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A STUDY OF THE SILIGNA VALUE CHAIN

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INTRODUCTION

It is widely accepted that since the 1970's the rules governing industrial competitiveness have begun to shift (Best 1990; Kaplinsky 1994; Schonberger 1982; Womack, Jones & Roos 1990). This paradigm shift from Fordism to flexible production is reflected primarily in a shift in the nature of consumer demand. While in the Fordist era consumers were largely satisfied with standardised, mass produced goods, the post-Fordist consumer, faced with increased buying power and increased choice began to demand greater product quality and variety. These shifts, occurring as they have within the context of an increasingly globalised world economy, have had a significant impact on the nature of competition. Manufacturers, faced with increased competitive pressure, and increasingly discerning customers are having to restructure both internal and external relationships in order to respond flexibly, innovatively and rapidly to shifting and splintering market demand.

International experience offers us of a host of examples of how manufacturers have successfully restructured to improve their international competitiveness. At the two ends of the spectrum of restructuring responses are the Japanese large firm and Italian small firm models of flexible production. In Japan firms such as Toyota have been very successful in their introduction of such principles as Just-in-Time production, continuous improvement and supply chain management. In a very different setting, small firms in parts of Italy have successfully broken into the global market through pooling their resources through networks and co-operating around a range of issues. What is clear from both models is the benefits that can accrue to firms through improving relationships both along the supply chain with suppliers and customers and with their competitors. The concept of *collective efficiency* that explains the benefits that accrue to firms that co-operate is by now well established, and there have been numerous studies of clusters of firms reaping the benefits of collective efficiency (Best 1990, Nadvi & Schmitz 1994, Schmitz & Musyck 1993). For the most part, however, collective efficiency is taken to refer to horizontal linkages between independent firms. Vertical co-operation is most often associated with supply chain management – efforts by a manufacturer to better co-ordinate their relationships with suppliers, which usually (but not necessarily) implies some level of improved co-operation.

In South Africa industry has long been protected from the brunt of unrestrained international competition. Import Substituting Industrialisation (ISI) has been extremely important in the development of South African industry in the past, and this coupled with a strong protective tariff regime and the trade isolation of the sanctions era has left a legacy of complacent industry used to a captive domestic market and unresponsive to market signals (Hirsch 1997, Joffe *et al* 1995). This situation has changed, however, with South Africa's return to the international economic fold. The post-apartheid government's acknowledgement of global trends towards reduced trade barriers is reflected in its fundamental shift of trade policy from Import Substituting Industrialisation (ISI) to trade liberalisation, with a strong focus on export promotion

(Dept of Finance 1996)¹. For South African manufacturers this has meant the need to urgently grapple with the shifts in the nature of international competition that have been sweeping the global economy in the past several decades. If South African manufacturers are to hold their own against foreign competitors in the domestic market, as well as to establish a footing in the export market, a concerted effort at industry-wide restructuring is required. Once again, this restructuring encompasses rethinking relationships and patterns of organisation at both the intra-firm and inter-firm levels. However, the South African economy has long been characterised by extremely low levels of trust, and this makes restructuring in line with such principles as collective efficiency extremely difficult to implement.

This paper reports on the efforts of a number of firms along a value chain to improve their international competitiveness through co-operation around problems that are hampering efforts to establish a position in the global market. The departure point of this study is that it examines the origin and nurturing of a co-operative effort, rather than concentrating on the way in which an established collective structure operates and benefits participants. Examples of successful and well established co-operative efforts are obviously extremely useful, but how successfully international examples of collective efficiency can be transplanted, particularly to a developing country context, depends on understanding the *process* of establishing co-operation and building trust. Equally importantly, the case study offers an example of both horizontal co-operation between independent firms, and vertical co-operation that is structured as a relationship between *equal* partners, rather than been conceptualised as a form of supply chain management.

The Saligna Hardwood subsector is a relatively small part of the South African timber products industry. However, a number of circumstances have come together to create an environment favourable to collective action by sectoral stakeholders. While efforts at organising co-operative action in this sector are still in their infancy, the process of building trust and facilitating moves towards co-operation offer useful lessons for similar efforts in other sectors.

Section One of this paper examines the circumstances in the global and South African furniture industry that have created a situation favourable to collective action. In Section Two we examine the South African Saligna subsector specifically, and the conditions that have promoted a willingness to co-operate along the Saligna value chain. Section Three looks at the role of both internal and external change agents in driving the process of building co-operative relations. Finally, in the Conclusion we offer some general lessons that can be drawn from the experiences of the Saligna Hardwood Value Chain Interest Group.

¹ The debate in government over ISI and outward orientation is not new (c.f. the Viljoen Commission report of 1958 and the Reynders Commission report of 1972). The present shift in government policy is significant, however, in that it not only encourages exporting, *but* also exposes domestically oriented firms to substantially increased levels of international competition.

**SECTION ONE: SOUTH AFRICAN TIMBER PRODUCTS IN THE GLOBAL
CONTEXT**

Before considering the problems and prospects facing the South African Saligna Hardwood subsector it is useful to situate the subsector within the context of developments in the global and domestic value-added timber product sectors (furniture, joinery and related products). In this section we shall, for the sake of simplicity focus on the timber furniture sector, although one can expect to find similar issues dominating other value-added timber products subsectors. We begin by considering developments in the global furniture sector, with particular emphasis on the growing presence of developing countries amongst furniture exporting nations. Thereafter we consider the case of the South African timber furniture industry, and some of the problems and opportunities facing South African furniture manufacturers in the export market.

1.1 The global furniture industry

The furniture industry is on a clear growth trajectory. In the three decades preceding 1990 the furniture sector recorded a rate of growth in global demand exceeded by only two other sectors (Maskell 1998). At the same time, global flows in the sector have more than tripled in the past ten years alone. During the same period the *share* of furniture in world exchanges more than tripled (<http://www.ameublement.com>).

While trade in furniture is dominated by the industrialised countries, there is evidence that these countries are facing growing competition from furniture manufacturers in developing nations. In 1992 the top ten furniture exporting nations were all industrialised countries, with only two developing countries featuring amongst the top fifteen furniture exporters. By 1996 this picture revealed a noticeable change, with four countries – China, Poland, Malaysia and Indonesia - amongst the top fifteen furniture exporters, with China in seventh place.

