

**RESPONDING TO GLOBAL COMPETITIVE PRESSURE:
LOCAL CO-OPERATION AND UPGRADING
IN THE SINOS VALLEY, BRAZIL**

IDS WORKING PAPER 82

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SUMMARY

This paper investigates whether enterprises in the export-oriented Sinos Valley (South of Brazil) have stepped up co-operation in response to intensified global competition in leather footwear. Recent cluster literature suggests that joint action is essential for responding successfully to major challenges. Using a combination of quantitative and qualitative methods, the paper shows a substantial increase in bilateral vertical co-operation, contributing to a major advance in raising product quality, speed of response and flexibility. In spite of these advances, the cluster has not been able to raise exports and profits have fallen. This seems related to the fact that upgrading was largely limited to the sphere of production. Upgrading in other areas such as marketing, design and image was attempted in an ambitious program of multilateral co-operation. The program failed for two reasons: some leading enterprises put their alliance with a major global buyer above co-operation with local manufacturers; and the state failed to mediate at critical moments between conflicting business associations and entrepreneurial alliances. The paper shows that the centrifugal forces of globalisation make local co-operation increasingly difficult and concludes with suggestions for future research on global competition and local upgrading.

Keywords

Industrialisation, globalisation, clusters, collective efficiency, upgrading, co-operation, Brazil.

1 INTRODUCTION*

A key issue of our time is who loses and gains from globalisation. In markets of tradable goods, it is easy to predict that industries which have had little exposure to international competition will suffer. What about industries which have had such exposure? How are they coping with intensified global competition? This paper examines a case which one would expect to be amongst the winners: the shoe industry of the Sinos Valley in the South of Brazil. This industry seems a good bet for two reasons: (1) over the last 30 years the industry has become a major exporter of shoes to the USA and Europe; (2) this export growth was based not just on cheap labour but on the increasing returns from the clustering of highly specialised producers and suppliers.

The relevance of clustering for competing in global markets has received increasing attention over recent years. It was triggered by some unexpected success stories not just from advanced countries but also developing countries. What caught the attention in particular was the fact that many of the exporting firms were 'home grown' and of small and medium size. However, other case studies show enterprises remaining uncompetitive even though they are clustered. And from the history of now-advanced countries we know of clusters losing their former competitiveness. Hence much of the current research agenda is concerned with understanding what distinguishes the successful from the failing clusters. The unprecedented competitive pressure arising from increasingly globalised product markets makes this question particularly acute.

The focus and approach used in this paper has grown out of my previous work in which collective efficiency has been the central concept. It is defined as the competitive advantage derived from local external economies and joint action. The former are incidental, the latter is consciously pursued and the combination of the two varies between clusters and over time. A hypothesis which emerges from this previous work is particularly relevant for this paper: responding to major opportunities and crises requires more and better co-operation between the clustering firms. In other words, external economies are important to growth but are not sufficient to ride out major changes in product or factor markets; that requires joint action.

The Sinos Valley has been confronted with such a major change. Competition in the global shoe market has intensified over recent years. Other producer countries with even lower wages are squeezing into the market, and buyers in the US and Europe are imposing standards of quality and speed which would have been thought unattainable a few years ago - at the prices they are prepared to pay. Since beating competitors like China on labour costs is hardly possible, the challenge is to produce better shoes in a faster way and to open up new markets and marketing channels.

This paper asks how local producers have responded to the challenge. Has the intensified global competition pulled them apart or brought them together? Have they, in line with the above hypothesis, stepped up co-operation? Have enterprises which increased co-operation performed better than those which have not?

* I am grateful to the many entrepreneurs and association officials who provided information and views on the changes occurring in their industry. My promise of confidentiality prevents me from naming them individually. Several colleagues provided valuable support. Luiza Bazan and Vanessa Fleck helped with the data collection; Manuel Albaladejo and Monica Oliber helped in processing and analysing the data. Very useful comments on a previous version of this paper were provided by Manuel Albaladejo, Luiza Bazan, John Humphrey, Raphie Kaplinsky, Henry Lucas, Khalid Nadvi and Adrian Wood. The research was funded by the Department for International Development in London. The responsibility for everything in this paper is mine alone.

