellery Export Sub-Committee. The Committee identified several suitable markets where it intended establishing local agents who could be entrusted with samples from South African manufacturers seeking to penetrate these markets. The Committee was prepared to facilitate entry into foreign markets but stated from the outset that the success of such an initiative ultimately depended on the extent of manufacturing jewellers' participation.[72] The Export Sub-Committee did not realise any meaningful jewellery exports, to some extent because of high entry barriers into the export markets but mainly as a result of the low participation from jewellers. Indeed, a questionnaire circulated to 150 jewellers to ascertain their needs and experiences with regards to exports, elicited a meagre 13 replies, an indication that manufacturers were not sufficiently concerned to participate.

Lack of enthusiasm and interest seemed to be more prevalent in the industry since the demise of the cluster in the CBD. For example, jewellery manufacturers decried the jewellery training at the Technikons, claiming that it resulted in work "irrelevant to the trade", but did little to rectify or assist with the problem.[73] When, in 1994, the jewellery manufacturing department of the Witwatersrand Technikon invited members of the industry to view, and comment upon, students' work, it elicited a disappointing response, both in terms of the dismal attendance by employers, and their lack of reaction to the work on display.[74] Likewise, the annual jewellery trade fair, which had been a key feature for jewellers throughout the country, gradually lost

its appeal in the early 1990s. Many of the retailers and manufacturers were reported to "not bother to attend",[75]and those that did participate were said to make little effort with their products for exhibition.[76] Although it was stressed on more than one occasion that the fair should be used for new product launches, the general consensus was that "the majority of exhibitors don't do anything new specifically for the trade show".[77] For an industry under pressure to increase its international market share, there was not much concern for building a strong, local base before attempting foreign markets. Jewellers were equally non-committal about an International Jewellery and Diamond Symposium which the Jewellery Council organised in 1994, but had to cancel at the last minute due to lack of support from the industry.[78] The Symposium represented a valuable opportunity for jewellers to appraise themselves of new markets, trends and developments from speakers representing international organisations such as the World Gold Council, De Beers' Central Selling Organisation, and Jewellers of America. The Chamber of Mines, which had been instrumental in organising the participation of the WGC in the event, voiced its concern at this show of apathy, warning that it would affect the future involvement of the WGC in local events.[79]

7.6 Conclusion

This chapter has analysed early government initiatives to stimulate the development of the jewellery sector. The legislative reforms that were introduced as a result of the BTI report had only a limited effect on industry growth. A combination of external events and lack of cohesion in the organisation of the industry mitigated the impact of the government's concessions on the industry. Notwithstanding the poor response from the industry to these initiatives, government interest in the jewellery sector prevailed, largely inspired by the beneficiation debate which focused attention on South Africa's mineral resources and the paucity of related downstream activities. Further intervention by private and public sector stakeholders to develop a strategy to revive the industry still did not result in achieving this objective.

By the end of the apartheid era, therefore, the jewellery industry in South Africa continued in an economically depressed state. With the change in government in 1994 there was new impetus to rekindle the jewellery sector. The issue of beneficiation assumed added importance under the post-apartheid government, and lent new urgency to the task of reviving the sector. It is in this context that the

initiatives during the post-apartheid years to stimulate the jewellery industry are examined in the following chapter.

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CHAPTER EIGHT

Revitalising the Jewellery Industry Post-1994

8.1 Introduction

The aim of this chapter is to critically examine the initiatives under the post-apartheid government to revive the jewellery industry. The groundwork that was laid in the pre-1994 period to accelerate the growth of the jewellery sector gained considerable momentum in the post-apartheid era. The issue of beneficiation that had surfaced prior to 1994 resonated even more strongly with the new government and was the basis for government's determination to develop the jewellery sector. The mining sector, as suppliers of the precious metals, were perceived by government as partly responsible for ensuring the growth of the downstream industry and therefore played an important role in the policy initiatives that were launched to address the problems in the jewellery industry. This chapter explores the nature and unfolding of the initiatives that were introduced to assist the industry, and the problems experienced with the implementation of these measures.

The chapter is structured around two major themes: the initiatives led by government, in particular the Department of Trade and Industry (DTI), and those under auspices of the mining sector. Under the national government the two main initiatives were a cluster study, and a global marketing and implementation project. The outcome of these initiatives and their effect on the jewellery industry is discussed under separate sections in the chapter.

The activities of the mining sector to strengthen and expand the jewellery industry in South Africa are discussed in terms of the three principal mining groups most involved in strategies to increase beneficiation. These are the gold mining companies Anglogold/Ashanti and Harmony Gold, and the platinum group, especially AngloPlatinum. Each of these entities differs in their approach to assist the jewellery industry, with similarly divergent results.

8.2 The DTI cluster study

In view of the jewellery industry's continued lethargy, the Chamber of Mines, towards the end of 1994, initiated a working party comprised of itself, the CSIR, Mintek, the Jewellery Council and the Jewel City Trust, to formulate a long-term strategy for the industry.[1] The initial aim of the group was to launch a study designed to identify the conditions for South Africa to become a leading jewellery manufacturing country, and to determine the obstacles preventing the jewellery industry from attaining competitiveness. The Department of Trade and Industry (DTI) also joined the working party as there was renewed interest from the new government in revitalising the jewellery sector. In part, this interest stemmed from the government's broader programme to stimulate industrial development in South Africa in the post-apartheid era.

As the country emerged from political isolation and re-integrated into the global economy, the DTI introduced a programme aimed at assisting select industries in maintaining or reaching international competitiveness. The programme was based on the cluster concept of industrial growth, drawing on Porter's theory of competitiveness by emphasising the collaboration of firms and supporting organisations along an industry's value chain, regardless of their geographical location.[2] In the case of the jewellery sector, the stakeholders identified included designers, manufacturers, retailers, research and development organisations, national and provincial government, labour, financial institutions, capital equipment suppliers and producers of raw materials. The cluster project entailed benchmarking all the components of the jewellery cluster against national and international standards to identify the problem areas specific to the sector. Task groups were then appointed for each problem area to develop solutions which would culminate in an industry strategy involving the participation of all stakeholders.[3] The jewellery study formed part of several other cluster studies already in progress under auspices of the Department.

Despite the initial impetus for the project emanating from the private sector, headed by the Chamber of Mines, the DTI ultimately assumed control of the project, principally because the beneficiation of minerals into jewellery had become a highly politicized issue. Commonly held perceptions among political circles were that very little of the benefits from South Africa's natural resources accrued to the country, and that none of the funds paid into the World Gold Council by South African producers

was spent on the local industry. Politicians from some of the country's more resource-rich provinces also had a keen interest in, and high expectations of, the potential of jewellery fabrication in their areas.[4]

These political views notwithstanding, there were DTI representatives who, on the basis of evidence accumulated through past studies, agreed with the Chamber that "most of the claims made by the jewellery industry and the better known supporters of local beneficiation of gold do not stand scrutiny".[5] Indeed, it was believed in some government quarters that, aside from specific market niches such as ethnic jewellery for tourists, the local jewellery industry did not have the potential to compete internationally. If the country were to increase the level of beneficiation from one to five percent of its gold production into jewellery, it was held, this would be considered a remarkable achievement.[6] Accordingly, it was hoped that the jewellery cluster study would clarify and eradicate many of the misconceptions that existed about South Africa's competitive advantage in jewellery relative to its resource base.[7] It is significant to observe that of all the stakeholders concerned with instituting the study, the jewellery industry, in the form of the Jewellery Council, seemed to show the least interest. The Chamber of Mines commented in this regard that "the proposal of a jewellery cluster study is being driven more by the Department of Trade and Industry (DTI) and the IDC than by the SA jewellery industry". Evidence of this was the industry's show of "at best mild enthusiasm and motivation for this project", in informal discussions with the Chamber.[8] This finding once more confirms the apathy in the industry that had as much to do with its lack of competitiveness as the unfavourable circumstances in which it operated.

Funding for the study was to be through a public/private partnership, with each party contributing roughly equal amounts to the project. The private sector contributors were to comprise the gold, diamond and platinum producers, as well as the Jewellery Council of South Africa.[9] A notable fact is that, of the private sector participants, the gold producers were expected to donate the greater share of that part of the funding. The Jewellery Council, devoid of financial resources, approached the Chamber for assistance in enabling it to contribute the Council's share of funds for the project.[10] The mining organisation, cognisant that the local industry was unlikely to achieve international recognition despite these latest initiatives to revitalise it, was unwilling to devote any funds to the study.[11]The political motivation behind the study, however, prompted the Chamber to make some form of financial contribution towards it. This contribution was a much smaller sum than that suggested by government, to denote

that the gold producers did not wish to take a leading role in shaping the future of the jewellery industry.[12]

Ultimately, neither the Chamber nor jewellery industry were required to make any financial contribution to the study. Funding was entirely from government, through the Fund for Research into Industrial Development, Growth and Equity (Fridge) under the National Economic Development and Labour Council (Nedlac). With funding secured, the Jewellery Cluster initiative was formally introduced to the industry in Johannesburg in September 1996, through a plenary meeting aimed at informing all participants and stakeholders of the process, and obtaining commitment from all. The launch did not have an auspicious start, attracting only 80 participants out of 5000 invitations sent to the industry. Reports on the launch drew attention to the poor attendance, indicating that "perhaps the apathy is a symptom of the dire straits in which the industry finds itself or maybe industry was sending a message to government not to 'interfere'".[13] A more likely explanation, however, is the observation made in one of the reports that "some people are in cosy positions and may not be interested in changing the status quo".[14] Another reason for the poor attendance concerned lack of knowledge of the meeting. The Jewellery Council was the principal means for disseminating information about the event, but many in the industry who are not affiliated to the Council would not have received notice. A broader approach to informing the industry might have ensured a wider spectrum of participants. Yet another factor is the geographical disparateness of the industry, especially the polarization between Johannesburg and the Western Cape, which often precludes members based in one area from attending events held in another.