Table One:

Top 15 Exporters – 1992 & 1996

Rank	1992	1996
1	ITALY	ITALY
2	GERMANY	GERMANY
3	USA	USA,
4	FRANCE	CANADA
5	DENMARK	FRANCE
6	BELGIUM-LUXEMBOURG	DENMARK
7	CANADA	CHINA
8	NETHERLANDS	BELGIUM-LUXEMBOURG
9	UNITED KINGDOM	UNITED KINGDOM
10	SWEDEN	SWEDEN
11	CHINA	POLAND
12	AUSTRIA	SPAIN
13	SPAIN	MALAYSIA
14	SWITZERLAND	AUSTRIA
15	INDONESIA	INDONESIA

Source: <http://www.intracen.org/itc/infobase>

Equally important, there is evidence to suggest that imports by leading furniture importing nations from *developing* countries are growing at significantly faster rates than are imports from *industrialised* nations.

Table Two:

**Average Annual Growth Rates of Furniture Imports by Top
Furniture Importing Nations**

Country	85-94 Average Annual Growth Rate (%) of Imports from ...	
	... Developing Nations	... Industrialised Nations
Japan	40	24
Canada	42	23
Austria	29	16
Netherlands	45	11
France	25	9
UK	25	6
USA	21	4
Germany	13	-2 ⁽¹⁾

(1) Annual growth rate 1991-1994 (%).

Source: Navas-Aleman & Orozco-Escorza (1999). Calculations using data from UNIDO (1996-1997).

The growing success of some developing nations in penetrating global export markets is encouraging news for other developing countries, given the importance to industrial development of industries such as the timber products sector (which is not only labour-intensive, but also add value to existing primary resources). Like most industries in developing countries, however, the timber products industry faces a number of constraints that limit how effectively firms are able to operating, and circumscribe their success in the export market. Raw material availability, technology management, human resource development and financing all limit manufacturing effectiveness amongst developing country furniture manufacturers (UNIDO 1991). In addition, efforts to build a presence in the export market are further hampered by environmental issues, the complications of ocean transport and the difficulty of overseas marketing and distribution networks (UNCTAD 1996).

Assuming the successful entry of a developing country's furniture manufacturers into the international furniture market, there is yet another factor that can be seen to impact on the long-term competitiveness of the developing country in question, and to limit the benefits of exporting. This is reflected in trends in the unit value of furniture exports, and has a significant impact on the long-term competitive strategies of developing country furniture manufacturers. Table Three, below, shows the percentage change over time in the unit value of furniture imports to Britain from a number of countries.

Table Three:

Growth in Unit Value of British Furniture Imports: (1989-1997)

Country	% Growth in Unit Value
Japan	34
Germany	33
Italy	22
France	19
USA	6
Denmark	4
Poland	158
Malaysia	- 6
Chile	- 38
Brazil	- 50
Indonesia	- 52

Source: Biggar, Morel & Sharma (1999)

The trend, highlighted in Table Three, is immediately obvious – while industrialised countries are *increasing* the unit value of their furniture exports, the unit value of exports from most developing countries, with the noticeable exception of Poland, have *decreased* over the same time period. Put another way, industrialised countries continue to add value to their exports, moving into higher market segments and charging higher prices for their products. The value-added of developing countries, on the other hand, is declining. This phenomenon has been referred to as the high road and low road competitive scenarios (Nadvi & Schmitz 1994). The ‘low road’ to international trade follows the route of low wage, low cost manufacturing based on price competition and supplying the mass market. In contrast, the ‘high road’ of competition is based on meeting the needs of specific market niches, often at the upper end of the market, and with a focus on a range of competitive issues besides price.

For developing country furniture manufacturers trying to increase their presence in the export market, understanding the long-term competitive implications of embarking on either the high road or the low road is crucial. Developing countries have traditionally been associated with the low road of low cost, mass-produced items. Clearly price-based competition does have a place within the consumer market, however, competition will always be cut-throat and fierce, and countries embarking on this strategy will find themselves under continued pressure to lower prices. Although price remains a critical aspect of competitiveness on the high road, product quality, design and other criteria (including service and environmental issues) are seen as equally essential. On the high road success depends on firms being able to pursue strategies of continuous innovation, and create flexible organisations capable of learning (Best 1987). Manufacturers need to be able to adapt rapidly to changing market conditions, and to develop new products accordingly. On the high road competitive pressure on firms comes in the form of the need to *add value* to products, rather than simply to lower costs. Creative designs, innovative features and excellent quality demand skilled and productive employees and innovative manufacturing technology and techniques.

Developing countries might appear at first glance to be better positioned to compete on the low road, given their labour surpluses, coupled with the previously mentioned constraints facing the timber products industry in developing countries. The concern, however, is that an unthinking pursuit of export market share through the low road strategy might undermine long term export viability by tying firms to a market niche where the unit value of their exports is on a continually downward trajectory. A short-term focus on profit margins could encourage the “pursuit of a self-defeating and unidimensional strategy of cost-cutting”, as opposed to, for instance, a long term strategy of improving labour skills and product quality (Scott 1996: 76; see also Best 1987; UNIDO 1991).

Similarly, Best (1987: 4) notes that firms that produce standardised products and compete on the basis of price tend to be dependent on mass retailers for sales and design. “The purely market mode of coordination means that the mass retailer is constantly sourcing the world seeking the lowest cost producer of homogenous products. It is usually only a matter of time before a low wage country ... threatens to drive sales levels below the break even point for the pre-existing firms”. The danger is that firms become excessively dependent on mass retailers, and lose their ability to direct their own competitive course.

In short, the value-added timber products industry offers a number of opportunities for developing countries. Not only is the industry one in which many developing countries have a natural advantage in terms of access to raw materials, but the characteristics of the industry dovetail with developing country priorities of creating employment and adding value to existing natural resources. Furthermore, there is a substantial and growing export market for timber products, with developing countries appearing to be well positioned to capture a growing share of this market. Manufacturers venturing into this export market must be aware, however, of the long term implications of their competitive strategy, and must choose their target markets with great care if they are to attain long term international competitiveness.

1.2 The South African furniture sector

The South African furniture sector offers a classic example of the problems and opportunities facing the value-added timber products industry in developing countries. South Africa has a long history of timber growing and milling, as well as a timber furniture industry that employs about 11 500 people (Finance Week, 9 July 1999). The South African furniture industry consists of a number of subsectors, including a substantial pine sector (assembled pine furniture for the domestic market, and knock-down furniture for the export market), veneered household and office furniture, almost exclusively for the domestic market, and hardwood production using both domestic and imported hardwoods. South Africa (or more correctly the Southern African Customs Union) features twenty fourth on the list of exporters in 1995, up from thirty sixth place in 1989. Furniture exports have been growing since the late 1980s, although admittedly from a very low base (IDC 1998). At the same time, however, the South African furniture industry has, over the past several years experienced a significant loss of employment (about 5 000 jobs in the past three years), and future prospects in this sector are unclear. The close relationship between general economic conditions and demand levels in the furniture sector does not bode well for domestic demand for furniture. On the export front there are a number of problems that make entering the export market and increasing market share extremely difficult for South African manufacturers.