These questions are examined for different kinds of co-operation. As will be shown, significant increases in some forms of co-operation contrast with decreases in others. Why have these failures occurred? Where advances were made, how did the process unfold? What was the role of public agencies in this process? The answers to these questions are of interest not just to those concerned with industrial clusters. They feed into a wider debate on the potential for building competitive advantage at the local level in the context of an increasingly globalised economy. As emphasised in Section 2, several academic specialisms converge in stressing the local sources of international competitiveness. The importance given to the local level needs to be registered in this age of globalisation. Section 2 draws together some of the key strands of this debate. It also specifies the value which this paper seeks to add.

The empirical analysis is structured as follows: Section 3 shows that globalisation is nothing new in the industry under investigation. It is entitled “The Easy Phase of Globalisation” to contrast it with the current “Tough Phase” discussed in Section 4. How firms have responded to the tough new challenges is analysed in Sections 5 to 7 which discuss bilateral co-operation and multilateral initiatives. The (largely absent) role of public agencies is the subject of Section 8 and Section 9 draws together the centrifugal forces unleashed by globalisation at the local level - also asking whether they are an inevitable outcome. The concluding section draws together the main findings and brings out lessons for policy and future research.

The data come from a number of sources and were collected using several methods: a survey of 65 enterprises based on the annexed questionnaire; in-depth interviews with selected manufacturers and their suppliers; interviews with the officials of business associations and public agencies; participant observation at meetings of industrialists; screening of the local press, and the usual secondary sources. A number of insights come from visiting the industry several times over recent years: in both late 1992 and late 1993, I interviewed and surveyed enterprises and their self-help organisations (written up in Bazan and Schmitz, 1997; Peasgood and Schmitz, 1994; Schmitz, 1995a; Schmitz 1995b). In mid 1996 I was invited by the industry and its associations to speak on “collective efficiency” and present some of the results of my earlier work. This also provided an opportunity for updating my knowledge through interviews with key informants. Then, in late 1997 I returned again, this time to conduct a survey on the question of global competition and local co-operation.¹ These return visits were essential to make comparisons over time.

2 GLOBAL COMPETITION AND LOCAL UPGRADING

This section shows how the paper feeds into the current globalisation debate. Globalisation is an umbrella term referring to the erosion of barriers to international flows of goods, finance and know-how. This paper is concerned with globalisation of product markets. The critical question who stands to gain and who stands to lose from this globalisation. While there is agreement that this question should occupy centre-stage in academic and policy debate, there is controversy over what enables firms to develop and sustain the competitive advantages which provide them with increasing incomes. There is however a convergence of views across various schools of thought against a focus on the individual firm and for investigating inter-firm relationships.

A number of writers have emphasised the importance of geographical proximity in inter-firm relationships. Terms such as synergy, economies of clustering, systemic competitiveness, local innovation system or collective

efficiency express the main concerns in this debate. Research on industrial clusters and the locality as a source of competitive advantage has grown enormously in recent years. Some authors (e.g. Scott 1996) predict that this concern will accelerate further as the globalisation of product markets intensifies. In the literature on advanced countries, this convergence on the locality straddles four lines of work:

New mainstream economics: Since the mid 1980s economists have found a way of modelling increasing returns which has led to a new body of growth theory. Paul Krugman (1991; 1995; Krugman and Venables 1995), particularly in his work on trade and geography, has put the increasing returns from economic clustering on the mainstream agenda. These concerns have been reinforced by econometric evidence that innovative activity tends to cluster due to knowledge spillovers (Audretsch and Feldman 1996).