Notwithstanding the low attendance at the plenary meeting, those who did attend felt positive about government's commitment to fostering growth in the industry, especially in light of the substantial resources that had been made available to the project. In government's view, however, developing the industry was not a question of the resources available, but the industry's own commitment to change. Government was adamant that "if the industry needs hundreds of millions to compete – then it hasn't got the potential for growth anyway". Indeed, the problem for the industry was not finances so much as effort to implement changes. As noted by one of the industry stakeholders, "certain people[1]* are doing well under the current

* this comment was made by a jewellery manufacturer, commenting on the attitude of fellow manufacturers

system and thus are not interested in changes taking place even if it is in the best interests of the industry".[15]

From the plenary session a number of task teams were established, each centred on a key competitive aspect of the industry, from material supplies and technology to exports and marketing. Participation from the industry was never strong, but a measure of enthusiasm was generated for the project, as evidenced by the increasing number of task teams and the growing commitment to the concept of collaboration that resulted in the formation of regional clusters in the Western and Southern Cape, and Kwazulu-Natal. Certain projects under the cluster initiative were pursued with vigour by the few industry participants that were involved. One of these projects related to the formation of an export house to market South African products abroad, and a South African trading bank to advance gold loans to expedite financing for export jewellery orders (da Silva, 1999b). The exporting venture entailed the establishment of offshore offices globally to market South African jewellery and provide information on foreign markets to local manufacturers. Funding was to be raised through shareholder capital and DTI assistance, albeit the organisers did not perceive financing, so much as attitude of the industry, as the major constraint in the success of the venture. It was felt that "one of the largest obstacles is the existing mindset of the local industry…(which) will need to adapt to the trust, co-operation and management style of international clusters".[16]

In the field of education and training, strides were also made through the cluster process. The focus was on streamlining and standardising all jewellery-making and design courses available, in order to develop a modular-based, standard four-year course to be offered by Technikons and other accredited institutions. The modular system would allow students to complete the course at their convenience, whilst at the same time giving market recognition for each level of the course attained. The standardisation of training courses was a prerequisite of the newly introduced Skills Development Bill, which enforced a levy of at least one percent from every company's payroll to be used in skills training. By fulfilling the training needs of the sector, 80 percent of the funds collected through the levy system reverted back to the industry for further skills development.

It was, therefore, propitious to align the training programmes in the industry with government regulations (da Silva, 1999b).

The cluster initiative was a concerted effort to increase the viability of the local jewellery industry and enable members to function on a unified and co-operative basis, but it ultimately was not sustainable. Interest from the few participants in the programme waned as the process degenerated into a plethora of meetings with little to no results. Disillusionment and work pressures caused the number of task-teams to diminish from ten, to only three. It was only a matter of time before the remaining groups ceased to exist altogether.

Reasons for the collapse of the cluster initiative were a combination of lack of leadership, commitment and resources from both the industry and government. The industry lacked the support of the majority of its members, and also the financial resources to bring to fruition the projects it was pursuing. Cluster participants therefore relied on government for assistance for funding and for leading the cluster process. Neither the funds nor leadership, however, were forthcoming from government. Industry cluster participants complained that it had been left to individual company owners with neither the time, resources, or experience to manage the initiative (Lourens, 1998c). From the start, many in the industry had been skeptical of government's commitment to assisting the industry, and the DTI's lack of co-operation in the process only served to entrench the industry's disillusionment and lack of trust in government.[17]

From government's side, the DTI expected the industry to assume full responsibility for the cluster process, and to also contribute financially towards it by matching any government funding that was made available. This expectation from the industry was confirmed at a workshop in 1999, when the then Minister of the DTI stated that "we've looked for a level of commitment from the players before we chuck our resources in".[18] Government, however, was remiss in not providing adequate guidance for the industry, and not sustaining its commitment to the cluster initiative as it unfolded. At the launch of the cluster, for example, government had stated that a second plenary meeting would shortly follow the first, to assess and refine the process further. This second meeting never occurred. There had also been assurances from government that it would provide funds to research the sector, collect data, and set the parameters for further investigation, which assurances were not fulfilled.[19] In the absence of these developments, the industry, after the first

plenary session, proceeded in a disintegrated fashion, each working group progressing independently of the other with no common ground to unite the industry.

By 1999, three years after the launch of the project, the jewellery cluster exercise had ground to a halt. The minister of the DTI at the time summed up the process as having "been a useless exercise because really nothing came out of it except a lot of babble after a while".[20] In the Minister's view, the reason for this was the general malaise suffered by most industries in South Africa, but manifested especially in the jewellery industry, that "we are unused to working together as industries".[21] As has been discussed in Chapters Five and Six, the jewellery sector was particularly resistant to working jointly to meet common objectives. After the misguided efforts of the cluster exercise, the focus on reviving the jewellery industry might have waned altogether were it for an external impetus that brought the industry once more into perspective. This was the crisis in the gold mining sector.

8.3 Influence of the Gold Crisis Committee and initiation of the global marketing study

South Africa's gold mines had been under pressure for several years from declining production, the result of mining at ever-increasing depths, declining grades coupled to increasing costs, and work place disruptions such as underground fires, strikes, and seismic activity (Lourens, 1998b). The problem of a contracting gold mining industry reached crisis proportions towards the end of the 1990s, when thousands of mineworkers were retrenched in the wake of a free-falling gold price. In 1998 alone, over 64 000 workers lost their jobs in South Africa's gold mines, a figure that translated into 90 000 unemployed when the impact of the decline on other, related industries is taken into account.[22] This turn of events was exacerbated in 1999 when the decision by some of the world's central banks to sell part of their gold reserves set the gold price on a downward spiral to reach a 20 year low by mid 1999.[23]At a gold price hovering around the $260 an ounce level, about 40 percent of South Africa's mines were marginal, and 80 000 jobs were at risk. In this period, six mines, at least, warned of retrenchments involving nearly 12 000 workers (Poggiolini, 1999b).

The start of the crisis, in 1998, prompted the formation of the Gold Crisis Committee (GCC), a tripartite group comprised of the mining sector, government, and labour, to explore ways of stemming the tide of retrenchments in the gold mining industry, and

investigate employment alternatives for those retrenched. Under the GCC, task teams were established, one of which, the Beneficiation Task Team, was specifically concerned with developing sustainable beneficiation and marketing strategies to enhance job creation in the gold industry.[24]Under this task team the issue of the potential of the jewellery industry in South Africa again came under the spotlight. Jewellery fabrication was identified by the government and labour constituencies of the GCC as being "an attractive industry with a potential to create employment for many thousands of our unemployed people".[25]

There was a tendency in this view to perceive jewellery manufacturing as the panacea to the problem of retrenched mineworkers. The then minister of the DTI cautioned against such a perception, stating that the "employment that we could create in the area of jewellery and beneficiation would not necessarily absorb the people that have been retrenched in the mining industry".[26] Jewellery manufacture was completely different to mining and entailed "different types of skills, vocations, (and) people…."[27] In addressing the Beneficiation Task Team of the GCC the DTI minister also challenged the perception of the gold-mining industry as responsible for the success of the local jewellery industry. It was strongly contended that "it's not going to be the mining industry that will give the lead to create a jewellery industry. It's going to have to be that industry itself, working with the mining industry".[28]

Under the Beneficiation Task Team the objective for the jewellery industry was two-fold: to develop a sustainable, export-driven industry, and to appoint a co-ordinator to identify and resolve problem areas, and ensure the participation of industry members. With respect to creating an export-oriented industry, the strategy was to commission an international marketing study to determine South Africa's jewellery export capabilities, identify the markets most suitable for its products, and formulate strategic recommendations for the most effective penetration of those markets. Funding for such a study was secured through Fridge*, the entity through which the original jewellery cluster study research was to have been funded. The appointment of an industry co-ordinator was financed through the Sector Partnership Fund, an incentive programme of the DTI aimed at stimulating co-operation in industry through the financing of projects developed on an industry partnership basis. Under this latter scheme the DTI contributed 65 percent to the cost of the project, the balance of

* Fund for Research into Industrial Development, Growth and Equity, a funding resource under the National Economic Development and Labour Council (Nedlac)

35 percent being met by industry partners. Accordingly, of the R1,5 million allocated to the project, the DTI contributed R1 million and the remaining R500 000 was to be paid by industry. In keeping with events in the past, however, the Jewellery Council, as representative body of the industry, had none of its own resources to contribute to the project, and sought assistance from the Diamond Foundation and, predictably, the mining sector. Consequently, the "partnership" responsible for the appointment of the co-ordinator was comprised of the Jewellery Council (through assistance from the Diamond Foundation), the Chamber of Mines, with the DTI as facilitator.

The global marketing study commenced in the latter part of 2000 and sought to identify the highest opportunity markets for South African jewellery, as well as to provide an analysis of the shortcomings and potential of the local industry to target those markets. The practical aims of the study were threefold: to provide manufacturers with the necessary information to gain access to export markets; to create an enabling environment to enhance jewellery exports, and to devise a strategy for the sector that would be supported by both industry and government.

8.4 Results of the global marketing study[2]

The USA, UK and Japan were identified as the most suitable markets for South African jewellery products. The USA represented the highest opportunity market due to its sheer size and as one of the world's three major consumers of precious metal jewellery. The UK market had high growth potential and there were strong synergies with South Africa in terms of jewellery styles and type. Japan was selected on the basis of the opportunity it presented for jewellery imports once its economic decline had been reversed. It was also one of the foremost consumers of platinum and diamond jewellery, as well as high-carat gold pieces. Product niches were also identified for each of the three markets, focusing on the material, design and application best suited to each market from a South African supply perspective.

Once the export markets and related products were identified, an important element of the study was to outline the requirements for supplying the product to the market. Based on the analysis of the local industry, South Africa fell short in all of the supply chain elements required for effective exporting. The industry had to implement

[2] The discussion on the marketing study is based on the unpublished report by Kaiser Associates, 2001: The South African jewellery cluster study: detailed findings document, June 2001

changes to the way it operated, especially in relation to design, production, marketing and sales. The core problems and recommendations relating to each of these areas will be discussed briefly.

8.4.1 Design

The lack of a uniquely South African design style, which led manufacturers to replicate European designs, was one of the industry's biggest problems. This has been a persistent problem in the industry that has never been adequately addressed. To compete internationally the industry had to have its own design capabilities to differentiate its product from competitors. To this end it was recommended that South African designers be exposed to international designs through organised trade missions into and out of South Africa, and that the design competitions sponsored by some of the major mining companies be used as a platform for developing commercially viable new products. Another way of broadening South Africa's design base was to link mass producers, who tended towards European replica designs, with craftsman designer jewellers. Such relationships would enable large manufacturers to acquire new designs, and designer jewellers to produce in bulk.