In light of our previous discussion of ‘high road’ and ‘low road’ competitive strategies, it is useful to consider the South African furniture industry’s position relative to some of its developing and industrialised country counterparts. Table Four, below, shows the unit value of furniture imports to Britain for a number of countries.

Table Four:
British Timber Furniture Imports from Selected Countries (1997)

Imports to the UK from:	% of Trade	Unit Value (Euros/ton)
France	3.7	5.2
Italy	15.0	4.6
Germany	7.9	4.6
USA	3.6	4.3
Croatia	0.4	4.0
Denmark	6.9	3.7
Indonesia	5.6	3.4
Chile	0.1	2.5
Malaysia	3.9	2.3
China	3.9	2.3
Poland	1.8	2.3
Canada	0.4	2.3
Brazil	3.7	1.9
South Africa	4.1	1.7

Source: Biggar, Morel & Sharma (1999)

It is of some concern that the unit value of furniture imported from South Africa is lower than that of any other country shown. While the widely acknowledged problems of low levels of skills and relatively unproductive labour may make it difficult for South African furniture manufacturers to compete at the upper end of the market, the country's relatively sophisticated labour laws suggest that it has no future competing on the basis of low wages. The danger is that South African furniture manufacturers who enter the export market on the basis of low cost, standardised products may lose market share to competitors from other, lower wage developing countries, while failing to develop the skills necessary to make the transition to a 'high road' competitive strategy.

1.2.1 Quality, Design and Price

Research has identified a number of areas of weakness that are likely to impact negatively on the ability of South African furniture exporters to make the shift from competition on the basis of price, to competition at the upper end of the market where design, quality, environmental standards and service take on critical importance (Dunne 1999; NPI 1995). The most obvious weaknesses of South African furniture manufacturers lie in the area of product design and quality. Manufacturers are aware of quality problems, and attribute this to older-type equipment, and a heavy dependence on labour. The relatively small size of most South African furniture manufacturers, coupled with poor economic conditions and the weakness of the currency limits the ability of firms to purchase expensive new equipment. At the same time, most manufacturers lack specialised design skills, and hiring a dedicated furniture designer is outside the financial reach of most small manufacturers.

Another issue impacting on the quality of South African furniture, is the quality of raw material inputs, particularly of domestically grown solid timber. This problem has a number of facets. In the case of pine (South Africa's main furniture export material), it would appear that climatic conditions in South Africa lead to a timber that is of intrinsically poorer quality than, for example, pine grown in Scandinavia. However, these intrinsic weaknesses are compounded by poor supply chain relations. The timber growing and milling industries in South Africa are characterised (as is much of the economy) by the dominance of several large firms, and a significant state presence. This has made for a very rigid industry, slow to respond to changing market signals. Compounding this, the furniture industry has never been a dominant user-group from the perspective of the timber industry.

Initially, timber plantations were established to cater to the needs of the mining, paper packaging and pulp, and to a lesser extent the construction industries. Only 12% of locally grown timber is destined for the furniture market (IDC 1998). Clearly, the needs of the dominant user-groups are significantly different from those of furniture manufacturers, and the legacy of the origins of the South African timber industry continue to impact negatively on furniture manufacturers today. Problems originate at the growing stage, where for example, frequent pruning is required to produce a furniture quality timber with small knots. While there is not a shortage of timber *per se* in South Africa, furniture manufacturers complain of a lack of *clear* (furniture quality) timber. Moving along the supply chain, problems with the quality of timber are magnified at the level of the sawmilling operations. The highly labour-intensive nature of South African sawmilling operations is an additional factor contributing to poor quality sawn timber. Low levels of automation, a lack of labour skills development and a failure by South African management to develop a commitment to quality in their labour force are all seen to impact negatively on quality. In addition mills often suffer from a lack of capacity, so that softwoods and hardwoods are processed on different shifts, using the same machinery, rather than dedicated equipment, with a negative impact on quality.

Closely tied to the issue of quality is that of price, or rather *value*. South African manufacturers continually raise the fact that their products are not competitively priced in the international market. It is, however, more useful to focus on the question of the quality of the product which South African manufacturers can produce at a given price. To focus predominantly on price as a basis for competitiveness is to embark on the downward spiral of cost-cutting that seems an extremely precarious competitive strategy. Production cost is certainly an issue, with both domestic stakeholders and foreign industry observers agreeing that South African labour is unproductive relative to its cost and that South African sawmills charge prices that are not internationally competitive. However, as we have seen, the quality of South African furniture is also a problem that needs to be addressed, starting at the source of the supply chain (with timber growers), and continuing though to the development of manufacturing skills.

1.2.2 Foreign Marketing, Distribution and Environmental Standards

The nature of exporting presents a range of problems for furniture manufacturers, besides the more general issues of product quality, design and price. Distance from main markets represents a significant hurdle in the path of South African furniture manufacturers wishing to establish an export presence. In the first instance, exporting presents a number of logistical problems, including the difficulty of identifying and building relationships with potential customers, the need to depend on slow, and often unreliable shipping for transportation, and the difficulty of arranging distribution in a distant market. For many manufacturers operating through an agent based in the foreign market offers a solution to some of these problems. Using an agent solves the practical problem of a lack of knowledge of the foreign market – who the main buyers are, what the end consumer wants, how the market operates, and importing procedures. Agents also simplify the problem of foreign distribution, allowing a single shipment of furniture to be distributed to a number of buyers.

Another critical competitiveness issue, currently applicable only to the export market, is that of the ecological soundness of timber furniture products. This is an area where the industrial concentration at the level of growers and mills offers definite benefits to South African furniture manufacturers, for the companies involved have been proactive in attaining environmental certification such as Forest Stewardship Council (FSC) accreditation. While this effectively ensures end product manufacturers of an ecologically sound source of timber, manufacturers are also under pressure to have the ecological soundness of their own internal manufacturing processes certified. For small manufacturers the cost of obtaining FSC or ISO14001 certification may once again prove prohibitive, which in the long run can be expected to pose a significant barrier to export success, particularly in the environmentally conscious countries of Western Europe.

Finally, foreign perceptions of South African timber furniture, and equally importantly, of South African furniture manufacturers have a significant impact on foreign marketing efforts. While the Department of Trade and Industry (DTI) representatives of various South African embassies overseas play a role in disseminating information about South African producers, South African furniture exporters are not represented overseas by any exclusively sectoral marketing body. South African manufacturers consequently have not benefited from a national reputation that identifies South African furniture as in any way uniquely South African. At the same time, individual ‘fly-by-night’ exporters are felt to have at times damaged the joint reputation of South African furniture manufacturers through poor service and poor quality products.