Business economics: Michael Porter also emphasises the importance of clustering (Porter 1990; Porter and Wayland 1995). He argues that competitive advantage in the global economy derives from a constellation of local factors which sustain the dynamism of leading firms. He has stressed the importance of proximity, not just of suppliers but also of rivals and customers for dynamic business development.²

Regional science: The interest of economic geographers and regional scientists in clustering is reflected in the recent industrial district literature which focused initially on Italy and then on many other countries in Europe and elsewhere (Becattini 1990; Brusco 1990; Markusen 1996; Pyke and Sengenberger 1992). It has also contributed to a new emphasis on the region as a nexus of untraded interdependencies - for example in the work of Michael Storper (1995) or francophone writings on the milieu innovateur (Maillat 1996).

Innovation literature: In the literature concerned with technological development there has long been a focus on the individual firm and a strong distinction between innovation and diffusion. Over the last ten years this has given way to a greater concern with learning-by-interaction (between producer and user) and first national, then increasingly regional systems of innovation (Braczyk, Cooke et al. 1998; Cooke and Morgan 1998; Edquist 1997; Freeman 1995; Heidenreich 1997; Lundvall, 1993).

While most of this literature refers to the experiences of industrially advanced countries it has inspired recent work on developing countries. There is now a small but growing body of literature (Humphrey and Schmitz 1996; Nadvi and Schmitz 1994) which shows that:

- a) Clusters matter in developing countries - they are common in a wide range of countries and sectors.
- b) Clustering has helped small firms to overcome well-known growth constraints and to sell to distant markets, nationally and abroad.

These two conclusions concerning developing countries need to be qualified because the growth experiences have been diverse. At one end of the spectrum, there are artisanal clusters which have shown little dynamism and seem unable to expand or innovate (e.g. McCormick 1998). At the other end are clusters which have been able to deepen their inter-firm division of labour, raise their competitiveness and break into international markets (e.g. Meyer-Stamer 1996; Nadvi 1997). Along this spectrum, there are many intermediate cases, (e.g. Knorringa 1996; Rabellotti 1997).

This paper concentrates on a well-established exporting cluster. In its outward orientation it is not a unique example. While under-researched, an increasing number of cases from developing countries has come to light where clustering has helped local firms to grow and export, for example, rattan furniture from Indonesia, towels from Turkey, cotton T-shirts from India, surgical instruments from Pakistan, jewellery from Thailand, computers from Taiwan, wood products from Chile or ceramic tiles from Brazil.

A common misconception is to see such exporting clusters as examples of a collectivity of *small* firms beating large firms in the international market. This image stems from accounts of the Italian experience in the 1970s or 1980s when indeed small-firm clusters – through their flexible specialisation – were out-competing large firms trapped in Fordist rigidity. This old characterisation has little relevance in the 1990s. Large firms have fought back, becoming more flexible, and successful clusters are rarely populated by small firms alone, they tend to have firms of all sizes. While not an automatic outcome, clustering helps small enterprises to grow. As argued elsewhere (Schmitz 1997), the significance of clustering lies in facilitating growth in “riskable steps” enabling small firms to overcome the growth constraints which seem so common in developing countries. Once grown, successful firms sometimes decide to move out but usually they do not (Nadvi 1996). The reasons are summed up in the idea of collective efficiency.

The question addressed in this paper is how clusters cope with the globalisation of product markets typical of the 1990s and the resultant competitive pressure. Squeezing wages is one option, tempting particularly in labour intensive industries where workers have little collective bargaining power. The danger is that such clusters get trapped in a race to the bottom. Kaplinsky (1998) emphasises that global market share gained mainly by lowering wages tends to lead to 'immiserising growth' and that raising incomes in a sustainable way requires industrial upgrading. While agreeing with this proposition, it is important to recall a finding from earlier work on industrial clusters in developing countries: upgrading and squeezing wages are not mutually exclusive (Nadvi and Schmitz 1994). Several studies showed that clusters, and indeed firms, often pursued a combination of the low and high road to competitiveness. Studying the relative weight of the two is not, however, the objective of this paper.