8.4.2 Production

The main concerns relative to production were the affordability of the gold and other precious material, the capacity for large-scale production, and the hallmarking of jewellery. Of these the most critical is undoubtedly the financing of the raw material, a problem often raised by the industry but with little prospects of a solution. Inability to afford the raw material posed a problem even for large-scale jewellers who struggled to fulfil high volume orders. Recommendations relating to this are discussed later under the issue on financing. Alongside affordability of the material is the limited capacity of many small- to medium-sized manufacturers to undertake large orders. One of the initiatives to counteract this is for smaller manufacturers to band together in sharing capacity among themselves, and to develop co-operative arrangements with larger producers who often work at only 60 percent capacity when meeting local demand.

The need for hallmarking in South Africa is an issue that has been much debated in the industry in the past, but with no finality. Many jewellers are reluctant to incur the costs, delays and inconvenience usually associated with a hallmarking system and therefore have never supported the implementation of such a scheme. To become a reputable jewellery export country, however, it is imperative to have some form of

hallmarking or quality assurance system. Such a system enhances the sector's reputation and facilitates exports into specific markets.

8.4.3 Marketing

South Africa is hampered by the lack of a co-ordinated marketing campaign to raise awareness of South Africa's products overseas. The study indicated that raising the level of South African exports had to be accompanied by strong marketing activities, one of which was to create a cohesive South African brand for jewellery, potentially building on the widespread perception of South Africa as a source of raw materials for jewellery. Important also was that the products received maximum exposure overseas, especially through trade shows where jewellery buyers generally source new designs and suppliers. Another suggested marketing option was to complement the jewellery specific marketing initiatives with other compatible, luxury lifestyle activities, such as South African flowers, wine and clothing.

8.4.4 Sales

The South African jewellery industry's low export performance thus far is in part a function of the unco-ordinated attempts to sell jewellery in overseas markets. All of these efforts have been at the individual level as there is no representation of the industry overseas other than general support from DTI trade representatives. A more targeted export drive recommended in the study requires group sales agents in each key market to establish contacts and nurture relationships with buyers. Given the expense associated with such agencies, an alternative is for member organisations to engage in joint sales activities, which obviates the need for costly overseas trips that most South African manufacturers cannot finance on their own. Nevertheless, as with marketing, country specific sales channel recommendations should be followed as these vary from market to market.

The logistics of production, marketing and sales are at the core of supplying export markets. In addition, a supportive structure to promote and heighten the efficiency of the manufacturing sector is equally important in ensuring sales abroad. The factors that create an enabling environment for industry depend on the organisational efforts of the industry but also rely on appropriate government intervention and support measures. These factors, and the role played by government and industry, will be examined next.

8.5 Factors for creating an enabling environment

8.5.1 Industry organisation

From the analysis of the local jewellery industry, it became evident that the existing industry organisation, the Jewellery Council of South Africa (JCSA), was not widely representative of the industry as it did not specifically include small and medium-sized manufacturers in its structure. Although all manufacturers, including small and medium-sized jewellers, were represented on the Council through the Jewellery Manufacturers' Association, this organisation was primarily representative of large manufacturers who overlooked the needs of smaller-scale jewellers. Aside from inadequate representation of the industry, the Jewellery Council also fell short in delivering services to the industry, mainly because of under-resourcing. The Council's finances relied primarily on membership fees, but with a large contingent of the industry sceptical of joining the Council, the organisation struggled to meet extraneous financial commitments. To create a stronger and more capable organisation the recommendations were to firstly, broaden the structural representation of the Council to include the participation of SMMEs (small manufacturers, previously disadvantaged individuals, designer jewellers) participation and secondly, to establish a Support Services Group to deliver critical services such as training, marketing, and technical support. Linked to the Support Services Group, a Jewellery Export Council was to be created to oversee marketing and exports.

8.5.2 Communication and co-operation

The disparate nature of the industry and poor organisational structure called for the establishment of an effective communication system to collect accurate trade data, develop and maintain a database, and communicate widely across the industry, not only to organisation members.

8.5.3 Training and development

An important element of the enabling environment of an industry is its training and education facilities which form the basis for the industry's continued growth in numbers and expertise. Despite numerous efforts in the past, training in the industry is still in disarray, with training institutions short of resources and industry support, and manufacturers complaining of the poor skills of jewellery design graduates. To address this issue it was recommended that a dedicated training manager be appointed to co-ordinate industry needs with institutional training, and assist in accessing funds made available through the skills levy system. It was additionally

recommended that another level be added to the training curriculum, focused particularly on business skills to enable potential entrepreneurs to not only manufacture but manage a business successfully.

8.5.4 Financing

The area of materials financing is cited by the industry as the most critical factor hampering its current development. The rand/dollar exchange rate, value added tax (VAT), exchange control regulations and high interest rates are all factors which contribute towards the high price of gold and other precious materials in the country. The gold loan system introduced in the early 1990s to offset this problem proved of little benefit to more than two or three large manufacturers, the high interest rates and excessive collateral required by the banks excluding the majority of jewellers from assistance. Nevertheless, commercial banks are also reluctant to offer more favourable terms because of the high risks, low volumes, and small client base involved. Two recommendations were made in the study, one for the co-operation of all major stakeholders (government, mining sector, commercial banks) to introduce a metal financing scheme, with proportionately shared risk by each party. The other was for the formation of manufacturing syndicates to provide the critical mass and necessary financial resources to access gold.

The issue of finance is not only one of affording the raw materials but also refers to DTI assistance through incentive packages. Currently, the incentives available are of little benefit to the jewellery sector insofar as the generic programmes do not meet the needs associated with jewellery production. For more effective DTI assistance, the existing supply-side measures need to be critically reviewed in terms of their relevance to the industry, and the necessary adjustments made for providing an industry-tailored system.

8.5.5 Research and development

R&D functions in the industry are generally covered by Mintek and the CSIR. Nevertheless, the industry is not usually involved in determining the direction of research, and the technical support that is provided, especially by Mintek, is on an individual and not industry-wide basis. Technically, therefore, the industry is weak relative to the major jewellery producing countries of the world. This weakness is also due to the exorbitant expense of importing the latest technology, and the cost of training personnel to operate the equipment. A brief survey of the technical competence of the industry by a member of the World Gold Council in 1997,

confirmed that in both technical skills and technology the industry in South Africa rated only "average", lagging well behind the best of Western practice.[29] Recommendations in this respect are for R&D strategies to be incorporated into an overall industry development plan that will close the gap between research being conducted, and industry needs. Additionally, the industry requires targeted assistance in obtaining necessary technology, and developing the expertise to use it effectively.

8.6 Implementation of the recommendations

The export marketing study provided jewellers with detailed information on markets, products, and the means of accessing those markets to increase jewellery exports. The value of this information, however, depended on the extent to which the recommendations in the study were adopted by the industry. Cognisant of the problems inherent in the industry, government decided to fund and oversee the initial phase of implementing the strategies formulated in the study. Of the initiatives prioritised, some were successfully implemented whereas others did not evolve. This section examines the degree to which the initiatives were implemented, and the effect it had on the industry.

8.6.1 Transforming existing industry structures

One of the most important initiatives was redesign of the Jewellery Council to make it more representative of the industry. Without a credible and effective organisation it was impossible to achieve cohesiveness in the industry and oversee the changes for growth of the sector. The structure of the Jewellery Council therefore was broadened to include the historically unrepresented groups of smaller jewellers. It was also important to increase the effectiveness of the organisation in delivering services to the industry. To this end, a support services manager was appointed to render generic marketing, technical support and other advice and assistance to the industry. The position of manager was funded by the DTI for a stipulated period of two years, with the proviso that the industry meet the costs of this position thereafter. Under the auspices of the support services manager, a Jewellery Action Group (JAG) was formed, comprised of existing and potential exporting jewellers. The JAG does not have the status of an Export Council and therefore does not qualify for government funding. It can, however, rely on government assistance to attend trade shows and to participate in other export marketing initiatives.

8.6.2 Create a dedicated training structure

A second important initiative was to establish a training structure or manager to determine the training needs of the industry and correlate institutional training with manufacturing requirements. Concerted efforts were made to fill this position but financial constraints, and inability to liaise with the Mining Qualifications Authority, the responsible body for training in the industry, prevented the successful implementation of this objective.

8.6.3 Joint export marketing activities

The third strategic initiative was the formation and development of member organisations to conduct joint export marketing activities. Co-operation principles underpinned this strategy which centred on encouraging small- and medium-sized manufacturers, otherwise unable to export on their own, to pool their resources and capacities in order to target export markets on a collective basis. Initially, it appeared that the implementation of this initiative would be successful. Six marketing groups were formed, all with varying levels of exporting experience. None of these groups, however, progressed into established marketing units. The initial enthusiasm among group members dissipated in the absence of strong leadership and guidance from an external agent.

8.6.4 Develop a cohesive brand of South African jewellery

Developing a cohesive, recognisable brand of South African jewellery to differentiate the product in international markets was one of the key initiatives identified for implementation. In the past, the industry had made efforts to develop a distinct range of jewellery and diamonds, drawing on qualities synonymous with South Africa, but these branding concepts had never been launched. The objective, therefore, was to incorporate the previous product ideas into a single branding initiative. Such a project was too ambitious, however, given the lack of resources of the industry. A more realistic option was to link the branding of jewellery to the *Proudly South African* (PSA) campaign, a government, business, and labour initiative to promote South African products and services domestically and abroad. The principles endorsed by the PSA campaign, namely, South Africa as country of origin, and compliance with quality, environmental and labour standards, in large part conformed to the qualities inherent in the jewellery branding initiative. Although the PSA campaign is generic, there was the possibility of developing a jewellery-specific campaign. In addition, it was possible to produce a jewellery-specific feature, highlighting the key elements along the jewellery value chain, from mining to retailing. Unfortunately, these ideas

never reached fruition as there were problems with the production of the jewellery campaign, and difficulty in raising funds to sponsor the project.