1.2.3 The Way Forward

As has been made clear in this section, the international timber furniture sector is a dynamic one that offers substantial opportunities for developing countries to expand their export market share. However, as we have outlined, developing countries face a number of problems that hamper their efforts to capture export market share. An examination of the problems facing South African furniture manufacturers specifically, suggests that these problems cannot be attributed to end product manufacturers alone. Instead, we see that some problems are intrinsic to the raw material in use (specifically pine), while others are rooted in the actions of timber growers and mills, and indeed, the structure of the South African timber products industry as a whole. Yet other problems lie in the market perceptions of South African timber products and manufacturers. At a broader level, all of these problems are situated within the competitive strategy, and associated target market (low cost, mass market versus design and quality intensive niche markets) chosen by firms.

In the remainder of this paper we will consider the specific case of South African manufacturers producing (and in many cases exporting) value-added timber products made from Saligna, a eucalyptus hardwood grown extensively in South Africa. Saligna manufacturers are positioning themselves to overcome many of the exporting problems outlined above. In the first instance they are selecting an arguably superior raw material, and secondly, and more importantly, stakeholders are *working together along the value chain* to overcome a range of problems that commonly limit the effectiveness of South African value-added timber product manufacturers in the export market.

SECTION TWO: BUILDING NEW MARKETS:THE SALIGNA SUBSECTOR

Saligna is a species of Eucalyptus hardwood that is sometimes referred to as Australian Blue Gum. Saligna (and other closely related Eucalypt species) are grown in Brazil, Australia and South Africa, amongst other countries. In South Africa Saligna has traditionally been grown for use in the mining industry, however, the changeover to concrete mining supports has led to a sharp decline in demand from this quarter (Finance Week, 9 July 1999). The most outstanding feature of Saligna is that it is a *commercially grown* hardwood. This serves to distinguish it from many other hardwood species that have traditionally been drawn from indigenous forests, particularly in the developing world.

2.1 Saligna as a potential export product

Currently one of the primary forces affecting developments in the timber products industry is that of environmental responsibility. Environmentally conscious consumers in Europe have in recent years made their voices heard, in some cases with resounding clarity. A primary example of the influence of consumers on manufacturing practices is that of B&Q, the largest DIY retailer in the UK. In 1991 B&Q was targeted in an NGO campaign to boycott hardwood from indigenous tropical forests (Humphrey 1998). The eventual outcome of this consumer protest was the adoption by B&Q of a system of environmental certification for suppliers according to principles established by the international Forest Stewardship Council.

FSC certification, which aims to guarantee that timber comes from a sustainable source, is being adopted by a growing number of European timber product retailers who fear the negative effect of consumer action. For developing countries whose furniture industries have traditionally been built around indigenous hardwood forests, this drive towards environmental responsibility is likely to mean severely curtailed access to their traditional markets. In the case of South Africa, however, the presence of the previously low-priority Saligna hardwood offers unexpected potential for exporting. Saligna stakeholders in South Africa are increasingly recognising that Saligna manufacturers are extremely well placed to capture a growing share of the market for hardwood products in Europe, as environmental sustainability becomes an order-qualifying competitive criteria that determines access to this market niche.

Apart from the obvious marketing advantages of a sustainably managed, renewable hardwood resource, concentrating on Saligna timber products is an innovative export strategy for a number of other reasons. In the first instance, pine (currently the dominant material in South Africa's timber product exports) is a softwood, which by definition binds it to the lower end of the market. Saligna, on the other hand is a hard timber, making it suitable for the upper end of the market (Finance Week, 9 July 1999). In addition, South African pine is of an intrinsically lower quality than Northern European pine, placing South African pine products in the category of mass produced, low value-added exports. Even if the problems outlined in Section One are dealt with, the prospects for substantially improving the unit value of pine exports is limited. South African pine manufacturers are likely to continue to labour under price pressure from low wage competitors in Asian and other countries. Finally, the nature of the market for hardwood, as well as the characteristics of Saligna itself, offers favourable circumstances for adding value through attention to quality and design, and careful marketing.

2.2 Saligna as an export product: realising potential

The growth in the use of Saligna as a furniture material can be attributed to a number of different factors, including the growing cost of imported hardwoods and a desire to add value to a freely available local resource. A significant characteristic of Saligna subsector stakeholders is an awareness

of the relatively unharnessed potential of their chosen material as an export product. This attitude, which permeates the value chain from the level of timber growers through timber mills to end manufacturers of both furniture and other value-added products, lends a certain collective energy to the Saligna industry that is not apparent in the softwood subsector.

While Saligna stakeholders are clearly aware of the potential of the timber, they are also aware of the problems that beset the South African value-added timber product industry. While the intrinsic characteristics of Saligna overcome some of the problems experienced by, for example, pine furniture manufacturers, other problems are the same, and as with the pine subsector, serve to hamper export efforts. South African Saligna manufacturers wanting to compete at the upper end of the market are under pressure to improve design capacity and quality. Quality problems permeate the entire Saligna value chain, beginning with timber that is not grown according to the requirements of furniture (and other show-wood products) manufacturers, and continuing at the level of sawmills that lack the capacity and specialised equipment required for producing furniture-quality sawn hardwood. At the same time, end manufacturers complain that mills fail to provide timber in the required dimensions, which complicates and increases the cost of the manufacturing process.

Quality problems persist at the level of manufacturing, where poor skills and old or inappropriate equipment limit the quality levels that can be attained. Finishing is another area that requires particular attention in the case of Saligna products. Not only can finishes (such as varnish) that are not environmentally friendly diminish the environmental credentials of Saligna, but finishing techniques may have to be adapted to suit the specific timber characteristics of Saligna. Equally important to improving the *actual* quality of Saligna products is the need to improve the *perception* of Saligna as a quality timber. The fact that Saligna is something of an unknown in the export market increases the already difficult task of foreign marketing, adding to the existing problems of establishing contacts and arranging distribution.