I start from the observation that upgrading is essential for any cluster seeking to raise its competitiveness. While price continues to matter, raising quality, reliability and speed of response has become increasingly important in most global product markets. Such upgrading of production capabilities is a major concern of this paper, but it is not limited to this. It is also concerned with upgrading outside production, notably in design and marketing. There is a consensus in the literature (referred to above) that clustering facilitates the upgrading of production and related activities. It is less clear how this upgrading comes about. Much of the literature (including Krugman 1991; 1995) assumes that it is a spontaneous process of deepening specialisation, of spilling over of know-how and of synergies – a view which can be traced to Alfred Marshall's discussion of local external economies in industrial districts. Some of the recent literature has stressed that there is also a deliberate force at work, namely consciously pursued private co-operation and public support. This came out most clearly in the work on industrial districts in advanced countries (e.g. Brusco 1990; Pyke 1994; Sengenberger and Pyke 1991; Trigilia 1989) but also in research on developing countries (e.g. Humphrey and Schmitz 1996; Meyer-Stamer 1996; Tendler and Amorim 1996).

In proposing the concept of collective efficiency, I had two objectives in mind: first to bring together the spontaneous (or unplanned) and consciously pursued (or planned) effects. The concept is defined as the competitive advantage derived from local external economies and joint action. Nadvi (1996) has aptly called it passive and active collective efficiency. Second, the hope was that pairing the active and passive components would help to theorise an under-theorised field of research. More specifically I suggested that it helps to explain why some clusters have the capacity to respond to opportunity and crisis and others not. The hypothesis proposed was that *a successful response requires 'shifting gear' from passive to active collective efficiency. External economies are important to growth but are not sufficient to ride out major changes in product or factor markets. That requires joint action* (Schmitz 1995a). In other words, joint action matters in particular when major new upgrading challenges arise.

There is some evidence for this proposition from recent studies which enquire how clusters cope with the new upgrading challenge. A comparison by Scott (1994) of the gem and jewellery clusters of Los Angeles and Bangkok is particularly interesting. He attributes the greater dynamism of the Thai cluster to 'remarkable collective activism' ... 'significant resources have been mobilised to create an infrastructure of supporting services, ranging from training and educational programs to international marketing and information providing agencies' (p.260). Scott emphasises in particular the work of the trade association which - with the support of government agencies - seeks to 'leverage the industry into a developmental pathway characterised by rising skills and product quality' (p.261). This contrasts with the collective inaction in the (less dynamic) American cluster. Further confirmation comes from a study on Italy which tries to explain differences in industrial growth between and within regions. Locke (1995) concludes that industries situated in localities with well-developed associations and interest groups capable of aggregating diverse interests, mediating industrial conflict, and diffusing information adjusted more successfully to changing world markets.

Further support comes from longitudinal research in Italy by Dei Ottati (1996). She asked how the formerly successful industrial district of Prato responded to the crisis of the late 1980s. She found that, in the 1990s, vertical relationships between enterprises had become more stable and co-operative, that such co-operation was particularly pronounced in the increasing number of enterprise groupings and that enterprises in such groups were able to lead the recovery, innovate and upgrade quality. The change is captured in the title of Dei Ottati's paper "Towards a more conscious and organised industrial district" (p.35).