8.6.5 DTI to develop a tailored industry development programme

A fifth initiative identified for the industry was to liaise with the DTI in developing a tailored programme for the jewellery industry, and to ensure greater access to existing incentive programmes. The DTI's incentive offerings are considered "too generic" and therefore inadequate for the jewellery industry. Since 2002, there has been a greater commitment from the DTI to align its assistance programmes with the needs of the industry. To this end, the Department has embarked on a process of developing 'customised sector programmes' for selected industry sectors, including jewellery. One of the incentives in the customized jewellery programme is the introduction of a gold loan scheme for jewellery manufacturers. The scheme will enable manufacturers to borrow gold at low interest rates, and against 30 rather than 120 percent collateral. In addition the Department, with the co-operation of the mining sector, has funded an initiative based on bringing an international marketing agency to South Africa to assess the feasibility of selling South African jewellery in the UK market. Should the recommendations from the marketing agency be positive, the Department is committed to funding the initiative further by employing the marketing agency to market South African jewellery products in the UK. The DTI funding for this project is, however, contingent upon the private sector's financial contribution as well, which contribution the jewellery sector is unlikely to be able to afford. In keeping with experiences in the past, it is expected that mining companies will be approached for such assistance, and their financial commitment to such an initiative is not assured.

8.6.6 Establish links between designer jewellers and mass manufacturers

A sixth strategy outlined for the industry was that of fostering linkages between designer jewellers and large-scale manufacturers in order to produce a style of jewellery individual to South Africa. Jewellery manufacturers in South Africa tend to produce European-styled jewellery which does little to distinguish the product in overseas markets. By contrast, many of the country's designer jewellers have won international acclaim by winning entries in prestigious jewellery competitions. By combining the talents of designer jewellers with the production capacity of large-scale manufacturers, it was hoped to engender a trend towards producing a unique style of South African jewellery that would gain acceptance and recognition in international niche markets.

To realise this objective, a design forum for manufacturers and designers was organised in both Johannesburg and Cape Town, to enable the participants to interact and establish relationships with each other. Both groups of jewellers were in favour of the concept of collaborating together to expand the design potential in the country. Nevertheless, the interest that was generated in this initiative was not sufficient to result in conclusive working relationships between creative designers and mass producers. There was uncertainty in how to define and subsequently agree on the nature of the working relationship between a designer jeweller and mass manufacturer. The designer jewellers, especially, felt vulnerable to the risk of exploitation because of the small-scale nature of their businesses and the difficulty of protecting their design ideas. Likewise, mass manufacturers were not entirely convinced of the advantages of working with independent jewellery designers, as opposed to employing their own designers and determining their own styles. The initiative, therefore, did not progress.

8.6.7 Trade shows as a platform for market entry

A seventh strategy proposed for the industry was to use trade shows as a platform for entry into the three key markets identified for South Africa. A distinction was drawn between strategic and secondary shows. The strategic shows conformed to the three identified markets, whereas secondary shows referred to jewellery venues with limited opportunities for the industry as a whole, although of possible benefit to individual manufacturers with specific products. The strategic shows recommended were the Las Vegas show in the USA, the Birmingham Spring Fair in the UK, and the International Jewellery Show, Tokyo, in Japan.

Thus far, the industry has attended none of the three recommended strategic shows. Instead, the International Jewellery Show, London, has been selected for entry into the UK market. The choice of this trade show, rather than the Birmingham one, was dictated by opportunity constraints at the time. To date, the industry has attended the London show for two consecutive years in order to establish credibility in the market. Industry members have confirmed, however, that the Birmingham show will be more suitable to their products, and the aim is therefore to access that show in future. The other two strategic shows for the US and Japanese markets have not been attempted as the industry is not yet equipped to supply those markets.

8.6.8 Introduce a hallmarking system

Developing a hallmarking system for South African jewellery was considered strategically important to ensure the credibility of South African jewellery in foreign markets. The industry strongly resisted the proposal of a hallmarking system, on the basis of the administrative and financial costs, and also delays that it would incur. An alternative recommendation was made for a voluntary, quality assurance system. Various systems were investigated leaving the industry with the choice of either linking up with an existing, internationally recognised system with high cost and compliance implications, or devising a specific South African system that incorporated elements of existing international schemes. Of these choices, the latter option was the most favourable but, as with other projects, finance precluded the development of a specifically South African quality assurance system. Again, in the interests of costs and convenience, it was decided to use affiliation to the Proudly South African campaign as assurance that the jewellery complied with specific quality standards. The PSA campaign will only be useful as an interim measure as it does not ensure caratage or workmanship in jewellery. The industry, therefore, still needs a system of internationally recognised standards, with a level of enforcement, to enhance the image of South African jewellery overseas.

8.7 Effect of the marketing study and implementation of the projects on the industry

By the end of 2004 the marketing study and its recommendations had had no discernible effect in re-energising the industry into a global competitor. Despite the efforts of various stakeholders and the financial support of the DTI, jewellery production in South Africa remains low and international market access had, in fact, declined in 2004 as a result of the stronger currency, rather than increased.

Several factors continue to undermine the competitiveness of the sector, some of which cannot readily be rectified by external agents or incentive programmes. One of these is the lack of leadership in the industry. Notwithstanding the constitutional changes made to the representative body of the industry, the Jewellery Council remains largely ineffective in the industry due to lack of member participation and of financial resources. The issue of fragmentation and lack of unity in the industry is one that is difficult to resolve without the participation of jewellers. As has been demonstrated through the failure of projects that have been founded on co-operation principles, South African jewellers are reluctant to work collectively. The small-scale

nature of the industry and the inadequate resources associated therewith demands a joint action approach to achieve economies of scale and raise competitiveness. Joint action initiatives, however, are based on trust and this is an element that is not prevalent in the industry. On the contrary, mistrust, rather than trust, typifies the jewellery industry in South Africa.

Another obstacle to the competitiveness of the industry is the fluctuation of the currency, and the high costs of raw materials. A gold loan facility for the industry was finally introduced at the end of 2005. Four companies, two of them mining conglomerates, collaborated in providing the guarantees for the loan of 1 000kg of gold to jewellers. The gold loan scheme may not be the panacea to the industry's problems. The scheme has been criticized on the grounds that the minimum amount to be borrowed is beyond what small-scale jewellers need or can afford, and because more than a one-third guarantee is required from a jeweller.[30] Nevertheless, the gold loan scheme will be important not only in assisting local manufacturers but in attracting foreign investment as well. The lack of a gold loan system has, in the past, been identified as one of the reasons for the limited investment by foreign jewellery manufacturers in the country, despite the advantage of South Africa's General Systems of Preference (GSP) position with the United States. Should the availability of a gold loan succeed in attracting foreign investors, this should have positive repercussions for the jewellery industry in terms of employment creation, increased capacity, and skills transfer.

The question of labour costs is another important issue for the industry, especially in relation to other low-cost centres in the world, such as India. Although South African labour costs compare favourably with some of the jewellery-producing centres in Europe, labour productivity is often not on a par. Moreover, high labour costs has been one of the principal factors underlying the relocation of jewellery industries from countries such as Germany and Italy, to lower cost centres in South East Asia (Chapter Three). A move to more capital-intensive production is not a solution in South Africa either because of the high costs of technology as well. Most technical equipment has to be imported into the country, and an unfavourable currency rate mitigates against the purchase of sophisticated machinery. Furthermore, South African manufactures, with the exception of two chain producers, do not produce in sufficient volumes to justify large scale mechanisation.

Adding to the costs of South African jewellery manufacturers is the matter of 14 percent VAT which is applicable to all raw materials at the purchase point. There is no VAT deferment system in South Africa, so manufacturers have to carry the costs of the tax until they receive payment for the jewellery, which can extend to six months. Once more, in comparison to some of the export processing zones in the world, which are normally tax exempt, South African producers are at a significant disadvantage relative to their foreign counterparts. By 2003 there were no jewellery export processing zones in South Africa where manufacturers can operate free of tax. Although efforts have been made to have certain centres in South Africa declared Industrial Development Zones (IDZs) for jewellery production, this has not occurred yet. Even were such IDZs to come to fruition, they would still not offer the same advantages as export processing zones elsewhere, such as those in India.

South Africa's distance from the major modern centres in the world adds to the constraints experienced by jewellers. It increases manufacturers' costs in attending trade shows, and therefore causes them to attend fewer, if any, shows than they otherwise would. In addition, distance from markets magnifies the costs for manufacturers of undertaking the requisite visits to foreign retailers and buyers in the course of securing export orders.

The constraints affecting jewellers in South Africa does not preclude the industry from becoming a recognised participant in the world market. The government-sponsored study of the industry confirms that the South African jewellery sector has the potential of competing internationally, albeit in selected niche markets rather than on a world-wide basis. An important prerequisite for achieving international competitiveness is design ability, coupled to technical proficiency. Many of the mining houses in South Africa are devoting increasing attention to assisting the local jewellery industry in respect of these, and other, factors. The role of these mining companies in elevating the potential of the South African jewellery sector merits separate discussion, and forms the focus of the next section.

8.8 Mining sector initiatives in the jewellery industry

Traditionally, the mining sector in South Africa has not been involved in downstream activities, preferring instead to concentrate on extracting the raw material and leaving its conversion into consumer products to the "experts" in the field. A vacillating gold price from the 1970s prompted the gold mining sector to divert attention to gold

consumption patterns and the products determining gold offtake in the market. This interest in downstream developments led the mining sector to establish Intergold and its successor, the World Gold Council, to promote demand for gold jewellery and other products, but the mining companies themselves were not directly involved in these activities (Chapter Three). Up until the late 1990s gold companies could afford to remain aloof from marketing concerns, there being an established world gold franchise, and producers could rely on central banks to buy all their gold. Since 1999, however, the equanimity of the mining sector has been shaken as central banks and official holders of gold turned net sellers of the metal, unleashing rampant speculation and extreme gold price volatility in the process.[31] The signing of the Washington Agreement on gold in September 1999, when 15 of the world's central banks agreed to limit total annual sales to 400 tons over the next five years, carried out circumspectly, calmed the tumult in the market. Nevertheless, producers remained vulnerable, realising that high levels of central bank sales would remain a likely occurrence for the forseeable future (Lourens, 1999b). It is these events that have calatyzed precious metal producers and the gold mining sector in particular, into greater marketing awareness. For South Africa's mining companies, these global crises have combined with political pressures to precipitate their involvement in downstream activities.