South African Saligna stakeholders have for some time been aware of the need to tackle these problems if they are to realise the potential of Saligna as material for value-added timber product exports. More significantly, unlike in the softwood industry, there is a strong sense of the interdependence of players along the value chain. A crucial factor in this sense of interdependence is probably the shift in market demand that has led to an unexpected surplus of Saligna timber that both growers and mills are eager to find a market for. Rather than driving market demand with the typical assurance of firms with a dominant market position, growers and mills dealing with *hardwood*² have felt the pressure to identify new markets and respond proactively to both capture market share and increase the market for Saligna. This situation (unusual, if not unique in the South African timber furniture industry) has promoted an environment favourable to communication and co-operation along the value chain. Given our conclusion that significant progress in improving the international competitiveness of Saligna products requires attention to problems originating at *all* levels of the Saligna value chain, this willingness to be seen as 'part of a whole' is a critical first step in improving the possibilities for export success. However, translating an atmosphere of co-operation into *actual* co-operation that holds mutual benefits for value chain stakeholders and overcomes longstanding barriers of trust is a complex process. In Section Three we will look at how initial internal efforts at promoting co-operation along the Saligna value chain floundered, and how the introduction of an external facilitator and promoter was able to move the process forward, with real benefits promising to flow from the ongoing process of co-operation.

² Mills do not necessarily specialise in hardwood, but are usually departmentalised into hardwood and softwood sections.

SECTION THREE: THE SALIGNA HARDWOOD VALUE CHAIN

WORKSHOPS: TENTATIVE STEPS AT CO-OPERATION

As discussed in Section Two, Saligna industry stakeholders have over time developed an awareness of the problems of their sector, and more importantly, a willingness to accept that solutions require the co-operation of a range of actors along the value chain. These developments were facilitated by the decline in demand for Saligna from the mining sector, and the dynamic situation created by the expanding gap in industrialised country markets for hardwood timber products drawn from an environmentally sustainable source. The concept of collective efficiency – the mutual benefits to be drawn from inter-firm co-operation – appears to have been promoted for some time by a small number of change agents internal to the Saligna value chain. However, despite the efforts of these change agents, and hypothetical buy-in from the main Saligna timber mills, the actual *process* of co-operation floundered, failing to advance beyond bilateral talks between various manufacturers and individual mills.

It seems likely that the idea of mutually beneficial co-operation along the Saligna value chain would have remained at the conceptual level were it not for the willingness of internal change agents to seek the support of an external agency better positioned to promote the principles of collective efficiency.

3.1 The Role of the INDUSTRIAL RESTRUCTURING PROJECT in Co-ordinating a Saligna Interest Group

The Industrial Restructuring Project is based at the School of Development Studies at the University of Natal. It is an action-oriented research project that, since 1996, has focused on critical issues that are impacting on the competitiveness of manufacturing sectors that are under threat from increased international competition and the liberalisation of the South African trade regime. In 1998 the project began a programme of research into the South African timber furniture industry. In late 1998 a workshops held for furniture manufacturers in KwaZulu-Natal were attended by two manufacturers involved in the use of Saligna, both of whom were eager to promote co-operation along the Saligna value chain. Seeing the close relationship between the principles of industrial restructuring promoted by the IRP and their own goals for the Saligna value chain, the manufacturers suggested that the IRP become involved in facilitating a Saligna interest group.

The involvement of the IRP in the process of establishing such an interest group appears to have been a critical part of building the trust necessary for co-operation. In the first instance, the IRP is a project that has established its credibility within the furniture sector and a number of other key South African manufacturing sectors. Equally importantly, the IRP is well respected by the Department of Trade and Industry, and was able to use its credibility to leverage top-level sectoral buy-in from the Department. This in turn strengthened the image of the process with Saligna stakeholders. Thirdly, the neutrality of the IRP was critical in its successful involvement with Saligna stakeholders. Despite a relatively positive attitude towards co-operation, lack of trust and general suspicion about motives remained an issue within the sector. Through positioning the IRP as facilitator, the Saligna value chain group was able to avoid the danger of becoming (or appearing to become) an initiative designed to favour a particular stakeholder or group of stakeholders. This was a real threat, given that the Saligna manufacturing sector is dominated by smaller firms that are unlikely to be able to take on the logistical burden of organising such a group. At the same time, given prevailing negative sentiments towards mills, who are traditionally seen as wielding undue and unreasonable control over the industry, an interest group organised by the mills could be expected to be viewed with considerable suspicion by manufacturers. Finally, the two mills primarily involved in supplying the Saligna subsector are positioned as rivals, and an interest group facilitated by one would be unlikely to attract the support of the other.

3.2 The role of internal change agents

Having stated the critical role of the IRP as an external agent of change in the process, it is necessary to emphasise that the efforts of such an external agent are likely to amount to very little without a critical mass of intra-industry support. Two other conditions were therefore crucial in establishing the interest group, that is, the existence of *internal* change agents willing to lend their support to the process and the buy-in of key industry players *at all levels* of the value chain. The role of the IRP in this process was to *mobilise* and *co-ordinate* existing intra-industry support for the process, rather than to manufacture a willingness to look for solutions to problems through intra-industry co-operation.

The importance of internal support was highlighted during the process of identifying stakeholders interested in attending the first Saligna workshop. The links established by the IRP within the timber products industry have been specifically to furniture manufacturers. The use of Saligna as a raw material for furniture production, particularly for the export market, is relatively limited, however. The nature of problems experienced by Saligna *furniture* manufacturers requires solutions at the level of supply, that is timber growers and mills. For these actors, though, furniture manufacturers are just one user group, and to adequately meet the needs of the furniture user group means identifying and co-ordinating both complimentary and conflicting needs of other value-added users. Given this need to draw in other user groups, the IRP's contacts within the furniture industry were of limited use in identifying stakeholder firms. The role of key manufacturers and millers who supported the idea of a Saligna interest group in providing contacts to other Saligna stakeholders was thus critical in arranging the first Saligna value chain workshop. The IRP sent letters to firms identified as being potentially interested in the process, and where possible this was followed up with telephonic discussions. It became clear, however, that invitations to the workshop were significantly more effective when internal change agents had already broached the subject of co-operation with the invitee. As much as an external agent was required to overcome trust barriers, the support of *internal* agents lent credibility to the process, encouraging stakeholders to see the proposed workshop as offering a viable possibility of delivering real benefits.

3.3 Successes of the first Saligna value chain workshop

The first Saligna Value Chain workshop was organised as a three hour meeting facilitated by Prof. Raphael Kaplinsky of the Institute of Development Studies and the Centre for Research into Innovation Management in the UK, and Prof. Mike Morris, head of the IRP. The workshop was well attended by twenty-six delegates representing government departments, manufacturers, timber traders, industry specialists (both academic and consultants) and timber growers and mills. From the point of view of the IRP, the key flaw in the workshop was that the level of interest and involvement by participants was badly underestimated, so that three hours proved an inadequate amount of time to get to grip with all of the issues at stake. However, the workshop was extremely successful in its primary aim, which was to bring together stakeholders from all levels of the Saligna value chain with a view to promoting the idea of collective efficiency through co-operative problem resolution.