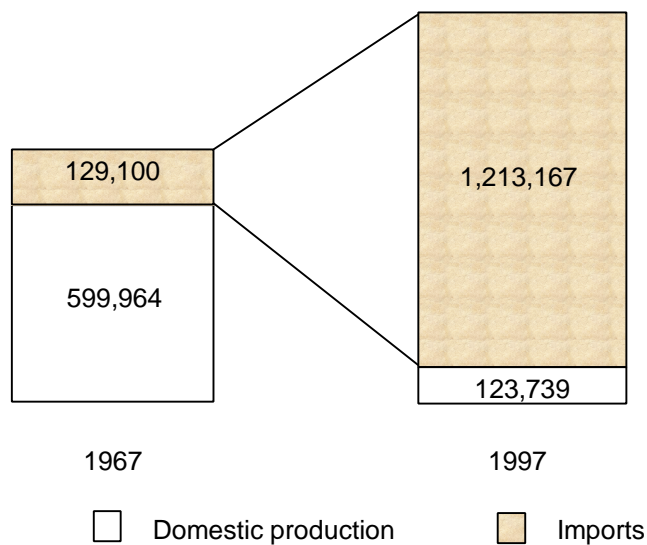
This paper is concerned specifically with the response of a Brazilian cluster to the recent upgrading challenge. It is one of several studies³ which focus on clusters in developing countries and asks how they cope with the pressures of globalisation. What precisely are these challenges? Have local firms – in line with our proposition – increased co-operation amongst them? Do responses differ with the type of co-operation? Do enterprises which increase co-operation perform better than those which do not? Who takes the lead in stepping up co-operation? What internal or external factors explain collective failure? The existing literature on developing countries contains very little on these questions. In trying to answer them, this paper seeks to advance our understanding of the trajectories of clusters and to connect this particular field of enquiry with the broader literature on globalisation.

3 THE EASY PHASE OF GLOBALISATION

The core of this paper is the analysis of local responses to global pressures. In order to understand these pressures, it helps to distinguish between two phases of globalisation, the current tough phase and the previous easy phase.

Globalisation is nothing new in the shoe industry. It started in the late 1960s when the domestic supply ratios of some advanced countries began to decline sharply. The most significant and clearest example is the US whose import penetration increased from 18 per cent in 1967 to 93 per cent in 1997. Figure 1 sums up this decline in domestic production and increase in imports over these three decades.

Figure 1: Pairs of non-rubber footwear entering US distribution channels, 1967 and 1997



Source: Footwear Industries of America

As can be seen from Table 1, the most dramatic change occurred not in recent years but over the period 1967 to 1987. Import penetration reached 81% by the end of 1987. Similar change, though somewhat slower, occurred in some of the main European economies.

Table 1: US import penetration 1967–1997

1,000 pairs	1967	1977	1987	1997
US Production	599,964	413,700	230,000	123,739
US Exports	2,217	5,411	11,490	28,303
US Imports	129,100	368,100	937,700	1,213,167
US Consumption	726,883	776,389	1,156,210	1,308,603
Import Penetration	17.8%	47.7%	81.1%	92.7%