Historically, as shown in Chapters Six and Seven, the South African mining industry has often been drawn involuntarily into the affairs of the local jewellery industry, either playing an interventionist role in the absence of other agents, or responding to the industry's requests for assistance. More recently, the involvement of the mining sector in jewellery activities has become more strategic, a necessary move by the major mining companies in response to new global and local demands. The result has been the launch of a number of initiatives to enhance jewellery production and awareness of the industry.

8.8.1 AngloGold-Ashanti

One of the most active mining companies in the jewellery sphere is AngloGold-Ashanti, one of the world's largest gold producers. The company is one of the largest funders of the World Gold Council, contributing approximately $10 million to the organisation in 2004. In addition, the company spends over $15 million annually on its own marketing initiatives (AngloGold Ashanti Marketing, 2005).

The AngloGold-Ashanti strategy is to develop an African gold jewellery industry and encompasses several elements, including skills development, design, manufacture and exporting, and retail.[32] Several projects address the issue of skills development in the industry, particularly among the previously disadvantaged sector of the population which lacks the resources to access Technikon training. AngloGold-Ashanti was one of the first benefactors of the *Vukani Ubuntu* jewellery training school in Atteridgeville, its assistance providing a major impetus to the school's development. The gold producer is also a strong supporter of Imfundiso Skills Development, a nongovernmental organisation that runs various community-based jewellery training programmes across the country (Chapter Four) (AngloGold Ashanti Marketing, 2005).

As part of its skills transfer programme, AngloGold-Ashanti was instrumental in introducing West African jewellery-making skills into South Africa. In 2000 the traditional jewellery-making countries of Mali, Ghana and Senegal, were visited in a bid to understand how their jewellery production methods, combining quality workmanship and design with low capital outlay, could be applied in South Africa.[33] Certain of the techniques and systems traditional to jewellery production in those countries subsequently have been incorporated into some of the training programmes in South Africa, specifically those targeted at the previously disadvantaged sector with its limited resources. It is recognized that not all elements of the West African culture can be replicated in South Africa, especially the centuries-old tradition of producing gold jewellery that is popular for its adornment and investment value. Nevertheless, AngloGold-Ashanti argues that it should be possible to introduce into the South African context the more simplified methods of jewellery manufacturing practiced in West Africa. Facilitating the manufacturing process has the potential to both raise the beneficiation prospects in South Africa, and make jewellery products more generally accessible (AngloGold Ashanti Marketing, 2005). AngloGold-Ashanti's commitment to training is also apparent in several technical symposia it has organised and funded for designers as part of the design competitions sponsored by the company. The symposia are intended to expose designers to aspects of manufacturing otherwise unfamiliar to them, such as working with 22 and 24 carat gold (Holtzhausen, 2000).

Design is one of the main areas on which AngloGold-Ashanti has focused its efforts, specifically in the form of design competitions that aim to showcase local design talent, as well as enhance the technical skills of local jewellery craftsmen.[34] For

example, the “Riches of Africa” design competition, introduced in 1999, is focused on jewellery that reflects the abundance of South Africa, both in terms of its mineral wealth and its culture and natural beauty (Joffe, 2001). To broaden the appeal of gold to a wider market and demonstrate the versatility of the metal in different settings, AngloGold-Ashanti turned its design focus to the New York fashion Week show in September 2000, sponsoring five African fashion designers who used gold creatively as safety pins, beads, chains, and thread, in clothing accessories. A similar effort was made in the Afridesia project in 2002 when a select number of South Africa’s foremost clothing designers were requested to design appropriate gold jewellery to complement their clothing ranges.[35] Other initiatives for inspiring design, albeit in an international context, are the Gold Virtuosi and Swarnanjali global jewellery design competitions. The Gold Virtuosi competition is a combined effort by Anglogold-Ashanti, the World Gold Council and Vicenza Fair in Italy, to stimulate and reward creativity in gold jewellery designs. In keeping with the concept of exposing jewellery beyond the confines of the trade, the winning entries of the first Gold Virtuosi competition were displayed at a major fashion show in Paris.[36] The Swarnanjali competition is focused on India and encourages innovative designs in 22 carat gold for men and women.[37]

In the area of manufacturing, AngloGold-Ashanti has shifted markedly from gold producers’ traditional operating environment to take a 27 percent stake in OroAfrica (AngloGold Ashanti Marketing, 2005). This enterprise is one of South Africa’s largest gold jewellery manufacturers with links to a leading Italian chain manufacturer, and with significant inroads into export markets. Through OroAfrica, AngloGold-Ashanti has the opportunity of launching and testing new products on the market. Moreover, the initiative has synergies with another AngloGold-Ashanti project, the internet retail venture Gold Avenue. The latter is a partnership with leading bullion bank JP Morgan and the Geneva-based PAMP (Produits Artistiques de Maetaux Precieux), one of the world’s major refineries with a tradition of innovative downstream products (Joffe, 2001). Gold Avenue started in 2000 by offering a range of gold products and services to businesses, consumers and investors, and was expanded in 2001 to include direct gold bullion sales aimed at banking institutions and gold jewellery manufacturers (Delaurentis, 2002).

Consistent with its aims of raising awareness of gold and gold products in South Africa, in 2001 Anglogold-Ashanti established the Gold of Africa Museum in Cape Town, which houses the world’s largest collection of African gold artefacts

(Delaurentis, 2002). The museum is planned as a centre for learning about African gold and goldsmithing, as well as serving as a tourist attraction.

Of AngloGold-Ashanti's forays into the jewellery sector, the most significant is the African Gold Zone (AGZ), a site designated for a gold jewellery manufacture and training facility on the premises of the Rand Refinery. The main stakeholders in the venture are the gold producers, primarily AngloGold-Ashanti who initiated the concept, and the Rand Refinery which donated the land. Government (the DTI) was expected to assist with the venture through making available a set of incentives to attract manufacturers to the proposed facility. Specifically, the expected incentives centred on legislative exemptions normally applicable to a designated Industrial Development Zone (IDZ). The IDZs are purpose-built, industrial estates linked to an international port or airport, in which high quality infrastructure and expedited customs procedures are coupled with duty-free operating environments, specifically to boost export-oriented production (Franz, 2000a). The proposed manufacturing facility at the Rand Refinery is not located near a port but it was hoped that Rand Refinery's direct links to Johannesburg International Airport would be sufficient to qualify the site as an IDZ.

The AGZ project was formally launched in October 2000, with the then Minister of DTI committing his full support for the venture.[38]The critical mass required for the viability of the project was founded on two anchor tenants: A. Mair Manufacturing Jewellers, one of South Africa's leading jewellery manufacturers, and a major Italian chain manufacturer who was in the process of establishing a joint venture company in South Africa. With two large manufacturers situated in the complex, it was anticipated that smaller and medium-sized concerns would automatically cluster at the site. The critical mass provided by the two anchor tenants was also an important component for securing a gold loan facility operative in the AGZ (Franz, 2000b). The banking community required volume demand for fine gold of at least R50 million, as well as stringent security criteria before introducing a gold lending scheme at internationally competitive rates. The security requirements were met adequately by the AGZ, and the two major manufacturers were expected to create the necessary volume demand to satisfy the banks.

The gold loan system was the most significant drawcard in the promotion of the Zone. Other advantages of the AGZ were the provision of utilities such as water and electricity at favourable rates, high-level security due to the location of the site on the

Rand Refinery premises, and the secure transport of export-destined jewellery to Johannesburg International Airport where access to the Rand Refinery's high security vault facilities was granted. Additional benefits stemmed from low rentals, low insurance rates, access to joint marketing initiatives, on-site labour training facilities, and reduced regulatory red-tape.[39] In providing these benefits the aim was not only to increase the production capacity of the local jewellery manufacturing industry, but also to "create a centre of manufacturing excellence and to reposition the industry as a more competitive player globally".[40] In this respect the AGZ formed part of a broader "cluster" initiative that was premised on the location of export-oriented jewellery manufacturers and supporting service providers in designated areas where they would benefit from economies of scale and an environment conducive to co-operative working relationships. Such clustering was to be achieved through greenfield developments, such as the AGZ, and the upgrading and expansion of existing "cluster" structures such as Jewel City.[41]

The proposal for the AGZ has received mixed reactions from manufacturers. The idea of providing benefits to selected industry members on the basis of their location in specific sites alienated those members not contemplating a relocation to those sites. Established jewellers who were well established in existing premises and had no intention of relocating argued that they were being discriminated against. In particular, exporting jewellers, felt aggrieved that relative newcomers to the industry, such as foreign investors, would receive unfair preferential treatment simply by virtue of their location. The argument was that all manufacturers in South Africa struggled to afford unwrought gold, and therefore any incentives, such as the gold loan scheme, should be applicable to all jewellery manufacturers and not only zone tenants.

Shortly after the official launch of the AGZ in 2000, the project became mired in controversy when the special incentives expected of the DTI did not materialise, leading to disputes between the government and private sector representatives. The private sector stakeholders were convinced that the designation of the Zone as an IDZ, and the attendant incentives that this entailed, was assured in light of the DTI minister's expressed support for the venture. The DTI, however, insisted that support of the AGZ did not imply special intervention by the Minister in terms of circumventing established procedures. For the AGZ to be designated as an industrial development zone, it was said, the usual application procedures had to be followed. As there had

been no application to the DTI in this respect, the special incentives for the AGZ did not come to fruition.

Without the concessions of a gold loan facility and the VAT zero-rating on gold sales which had also been mooted, the AGZ failed to attract further tenants beyond the single manufacturing jewellery company which had originally established there. The Italian chain-making manufacturer, which was to have been the second anchor tenant at the complex, decided against locating at the zone. Consequently, the critical mass that the two anchor tenants were to have provided, and which was to have served as a basis for introducing a gold loan system, did not occur. The other advantages inherent in locating in the AGZ, such as ease of access to gold, secure environment, and transport of export jewellery to Johannesburg International Airport, also failed to attract tenants to the area. Likewise, the professed low rentals and favourable cost of utilities at the complex did not convince existing jewellers to relocate. With the AGZ remaining devoid of tenants except for the single jewellery manufacturer, it became more difficult to approach the DTI again for assistance. Indeed, the Minister, in his address at the launch of the AGZ, had voiced his support of the venture on the understanding that the necessary critical mass had been reached for developing a major jewellery manufacturing industry in the country. It was clearly evident that such critical mass still eluded the industry and the government was not prepared to commit funds or incentive programmes unless there was sufficient participation from the industry. There have not been further developments in transforming the Rand Refinery site into a jewellery hub.