From the outset the interest group was driven by a value chain approach. The facilitators stressed the international experiences of industrial restructuring, and more importantly, the necessity of a value chain approach to international competitiveness. Early discussion at the workshop centred on constructing a diagrammatic representation of the Saligna value chain (see Appendix One). The interdependence of the various stages of the value chain was discussed, and facilitators stressed that interdependence along the value chain must be understood within the context of end market demand. A failure to accurately gauge market demand, and to position Saligna products correctly in the market will undermine any attempts to improve value chain efficiency. The Saligna value chain needs to be understood in the sense of a 'feedback mechanism'. Furniture manufacturers and related users who wish to expand their presence in the international marketplace require a secure supply of top quality

timber, and it is in the interests of the South African economy (and timber growers and millers more specifically) to increase the value-added of exports. *However*, timber growers need to be sure of adequate demand from value-added users before switching planting patterns away from other users such as the paper and packaging industry. Similarly, millers are unlikely to make costly investments in more sophisticated machinery unless they are sure that demand warrants the investment. This theme of the interdependence of value chain stakeholders recurred throughout the workshop, and indeed, is central to the concept of collective efficiency.

Establishing Working Groups

In order for the Saligna interest group to move beyond simply talking about co-operation, some form of co-operative action needed to be initiated that would begin to realise benefits for the participants. Building on the value chain approach adopted throughout the workshop, three linkages within the value chain were identified that posed particular problems for value chain efficiency. These linkages and a brief conceptualisation of the problems identified by participants as inherent in each link are outlined below:

- The problems at the level of the link between timber **growers** and the rest of the value chain centre on issues of the quality and availability of Saligna, and the incentives and potential for growers to supply top quality Saligna to furniture and related manufacturers.
- The most problematic relationship along the Saligna value chain is probably that between the **mills** and **manufacturers**. Two key complaints relate to the quality of the sawn timber coming from the mills, and the unwillingness of the mills to produce timber to the internationally recognised dimensions required by manufacturers.
- Finally, a link that is critical to the overall health of the industry is the link between **manufacturers** and the **end market**. Here a number of problems were identified, although in essence all of these issues relate to a lack of co-ordination in sectoral marketing efforts. A common brand image, joint market research and a sectoral quality control policy were some of the areas where collective action was seen as offering potential benefits.

Several issues were crucial in setting up working groups that were action-oriented and promised to deliver tangible benefits to workshop participants. Firstly, the activities of the three working groups were strongly tied to issues that were widely recognised as the key problems limiting success in the sector. Secondly, each of the working groups included stakeholders from both 'sides' of the problem. This meant that participants had a real opportunity to make their grievances heard. Thirdly, the involvement of a number of representatives of the two mills and a core of highly motivated manufacturers created a situation where there was an above-average chance of translating theoretical solutions into activity. Fourthly, the workshop facilitators had promoted the idea that the aim of co-operation was to offer potential *mutual* benefits. Equally importantly, the involvement of a number of competing firms at each level of the value chain created a situation where a failure to co-operate held the risk of missing out on benefits enjoyed by competitors. Finally, stakeholders were encouraged to participate in the working group that related most closely to their own priorities. However, the information and benefits coming out of each working group were made accessible to all participants.

A full commentary on the outcomes of the discussions held at the workshop by the individual working groups is beyond the scope of this paper. It is sufficient to state that while the discussions were wide ranging, and the specific problems identified diverse, the workshop concluded with each working group selecting a particular discrete issue on which to base their activities. The respective tasks were:

- **Young Tree Working Group:**
This group agreed to investigate whether harvesting Saligna for furniture manufacture at about 16 years is a viable proposition. This would tackle the excess supply of Saligna expected in the future, and make growing Saligna for use in furniture and other timber products a more viable undertaking.

- **Product Matrix Working Group:**
This group would develop a matrix reflecting the demands of various Saligna users, with the goal being to maximise recovery rates while better meeting the needs of various users in terms of the dimensions of sawn timber made available by the mills.
- **Branding Working Group:**
Group members decided to broadly examine the practicality of presenting a united front on the export market through, for instance common branding of Saligna products.

Working groups agreed to report back on their progress at a second, full day, Saligna value chain workshop scheduled for six weeks later.

3.4 Lessons from the second Saligna workshop

The groundwork laid by the first Saligna workshop proved essential in increasing the momentum of the initiative. The first workshop served to establish a level of credibility, both for the IRP and for the process of co-operation itself. This was reflected in a number of telephone calls received by the IRP in the weeks following the workshop from Saligna industry stakeholders interested in attending the second workshop. This once more points to the critical importance of industry-level champions in the process of setting up any co-operative initiative. Only two firms dropped completely out of the process between the first and second workshops, with five new firms becoming involved in the project.

The most noticeable feature of the second Saligna value chain workshop was the increased level of interaction and communication between participants. For the first time participants directly voiced their concerns around the issues of trust and confidentiality within the context of inter-firm co-operation. This development in itself can be seen as attesting to the progress made towards the goal of collective action. Issues of trust and confidentiality are central to corporate success, and a failure to openly acknowledge these issues would suggest a lack of real commitment to collective action. Addressing these concerns is however a complex process, and one for which there is no blueprint. The participants of the Saligna interest group will have to grapple with these issues over time, and determine for themselves the parameters of co-operation and confidentiality.

For the first time participants considered the financial aspects of co-operation, another issue of obvious concern to stakeholders. Discussions around the need for increased investment in capital equipment by timber mills raised once again the need for mills to have some sort of assurance of a long term market before embarking on new investments. Joint equity partnerships were suggested as one option for leveraging new investments on the part of timber mills. Any sort of joint marketing efforts also have financial implications, of course. Amongst others issues, the cost of using quality and environmental certification as a marketing tool was raised. Participants were quick to recognise the potential for using their collective bargaining power, and it was decided that the possibility of arranging favourable rates from quality and environmental certification consultants would be explored, as would the possibility of accessing government funding to support collective action.

Finally, the second workshop highlighted the difficulty of co-ordinating co-operative efforts amongst a geographically dispersed group of stakeholders. While communication technology such as the Internet goes some way towards bridging geographical barriers, manufacturers that are not located near one another find it more difficult to handle the logistics of co-operation. In order to maintain the momentum of the process of building co-operation, workshops need to be scheduled in such a way as to allow sufficient time for tangible progress to be made. At the same time, however, long periods between meeting can allow the process to *lose* momentum, especially where participants are not in regular contact. One way to avoid this situation arising is for the external agent to maintain the flow of information between participants by for example co-ordinating an interim newsletter. Another useful strategy might be to share ultimate responsibility for co-ordinating working group activities

between two or more individuals with equal stakes in seeing purposive action.