Source: Footwear Industries of America

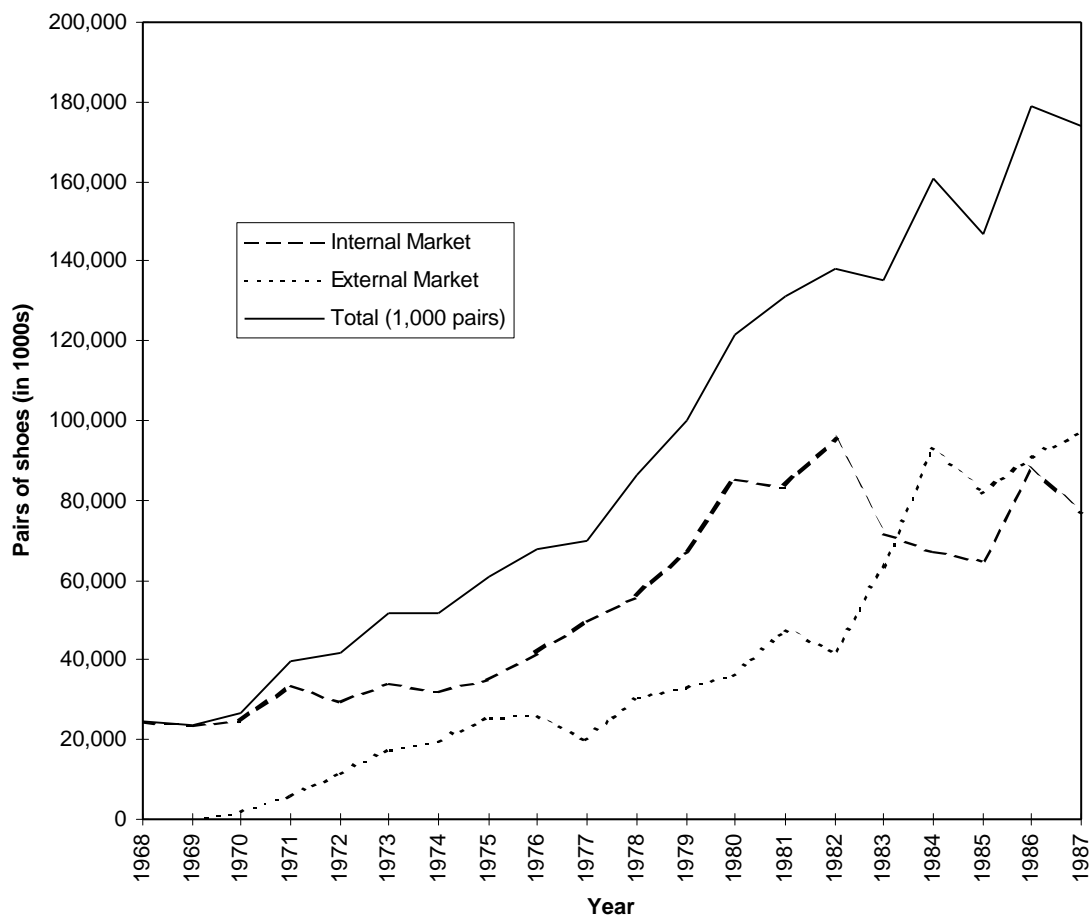
Table 2: Brazilian exports 1968–1997

Year	Pairs (in 1,000's)	Total in US\$1,000 (current prices)	Average price in US\$ (current prices)	Total in US\$1,000 (1996 prices)	Average price in US\$ (1996 prices)
1968	338	450	1.33	2,030	6.00
1969	1,029	1,850	1.8	7,900	7.69
1970	3,778	8,273	2.19	33,426	8.85
1971	10,442	29,323	2.81	113,508	10.88
1972	15,679	54,562	3.48	204,608	13.05
1973	21,604	93,479	4.33	329,926	15.28
1974	27,786	120,274	4.33	381,822	13.75
1975	34,663	165,142	4.76	480,996	13.86
1976	31,299	175,126	5.6	481,998	15.41
1977	24,735	174,476	7.05	451,231	18.23
1978	39,699	278,840	7.02	670,557	16.88
1979	41,881	351,386	8.39	758,387	18.11
1980	49,030	386,872	7.89	735,731	15.00
1981	69,760	562,192	8.06	969,297	13.90
1982	61,020	499,688	8.19	811,401	13.30
1983	93,439	681,521	7.29	1,073,261	11.48
1984	144,131	1,026,003	7.12	1,548,684	10.75
1985	132,571	907,396	6.84	1,321,450	9.96
1986	141,960	958,234	6.85	1,370,537	9.80
1987	122,742	983,556	8.01	1,356,629	11.05
1988	139,138	1,168,760	8.4	1,549,737	11.14
1989	151,492	1,281,011	8.46	1,619,824	10.70
1990	142,916	1,184,590	8.29	1,421,508	9.95
1991	132,088	1,171,274	8.87	1,348,876	10.21
1992	157,975	1,408,694	8.92	1,573,960	9.97
1993	201,468	1,931,795	9.59	2,095,980	10.41
1994	171,277	1,624,087	9.48	1,718,611	10.03
1995	137,974	1,498,811	10.86	1,542,516	11.18
1996	142,684	1,650,112	11.56	1,650,112	11.56
1997	142,475	1,522,944	10.69	1,487,008	10.44

Sources: DECEX – Foreign Trade Department
 ABICALÇADOS – Association of Shoe Manufacturers
 ABAEX – Association of Export Agents in Footwear
 Deflator: US Consumer Price Index, IMF, International Financial Statistics Yearbook

Brazil was one of the main beneficiaries of this phase of globalisation. As can be seen from Table 2, exports shot up from tiny amounts in the late 1960s to 150 million pairs by the late 1980s. Most of these exports came from the Sinos Valley in the state of Rio Grande do Sul. Figure 2 shows the increasing share of exports in output which grew from near zero to 56% in 1987.⁴ 82% of these exports went to the US, the remainder to Europe.