8.8.2 Harmony Gold Mine

Alongside AngloGold-Ashanti, the other mining company active in local downstream activities is Harmony Gold Mine, based in Virginia in the Free State Province (Fig. 8.1). The aim of Harmony Gold Mine is to create at Virginia a dynamic jewellery manufacturing hub which is a parallel to Italy's jewellery capital, Vicenza. This approach falls within a broader strategy to expand the local skills base in the country through the production of labour-intensive, uniquely styled South African jewellery. This strategy aims at restructuring the industry, and, more importantly, to provide a much-needed growth engine for Virginia and the broader Free State Goldfields area (Scheepers, 2000).

The Free State Goldfields is one of the areas most hard-hit by declining mining activity. Since the mid 1980s, with a falling gold price and exhaustion of accessible

gold resources, over 100 000 jobs were lost in the area, leaving it one of the most impoverished regions in the country. In the absence of a national economic recovery plan for the region and with the spectre of further declines in gold production looming, local authorities, the business community, and mining sector joined forces in 1992 to create the Free State Goldfields Development Centre (FGFDC) (Nel and Binns, 2002). The task of this organisation was to induce a shift in economic focus for the area, to ultimately replace the mining oriented economy with a more diversified and export driven one. Of the alternative economic activities identified for the region, gold jewellery production was one of the most important, this being determined by the presence of Harmony Gold Mine in the area, and its establishment of a gold refinery on the premises (Cairns, 1996, p16). The refinery, aided by recently introduced legislation at the time which enabled gold mines to sell and market one third of the gold they refined, was interpreted as the catalyst for developing Virginia into the gold jewellery manufacturing hub of South Africa.

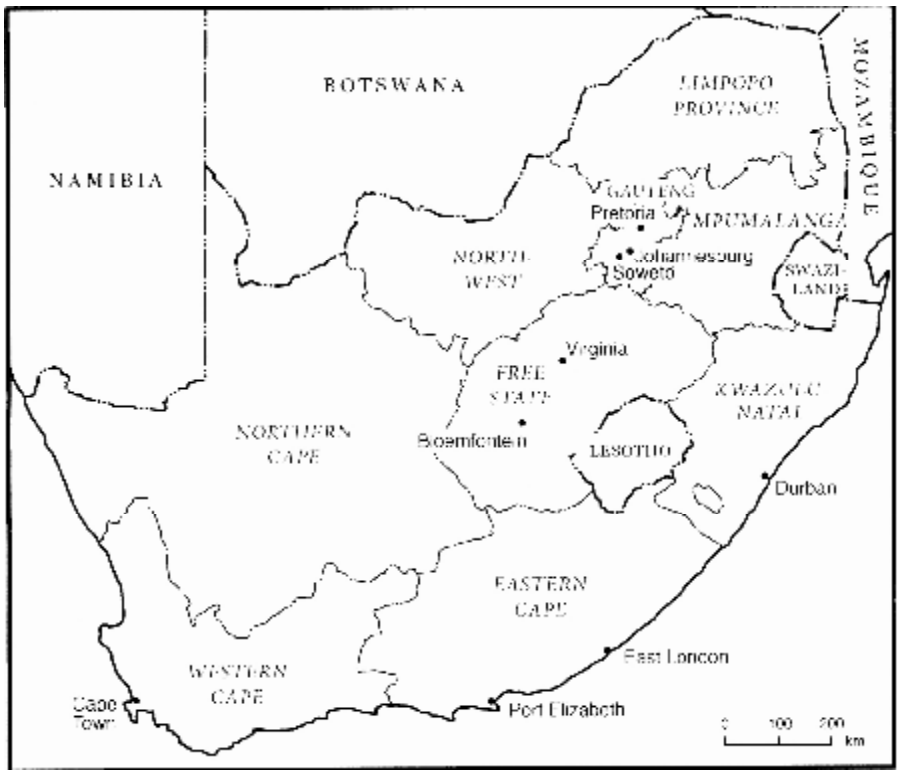


Fig.8.1 Location of Virginia, Free State province

The first developments towards creating a jewellery manufacturing hub were the downstream integration of a jewellery training school, and a "gold jewellery factory that would produce two or three times South Africa's current total production of gold jewellery" (Cairns, 1996, p16). With the completion of the refinery in 1997, both these projects were put in motion; Harmony provided the infrastructure for a jewellery

training school, an initiative that was being funded by the Italian government and administered by the UNDP and the DTI (Nel and Binns, 2002). Similarly, the gold mining company contributed the facilities and made gold available on favourable terms to Via d'Oro, a jewellery manufacturing concern producing hand-made chain and other jewellery pieces with a strong African theme, for export to Europe, the USA, and other international centres (Bradley, 1998b; Steven, 1998). The importance of Via d'Oro manufacturing centre to the area, especially in light of the 450 job opportunities it was to provide initially with an additional 400 jobs later, prompted not only Harmony Gold to pave the way for the company's establishment in the area. The Free State Development Corporation and the Virginia Transitional Local Council (TLC) both invested in the venture, and, in addition, the company was granted subsidies in the form of relocation costs, transport grants and rates rebates by the Virginia TLC (Steven, 1998; Poggiolini, 1999c).

In line with creating a jewellery hub, Harmony was also instrumental in attracting to the region another, more mechanised jewellery producing company originating from the Middle East. This was a well-known group of manufacturers called Bhagwanji, which had been established for over 50 years, and with representation in several parts of the world including the UK, Kuwait, the United Arab Emirates, and Uganda. This group, albeit not employing as many people as Via d'Oro, was expected to produce considerably more jewellery than the latter, and to also boost South Africa's export profile (Scheepers, 2000). As with Via d'Oro, the Bhagwanji manufacturers stood to benefit from Harmony Gold's assistance with infrastructure, favourable gold-lending rates, and other incentives provided by the local authorities to attract businesses to the area (Nel and Binns, 2002). Aside from the incentives provided by private and public sector interests, there were other factors that influenced the location of the jewellery businesses in the area. These were the proximity of raw materials and a large work force pool with the potential of adding a unique, African imprint to the jewellery produced. Additional benefits were lower wage costs and costs of living, as well as the lack of traffic congestion in the area (Nel, *et al*, 2004).

Despite the investment and incentives to develop Virginia into a gold beneficiation hub, these endeavours met with varying success. Via d'Oro, the flagship manufacturing plant which was to spearhead the area's transformation into a jewellery producing centre, closed two years after its establishment, due to bankruptcy. Rumours of the cause of the company's travails varied from an unpaid gold loan, to worker strikes, and burglary and theft. Nevertheless, it was claimed that

the factory had not, from its inception shown any profit. Despite claims of marketing and selling its wares in key centres around the world, the 365 women employed at the factory were, at the time of its closure, manufacturing copper goods (Venter, 2001). Demise of the factory was unfortunate given the size of the workforce involved, and the period of its occurrence which followed in the wake of a plunging gold price and the consequent restructuring of some of the gold mines in the area (Venter, 2001). The setback, however, did not deter stakeholders such as Harmony Gold Mine and the local authorities, from pursuing their objectives for the area.

Considerable options surrounded the Bhagwanji venture, known as OroMaska, in which the Free State Development Corporation, Industrial Development Corporation and Harmony Gold each held a 16,3 percent stake, with the Bhagwanji group holding the remaining 51,1 percent share. The R65 million project was to have commenced operations by the end of 2001 but for unknown reasons this never happened. The venture was abandoned, and the specialised equipment purchased through financial assistance from the Free State Development Corporation was left unused in the refurbished premises provided by Harmony (Bosman, 2003). Once again, as with Via d'Oro, this constituted a major blow to the other participants in the venture but hopes of activating a jewellery cluster in Virginia were still strong, buoyed by other, promising developments in the area.

With the demise of two manufacturing ventures in Virginia, the focus turned to South African Royal Manufacturers (SARM), a jewellery manufacturing company which combined Canadian and Peruvian interests. SARM effectively replaced Via d'Oro, being based in the latter's premises and producing gold rope chain for sale to the North American market. The company employed 700, mainly black, women, and was said to export about R24million worth of finished and semi-finished gold chain. It planned on exporting five times their initial jewellery production, using over two tons of gold in the process (Isaacs, 2003a). Unfortunately, the SARM jewellery-making venture has fared little better than its predecessor Via d'Oro, and the company was declared bankrupt towards the end of 2004.[42]

It would seem that the availability of incentives and the location advantages of the area have not been sufficient to ensure the success of jewellery manufacturing ventures in Virginia. It was reported that despite the availability of labour, the lack of skills and the perceived lack of commitment, performance and productivity of the workforce, hampered production and resulted in labour turn-over rates of up to 250

percent for SARM. Reports of internal employee theft and incidences of sabotage further compounded the problems of workforce management. Other setbacks encountered related to the area's remoteness from major metropolitan centres which made it difficult to obtain machinery spares, access service providers, and attract the skills necessary to maintain and repair precision machinery. It was argued that many of these difficulties could have been alleviated by government intervention through support, advice, and investment in the jewellery cluster. Instead, there were claims of no, or very little, support from different levels of government (Nel, *et al,* 2004).

A jewellery manufacturing concern that does seem to have survived in the area is Emthuthweni, established under the directorship of one of the previous partners of Via d'Oro. A small, mass production company, the approach at Emthuthweni is to subdivide complex jewellery making processes into a number of simple, manageable steps, enabling several employees to be involved in the manufacture of a single jewellery piece (Isaacs, 2003a). This factory began operation in mid-2001 with a work-force of ten employees which subsequently expanded to 35 following a surge in demand for a specific range of jewellery (Isaacs, 2003a; b).