CONCLUSION: RECOMMENDATIONS FOR FACILITATING COLLECTIVE ACTION

The Saligna Hardwood Value Chain Interest Group is still in its infancy, and it is unclear whether the process will lead to a mature form of collective action like that which has developed in parts of Italy³. What is clear is that substantial progress has already been made in overcoming the inertia and lack of trust that generally hamper the prospects for co-operation within the South African industrial environment. An examination of the process of building co-operation within the Saligna subsector suggests a number of general lessons that may be applied to similar efforts in other sectors. Broadly, the favourable outcome of the process thus far seems to be the result of three interacting factors:

- favourable conditions within the broader sectoral and market environment
- the role of internal change agents
- the role of the IRP as an external change agent

Favourable conditions for promoting collective action

The successful nurturing of co-operation amongst Saligna value chain stakeholders is in the first instance a function of favourable sectoral and market conditions. The growing environmental awareness of industrialised country consumers is providing the potential for Saligna hardwood manufacturers to position themselves in such a way as to capture market share lost by manufacturers drawing on non-renewable hardwood resources. At the same time, the global furniture industry is growing, and developing countries appear to be capturing an increasing share of this market. These circumstances are critical to the process of encouraging co-operation. It is without much doubt easier to organise co-operation within the context of a dynamic market where there is a real chance of capturing market share if specific problems are overcome. While firms could definitely benefit from co-operation in a contracting market, firms tend to be risk-averse, and likely to be more so in times of crisis.

Equally important for the Saligna interest group is the fact that raw material suppliers have simultaneously been experiencing a decline in demand from a dominant user group that competes with furniture and related product manufacturers for Saligna supplies. This has created a situation where there is a similar level of incentive for firms at all levels of the value chain to co-operate. This is critically important, and it is unclear whether efforts at co-operation would have advanced as successfully if furniture manufacturers had not been seen as a user group of growing potential. Collective action is, after all, not based on any altruistic motive, but rather on the potential benefits that each stakeholder anticipates deriving from the process.

Finally, Saligna stakeholders at all levels of the chain are aware of the key problems that impact negatively on value-added users. In its early phases co-operative efforts need to be clearly focused on broadly recognised problems that are clearly within the scope of the group to address. Reaping tangible benefits as soon as possible is an extremely useful way of improving the credibility of the project and breaking down barriers of trust.

³ Areas of Italy such as the district of Emilia-Romagna are widely recognised as an example of mature inter-firm co-operation between geographically proximate firms. Such co-operation (in the form of trade associations, purchasing, marketing and credit co-operatives, as well as subcontracting networks) has been instrumental in allowing small and micro enterprises to operate successfully in both regional and international markets. For more on the region see IDS (1997) and Piore and Sabel (1984).

The Role of Internal and External Change Agents

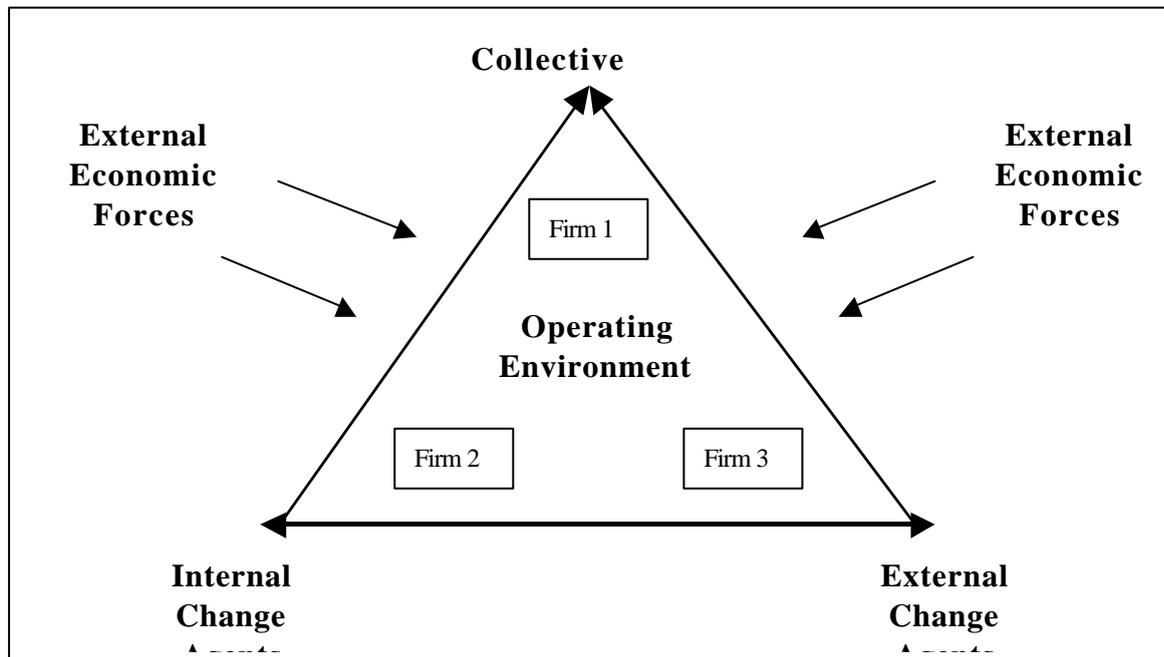
As the Saligna case study indicates, a favourable sectoral and market environment does not necessarily mean that positive sentiments towards co-operation will be translated into actual collective action. Barriers of trust and general inertia are difficult to overcome in the best of circumstances. Early on, the concept and benefits of co-operation were enthusiastically promoted by a small number of Saligna manufacturers. These intra-industry change agents held bilateral discussions with the key suppliers, and were able to secure their support for the idea of value chain co-operation. They were useful in giving the process credibility with industry stakeholders and encouraging firms to participate in the process. However, in the final instance an external agent, in the form of the IRP, was required to play the neutral broker, and draw together the disparate interests of the players along the Saligna value chain.

The existence of internal supporters and promoters of co-operation, coupled with the early buy-in by key stakeholders from *all* stages of the supply chain appears to be crucial to the process of establishing a group of firms willing to co-operate. However, from the experience of the Saligna case study it would seem that the usefulness of an external, neutral agent in facilitating the process cannot be underestimated. Finally, it is critical that the process is able to draw together enough firms from all levels of the value chain to promise tangible benefits to firms willing become involved.

In the final assessment, building co-operation either between competing manufacturers or along a value chain remains a complex process. Each value chain or each horizontal cluster of firms has to be understood in the context of its sectoral and market specificities. Indeed, the Saligna case study suggests how important these environmental factors can be in promoting (or hindering) co-operation.