Figure 2: Sinos Valley: shoe production for internal and external market 1968–87



Source: Associação Comercial e Industrial de Novo Hamburgo (ACI/NH), *Censo do Calçado*

In 1968 the Sinos Valley already had 450 shoe firms, but with few exceptions they were small, most very small (Schmitz 1995b). What explains their ability to become a major exporter? Certainly low wages helped but there were other regions, for example, the Northeast of Brazil, which had even lower wages (and shorter distances to the US and European market). There were also export incentives which helped, but why were these enterprises amongst the first to avail themselves of such government support? I have argued elsewhere (Schmitz 1995a) that the clustering of these small producers was critical to their ability to grow and export. The division of labour and external economies enabled them to advance in riskable steps and become more efficient. But these incidental economies of clustering were not sufficient. There was also joint action in the 1960s and early 1970s which helped these producers to break into the international market and attract buyers from the US and Europe. Once connected to these markets, these foreign buyers became the critical actors in the Valley.

The results of this first phase of globalisation which ended in the late 1980s can be summed up as follows (detailed in Schmitz 1995b):

- **Enterprise growth:** The small firm cluster of 1968 became a cluster with firms of all sizes. By 1983 it included 33 firms with over 600 workers, a strong middle of 138 firms with between 101 and 600 workers and 246 (probably more) firms with up to 100 workers.⁵ All the firms were locally owned, there was no foreign investment.
- **Employment growth:** While exact figures are not available, it is clear that the increase in employment was substantial. To give orders of magnitude, the shoe and related industries employed 27,000 workers in 1970. By 1990, this had increased to around 150,000 jobs.
- **No increase in wages:** The job growth did not result in higher wages, partly due to in-migration. Discounting yearly ups and downs, real wages stagnated during the 1970s and fell by a quarter in the 1980s.
- **Skills:** While most jobs were only semi-skilled (due to the fragmentation of work), technical and organisational skills of a small group of employees increased significantly. Export agents contributed a great deal to the build up of this production capability. This did not, however, extend to skills in design and marketing which remained in the hands of the export agents.
- **Growth of supplier industry:** The growth of the shoe industry gave rise to a local network of suppliers which included tanneries, the full range of component makers, machinery producers, and transport companies. Roughly, for every job created in shoe making, there was one in supplier industries.
- **Capacity for joint action:** Prior to the export boom there were strong social ties between local economic actors which facilitated joint action. Initially the export growth benefited from these community ties. However, the sheer speed of growth, the uneven spread of its benefits, and the increasing importance of external actors (especially export agents) weakened the community ties. The earlier community-based capacity for joint action disintegrated. Simultaneously, several new business associations emerged but these were only concerned with their specific subsectors. While there were more collective institutions, the capacity for cluster-wide joint action had diminished.

In summary, this first phase of participating in the global market brought both gains and pains. The gains were uneven but there can be no doubt that the Sinos Valley was a winner and shoe producing regions in the US and Europe were the losers.⁶ I call this the easy phase of globalisation in order to contrast it to the difficult phase which was to follow. “Easy” refers to the shoe producing cluster in Brazil. For the US and some European countries, this was the painful period.

4 THE TOUGH PHASE OF GLOBALISATION

The easy phase came to an end in the late 1980s. It was easy in the sense that the US manufacturers themselves became (reluctantly) the main importers and closed down their factories. In the space of 20 years (from 1967 to 1987) import penetration had jumped by 63 per cent. The Sinos Valley was able to occupy some of this space.⁷ In order to do so it had to compete with other developing countries, notably Taiwan, but the context was one of a rapidly growing US and European demand for imported shoes. In the 1990s, the situation has changed substantially.