The efforts at downstream beneficiation in Virginia have been strengthened through Harmony Gold company qualifying for the government's defence offset programme. The offset arrangement obliges recipients of South African military contracts to provide reciprocal investment in South Africa through participation in civilian and defence industrial projects (Creamer, M., 2000; Creamer, T., 2001). Under this system, much-needed investment has been diverted to upgrading the refinery at Harmony mine, and supporting the establishment of manufacturing ventures in the area. One of the outcomes of the additional funding into the area is the establishment of a new company, Musuku, which oversees the refinery in Virginia. Musuku is a joint partnership between Harmony Gold, Mintek, and a black empowerment company, with financial assistance from a national industrial participation investor. Under the auspices of Musuku, the refinery's production levels and refining capacity have increased, and value-adding technology has been introduced which is to enable the production of semi-processed gold products such as wire, strip and powder. In this way the refinery is able to supply refined gold directly to manufacturing entities and other companies requiring high purity gold, especially those in the high technology field (Isaacs, 2003c).

A source of skilled labour for the locally based manufacturing outlets, and another of the successful developments indicating the beneficiation potential of the region, is the jewellery school which opened in late 2000. The school, modelled on the *Vukani Ubuntu* jewellery training centre in Pretoria, started with 20 students and catered for grassroots entrants into the jewellery industry. A broad aim of the school, however, was always to progress beyond the teaching of basic skills to enable advanced, specialist training (Scheepers, 2000). With the latest involvement of the Technikon Free State which has established a satellite campus on the premises, the school is now regarded as a tertiary training institution. By 2003, the numbers of students had increased to 26 and this figure was expected to double once the satellite campus in Virginia was fully operational (Isaacs, 2003d).

Overall, it would appear that after initial problems, an incipient jewellery cluster is taking root in Virginia. Despite these achievements, the prospects of developing the area into a sustainable and robust jewellery manufacturing hub remain fragile, with much dependent on the success of marketing the products nationally and internationally. Certainly, developing a localised market for jewellery is one of the least feasible options to ensure the development of the cluster. The success of each individual venture is also reliant on the level of demand for the locally manufactured products. In the case of the new value-added facilities at Musuku refinery, demand for the products initially stems from locally-based manufacturing entities. Demand from elsewhere in the country is not necessarily assured, based on the experience of Rand Refinery when it ventured further downstream to produce semis. Having succeeded thus far in creating a platform for jewellery manufacturing in Virginia, Harmony Gold and the other local stakeholders cannot yet afford to relinquish their hold on the venture.

8.8.3 Platinum mining sector

The platinum mining group in South Africa has traditionally promoted platinum jewellery sales and marketing from an international perspective, through the medium of the Platinum Guild International. As with the gold mining sector, however, platinum producers have also been under political pressure to divert more attention to growth of the local jewellery industry. Of the mining groups, Anglo Platinum, as the largest producer, has been the most active in downstream interventions. Increasingly, the other, major platinum mining companies in South Africa also have been committing resources to assist local beneficiation. Anglo Platinum's focus in developing the local platinum jewellery industry has been upon training. The

company's financial support was critical in the establishment of the Hans Merensky Platinum Studio at the Pretoria Technikon which represents the first specialist platinum training outlet in the country. Although initiated by Anglo Platinum, the studio, since its opening in 2000, is also supported by Implats and Lonmin platinum companies. The success of the venture has prompted Anglo Platinum to also consider establishing similar centres in Cape Town and KwaZulu Natal, attached to the technikons in those areas. Additionally, the mining company is considering the introduction of a mentorship programme, whereby it sponsors a number of the most promising platinum design and manufacturing students to undergo a one year apprenticeship training under participating, platinum jewellery manufacturers. Another training initiative supported by the company is in conjunction with Metal Concentrators, a supplier of precious metals, which hosts a platinum technical training workshop once a year with Anglo Platinum. In the field of jewellery design, Anglo Platinum, like its counterpart in the gold mining sector, organises a major, annual competition of platinum jewellery. In addition, Johnson Matthey sponsors part of the metal for the jewellery competition pieces, and the mining company funds the prize, as well as showcasing the winning piece internationally afterwards (Kramer, 2002).

As a result of government strategies, specifically through the Mining Charter, to ensure greater beneficiation, other platinum players are engaging in downstream activities. Impala Platinum, South Africa's second largest platinum producer, in 2004 invested in a Cape Town-based jewellery factory which was established as a joint venture between a leading Italian and a South African jewellery manufacturer. Implats, in addition to a direct equity interest in the project, is also facilitating the supply of metal by extending a loan of up to 1 000kg of platinum to the company. The venture was hailed as "the most technologically advanced facility of its kind in South Africa" and is expected to beneficiate more than three tons of platinum each year, 85 percent of which is to be exported.[43] In addition, the new company is to create 33 new jobs, while securing the jobs of 120 people already employed with the original South African company.

Another endeavour to develop a platinum jewellery sector in South Africa centres on establishing a major platinum manufacturing and training centre in North West Province. The focus on that province stems from an initiative by the provincial government to encourage local economic growth and development specifically through the creation of small, medium and micro enterprises. Within this context,

and in view of the platinum rich resources of the area, a platinum jewellery "cluster" was identified as the most viable project for creating employment growth through start-up businesses. The initial plan made provision for a world class platinum jewellery design, manufacturing and training facility, with production of high value, handcrafted platinum jewellery targeted at local and export niche markets. In keeping with other, similar projects in the gold sector, the clustering aspect was to be effected through the accommodation of both learner jewellers and established manufacturers in a single, secure complex, preferably on a site close to a ready supply of platinum metal, such as a platinum refinery, to take advantage not only of proximity to the metal but also of existing security and transport facilities. Central to the success of this project was the support of the platinum producers, not only financially to supplement funding from the other stakeholders such as the provincial government, but also in the provision of premises and platinum metal.[44]

The key platinum producers, specifically Anglo Platinum, have expressed their support for the project, albeit on condition that the project objectives be aligned with the broader aims of the mining group to develop the platinum jewellery industry as a whole, and not only as an enclave in the North West. A new, 'integrated model' for creating a platinum jewellery industry in the North West, therefore envisages the establishment of a platinum training and development centre which is to be linked to an enterprise incubator and hive system, in the Pelindaba area of the province where suppliers of refined platinum already exist. Such a centre is to incorporate a designer or manufacturers' workshop with access to sophisticated equipment that can be used as a resource for the benefit of the industry nationally. In addition, however, aligned to Anglo Platinum's original plans, platinum-specific work benches are to be installed at existing training centres such as at the Cape and KwaZulu Natal Technikons. The proposed mentoring programme, enabling learner jewellers to be apprenticed to established entrepreneurs in the industry, is also to be implemented under the new initiative, with trainees being selected from Pelindaba and the other training centres.[45]

The overseeing body of the project is to be a Board of Trustees, operating through a Section 21 and a profit oriented, marketing company to ensure that the objectives of the project, on a development and commercial scale, are met. The Section 21 company, to be funded through donor and government agencies, is to focus on the developmental aims of the project by providing for the infrastructural and training requirements. The marketing company is aimed at generating its own funds for

marketing and other services rendered to the industry. Some of these services will include securing orders, providing branding, marketing and market development assistance, developing marketing plans, and providing training in retail marketing techniques.[46] Overall, the project bears strong resemblance to other, recent initiatives to agglomerate the jewellery industry, or a section thereof, in one structure to reap the benefits of security, trained labour, cooperative work opportunities, and economies of scale deriving from shared resources.

8.9 Conclusion

The purpose of this chapter was to bring the debates on the revival of the industry to the present day, 2004. It is clear that there have been a number of initiatives, especially since the late 1980s, to raise the competitiveness of South Africa's jewellery sector. South Africa has the resources but lacks many of the factor inputs required for an internationally competitive jewellery manufacturing sector. Some of the major problems affecting the industry can be traced back to the history of the cluster. In particular, the problems of fragmentation and weak organisational structure stem from the industry's reluctance to work collectively. According to the literature on industrial clusters, a high level of joint action is the determining factor distinguishing dynamic from weak clusters. South African jewellers have historically not been pre-disposed to working jointly, and these deep-rooted problems still hamper government's initiatives to turn the industry around.

Likewise, the interventions of the mining sector to encourage growth of the jewellery industry through geographical clustering have met with little success. The latest initiative from the private sector to introduce a gold loan scheme may have a more positive effect on industry growth.

Notes for Chapter Eight

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CHAPTER NINE

Conclusion

In the context of jewellery production on a global level, South Africa has consistently had an underdeveloped manufacturing sector. The situation is seemingly anomalous in view of the country's enormous resource base, which invariably evokes the expectation of a thriving jewellery sector. In the case of the South African government, this expectation is firmly entrenched, especially in relation to the mining sector which is perceived to have an obligation towards creating a successful local jewellery industry. This thesis has tried to explore South Africa's limited status in the world jewellery economy, and of the various attempts recently which have been made to improve this status. The theoretical base for this is the notion of cluster development and support, which runs throughout the almost 100 years of discussion in terms of the analysis of the rise, fall and restructuring of the jewellery industry in South Africa. The literature on cluster studies has largely been applied in contemporary research investigations; one of the contributions of the study has been to use the concept of clusters in an historical analysis.

The concept of industrial clusters is an apt basis for examining the historical development of the jewellery industry in South Africa. The industry that arose in the emergent township of Johannesburg could be described as a cluster; the small-scale nature of the jewellery manufacturing and retail enterprises were located in close proximity to each other and the suppliers of the raw material. Although the industry eventually dispersed from the Johannesburg CBD, subsequent attempts at restructuring and reviving the industry have been approached from a cluster perspective. The theory of industrial clusters has also enabled an analysis of the industry on a time continuum. Various forces have shaped the trajectory of the jewellery industry in its evolution and these are best understood in terms of the changing interpersonal relationships in the cluster, and the extent to which these network ties were able to withstand the external factors impacting on the industry. Another element from cluster theory that is relevant to this study is that of government policy. The literature suggests that government intervention can assist in the development of a cluster once it has been established and reached a critical mass. Government policy seems to be less effective in creating a cluster from the outset. In the South African context government has been instrumental in defining

the growth path of the jewellery industry, both through policies that initially constrained the development of the sector, and later, initiatives to reverse the decline of the industry. The effectiveness of these industrial strategies can be appropriately debated within the theory of industrial clusters.