Figure One:

Nurturing Inter-firm Co-operation: A Schematic Overview



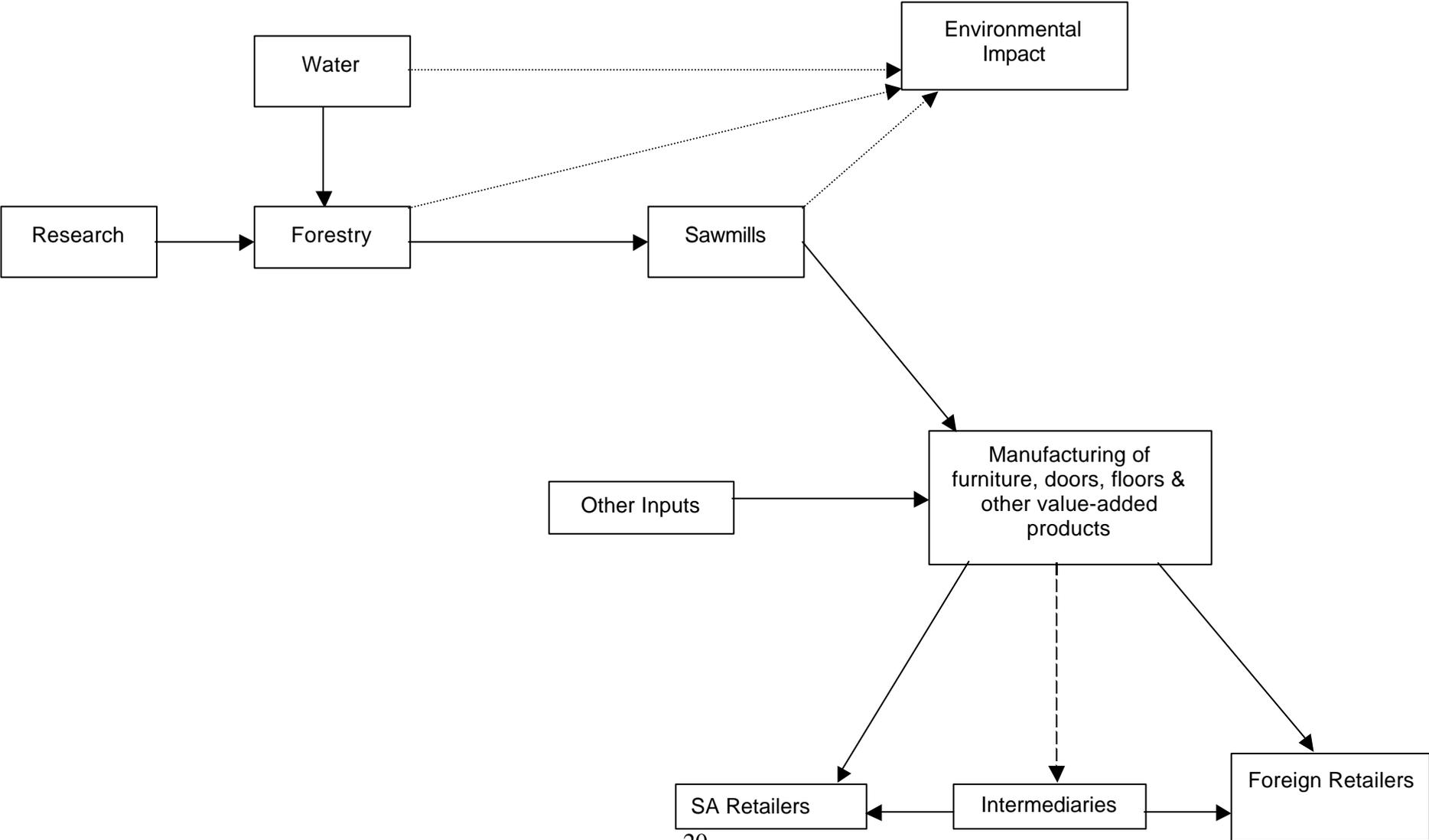
As Figure One reflects, successfully nurturing collective action depends on the interaction of both internal and external change agents with the circumstances in which firms find themselves having to operate. In the final instance, it is impossible for an external agent to *manufacture* support for co-operation. The role of an external agent can only be to encourage, mobilise, facilitate and co-ordinate existing intra-industry support for collective action.

This has important ramifications for government, especially in terms of its supply-side support measures. The Saligna Hardwood case study suggests that it is insufficient to simply offer firms an incentive to co-operate without properly engaging with stakeholders and responding to their specific requirements. Government policies that are set up in isolation from stakeholders and that are expected to facilitate co-operation are likely to fail. As we have seen, nurturing co-operation is a *process* that requires active involvement with a range of industry stakeholders. In the case of the Saligna Hardwood Interest Group the role of government stakeholders has been rather limited, although their presence in the process has been critical both as a source of credibility and as a source of information. However, the discussion throughout this paper suggests that there is in fact a much wider role that can be played by government in facilitating collective action. If government stakeholders are to play the role of *catalyst* in building co-operative relations then their role must extend beyond simply offering financial incentives to identifying internal and external change agents to drive the process. In some instances the state may have already positioned itself as a central actor in a particular sector, and may consequently be well positioned to take on the role of external change agent itself. In other cases it may be preferable to identify and promote a non-government external change agent with close sectoral ties, and more importantly, the necessary credibility with industry. An additional role for government may exist in creating a favourable climate for co-operation. In the case of the Saligna Hardwood Interest Group external change agents took on the role of fomenting a process of negotiation and co-operation that had already begun in the form of bilateral discussions between several internal change agents and other powerful industry players. Opportunities might exist for the state to play a role in identifying potential change agents and other key players and encouraging a process of dialogue around key sectoral issues, without necessarily openly promoting the concept of co-operation. In a case study of co-operation in the Irish furniture industry Heanue (1999) outlines how a co-operative venture between three geographically distant firms grew out of the firms' separate interactions with the state around training and other programmes. Over time these interactions created a similar strategic vision in the three firms that formed the basis for collective action facilitated by the state officials in question.

Given the complexities related to building trust and facilitating co-operative processes there is clearly a potential role for a central institution able to process the experiences of various co-operative efforts and utilise the knowledge gained to better nurture collective action amongst South African industry. However, if the Department of Trade and Industry is to play such a role there appears to be a need to deepen the level of engagement with industry stakeholders around issues of collective action, thereby playing a more active role in facilitating co-operation.

Appendix One:

Diagrammatic Representation of the Saligna Value Chain



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