The jewellery industry in South Africa is illustrative of the value of enterprise clusters in the support and growth of an incipient industry. The study is also indicative of the limitations of geographical proximity for industry development in the absence of strong networks of trust that result in collective action. The agglomeration of jewellery-related enterprises in central Johannesburg provided an essential base for the industry which was comprised of entrepreneurs of disparate backgrounds. At the same time, the unfavourable conditions for jewellers in the early days of the cluster both engendered co-operative relations and bred intense rivalry. Although there were manifestations of horizontal ties amongst jewellers, most notably in the formation of the representative body of the industry, vertical ties in the cluster were never strong, and were frequently characterised by animosity. Relationships with other agents in the cluster were also weak. The mining houses, although ostensibly the suppliers of gold, sold their product to government and were therefore remote from the activities of jewellers. Government, as the arbiter of gold sales, was overwhelmingly concerned with selling gold as bullion on the international market, and its relationship with the jewellery sector, far from being cooperative, was often contentious.

The horizontal ties that were forged among jewellers during times of crisis were also not constant. With access to a very limited local market, competition and rivalry in the trade was intense and would often eclipse any collaborative efforts to develop the industry and increase its marketability. Indeed, fear of losing ground to competitors even prompted jewellers to engage in devious practices to undermine fellow manufacturers. Aside from rivalry, an even more pervasive factor eroding ties among jewellers in the cluster was apathy, a trait inherent to the industry but exacerbated by the protectionist environment in which the industry operated during the years of import control. The success or failure of clusters has been measured against the degree of joint action or ‘collective efficiency’ prevalent in the cluster, and in light of this argument, the tenuousness of the relationships in the jewellery cluster was one of the principal factors behind its downfall. The industry had to contend with increasingly difficult circumstances brought about by political events and restrictive government policy, but the lack of a strong cohesive network prevented the cluster

from withstanding adverse circumstances. Jewellers in the cluster were often more embroiled in internal conflicts than focusing on overcoming external problems through joint action. Efforts by the representative body of the industry to unite the jewellers and engender cooperation were often in vain as individual differences took precedence. When the *South African Jewellers' Association* collapsed, it required the intervention of outside agents from the mining sector to organise the industry into a new, coherent structure in the form of the Jewellery Council of South Africa. Ultimately, even this new industry organisation was unable to ensure the resilience of the cluster, or to propel the industry into international competitiveness.

Not accustomed to developing strong linkages at the local level, the industry was unable to "shift gear" in pursuance of new opportunities in the international market. To maintain global competitiveness it is important for clusters to move beyond local networks into establishing ties with external buyers. In the literature on clusters, entrepreneurs progress from relying on ascriptive ties, based on social and local networks, to building relationships with external agents through "earned trust". This enables growth of the cluster through inroads into new markets and access to new trends, developments, and technical know-how. The jewellery cluster, albeit previously excluded from the global market due to prohibitions and sanctions, nevertheless ignored opportunities to develop contacts with overseas agents and others in the trade. Various efforts ranging from assisting jewellers to export, bringing experts to the country, and exposing participants to new developments in the industry, were frequently disregarded. A large part of the industry preferred to stay with old customs than rise to the challenge of new opportunities. The resistance to change, together with the weak linkages in the cluster, made it inevitable that the cluster would collapse under adversity.

Since the fragmentation of the cluster in the Johannesburg CBD, initiatives have been introduced to geographically agglomerate the industry, in the hope of ensuring its development through external economies and cooperative action. Thus far these initiatives have not proved successful, confirming the arguments in the literature on enterprise clusters that policy intervention can be effective in facilitating the growth path of clusters, but only when there is an existing basis for industrial strategies to take effect. Even in the case of established clusters, policies for industrial growth have usually worked through representative organisations, indicating that the impetus for growth or change has been from the cluster participants and not the intervening policies. Scott (2004) in his discussion of industrial products industries which includes

jewellery production, argues that the first task of policy makers in developing or assisting the growth of agglomerations is to map out the collective order of the local economy as this is what presents possibilities for meaningful and effective policy interventions. He argues further that it is important to "start off with what already exists" (Scott, 2004, p 478-479). The demise of the jewellery cluster left the industry scattered and without focus, offering little foundation for the application of industrial strategies that are based on a unified approach. The physical proximity of businesses in the cluster had enabled a level of networking ties, albeit tenuous, to develop. In the absence of locational advantages, these relationships weakened and even ceased altogether, and mistrust became more prevalent. Efforts to unite the industry through geographical location have therefore met with resistance, as entrepreneurs are more accustomed, and prefer, working individually rather collectively. The only initiative to base the industry in a defined geographical location that has met with some success is Jewel City. That complex, however, has succeeded in attracting mostly diamond industry members, not jewellery manufacturers.

AngloGold-Ashanti and Harmony Gold mines have each tried to provide locational advantages to the industry by making available sites and facilities. These initiatives have also met with varying success; the African Gold Zone has still not attracted more than one tenant and not all of the businesses that have located in Virginia near Harmony Gold Mine have been sustainable. One of the reasons that these initiatives have not proved successful is the remoteness of these areas, especially Virginia, from major centres with the necessary infrastructure and opportunities for employment, marketing and sales. Scott (2004) claims that the most highly developed and dynamic cultural-products agglomerations today occur for the most part in large metropolitan areas. The primary factor for this choice of location is that "any industrial agglomeration is dependent not only on the proper functioning of its complex industrial relationships but also on its ability to reach out to consumers in the wider world" (Scott, 2004, p 481). Accordingly, successful agglomerations must be based where there are adequate systems for marketing and distributing their outputs. Recent government strategies for competitiveness, although not premised on the relocation of industry but on a collaborative approach to realising objectives and meeting challenges, have also shown disappointing results. The industry is initially responsive to the concept of working jointly, but this interest is not sustained and eventually peters out.

9.1 Problems of the industry and policy implications

The jewellery industry in South Africa is very small, and the local market lacks the affinity for jewellery that is evident in most of the major jewellery producing countries in the world. Consequently, for the industry to achieve economic significance, it needs to be export orientated. As an export market, South Africa faces several disadvantages. Its manufacturing costs are higher than the jewellery exporting countries in Asia, it is far from the world's major jewellery consuming markets, which factor adds to export costs, and it lacks the design brand that gives a country such as Italy its competitive edge. In addition, the industry in South Africa lacks large-scale manufacturing capacity to enable it to export to major markets such as the United States.

In order to overcome these problems it is imperative that the industry cooperate and work collectively, in order to achieve scale economies that it otherwise lacks. The most recent investigation of South Africa's industry, the jewellery marketing study, identified a number of initiatives to promote exports, many of which were based on cooperative arrangements. The absence of large-scale operating capacity in the industry can only be addressed through the creation of collaborative relationships among small-scale manufacturers. Joint arrangements will overcome the problems of manufacturing for large orders, and also facilitate producers in meeting the marketing costs associated with obtaining export orders.

One of the ways of gaining entry into export markets is by attending trade shows, a recommendation that is endorsed in the literature on clusters. The South African government has support measures to assist with the costs of participating in trade shows, but these facilities do not extend to many of the small-scale jewellers who claim that the support incentives are still financially inadequate to enable them to attend. Government may need to augment the resources available in the scheme to facilitate greater attendance at trade shows. Alternatively, jewellers need to join forces and collaborate to collectively engage in marketing initiatives abroad.

Production costs in South Africa are higher than in most countries in Asia. Manufacturing jewellers for many years have lamented the lack of a gold loan scheme to increase their competitiveness in the international market. A gold loan

facility has recently been introduced which should make the metal more affordable to jewellers and enable them to produce larger quantities of jewellery. There have been criticisms that the minimum quantity of gold that can be accessed through the scheme is more than many of the smaller jewellers can afford, or utilise. In this regard too, the concept of joint action is important in transcending scale constraints.

The Jewellery Council of South Africa, as the representative body of the industry, provides administrative assistance with sales, exports and participation in trade events. The organisation is, however, under-resourced and cannot assist its members financially. To be more effective in meeting the needs of the industry, the Council needs to bolster its financial and human resources. With faltering support from industry members, the Council is unable to muster many of the financial requirements to invest in projects, or to engage in activities to advance the development of jewellers. Industry members are often reluctant to contribute to project initiatives that do not benefit them immediately, and consequently, the industry tends to rely on financial assistance from government, the mining or other sectors for participation in activities relevant to its own development. Whereas government and mining sector stakeholders are often prepared to contribute to projects aimed at developing the industry, it is on the basis of financial commitment from the industry as well. The contribution of resources from jewellery members is a measure of their commitment to, and the sustainability of, a project. The industry cannot gain credibility unless it demonstrates involvement, financial and otherwise, in the realisation of initiatives.

One way of increasing the resources of the Jewellery Council is through a wider membership base. For this to occur requires the participation of jewellers in defining the role and functions of the organisation. Much of the lack of support of the Council stems from disillusionment with its effectiveness in the jewellery sector. There have already been attempts, through government-sponsored initiatives, to raise the profile of the Jewellery Council and increase its representivity of the industry. Nevertheless, defining the role of the Council to make it more relevant to the industry can only be achieved by industry members themselves, not outside agents. Having a credible and respected industry body is critical for the success of the sector. Not only is leadership important in overcoming fragmentation and attaining cohesiveness in the industry, government also tends to work through industry representative bodies in its intervention policies. A functional and effective industry organisation is therefore paramount for the success of projects implemented at an industry-wide level.

One of the problems that has dogged the industry through the years is that of producing jewellery that is distinguishable in the export market from that of other supplying countries. Much of the jewellery that is produced in South Africa is replicated from Italian and other designs, and therefore lacks uniqueness. Jewellers have long been encouraged to develop a design style that is identifiable as South African. Without new designs it is difficult to compete with existing producers or target niche markets. Mining companies, through design competitions, aim to engender a South African design culture with international appeal. Thus far the designs that have been created through the competitions remain at the level of showcase, single jewellery pieces. The challenge is to produce uniquely styled jewellery on a large-scale basis for international consumption.

Many of the problems that currently plague the South African jewellery sector are deep-rooted, stemming back from the history of the industry. Foremost of these problems is the lack of trust among entrepreneurs, which translates into a reluctance to work jointly to achieve common objectives. The theory on industrial clusters reinforces the notion of joint action as the key factor characterising dynamic clusters. A fragmented approach to challenges can only result in stagnation or decline of an industry.

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