Import demand from advanced countries has increased at a much slower pace. (For the case of the US see Table 1). At the same time there are more low wage exporters squeezing into this market. The challenge for the Sinos Valley is higher quality, greater speed, smaller batches and more diversity.

It is however hard to identify a precise turning point. The first sign that the old game was up came in the late 1980s when China had penetrated the US market and squeezed Brazil out of its main segment of cheap, standardised leather shoes. Between 1987 and 1997, US imports from China grew 17 fold. (Footwear Industries of America, <http://www.fia.org>).⁸ Brazil was forced to move up-market and raise quality.

The 'Chinese shock' coincided with the 'discovery of inventory cost' on the part of the overseas, especially US, retailers. Buyers stipulated that the time between order and delivery be reduced to a third or a quarter of what it used to be. And instead of keeping large stocks in their warehouses, they changed to placing small orders which were then repeated in line with sales. Buyers in the internal (Brazilian) market, which absorbs about a third of the output of the Sinos Valley, have followed the international trend of placing orders closer to the time of sale.

The change in product markets was not the only turbulence which local producers had to confront. The late 1980s and early 1990s was a period of macro-economic turmoil in Brazil. The latter is the unavoidable domestic context in which the industrial restructuring has occurred and therefore requires some explanation. But this is kept brief because ultimately it is a distraction from our main question of how local producers react to new global pressures. In the late 1980s and early 1990s, Brazil suffered from run-away inflation which peaked in 1993 when it reached one per cent *per day*. In spite of the monetary crisis the real economy continued to function, but there is no doubt that much entrepreneurial time and energy had to be devoted to short-run financial management and that organisational and technological innovation suffered as a consequence. Since inflation was not steady but fluctuating widely (partly because of various government anti-inflation measures which eventually failed), short-run financial matters had to be given priority attention in enterprise management. It was only in 1994, that the then new Government of Fernando Henrique Cardoso was able to break the inflation syndrome. Rates of inflation since then have come down to under ten per cent *per year*.

This conquest of inflation was however achieved at a high price for exporters. The new currency was anchored in the US dollar. Prices in export contracts had been fixed in US\$ and the domestic receipts (in local currency) declined by between 20 and 25 per cent.⁹ Re-negotiating prices was out of the question because contracts had already been agreed upon. Nor was there much room for raising prices in new contracts because of competitive pressures from other countries. So for a time, most Brazilian export manufacturers supplied at a loss or zero profit in order to keep their overseas customers and maintain their work force and arrangements with suppliers intact. Some were able to switch to the internal market which was buoyant, others went out of business. By 1996 export manufacturers of shoes were able to break even, but compared with pre-1994 the exchange rate continued to be unfavourable. This was the context in which the Sinos Valley tried to come to terms with the new global competition.

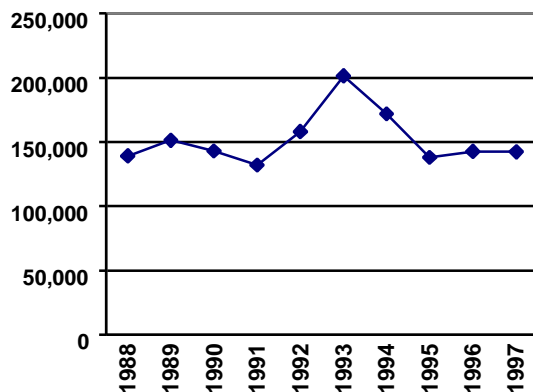
As mentioned above, there is no exact point in time when the first phase of globalisation ended and the second began. The pressure to upgrade was not a sudden imposition. The need to raise quality, speed and flexibility began to make itself felt in the late 1980s. Some parts of the industry never managed it and died. According to dos Santos (1992), 12 of the 100 largest shoe firms closed down during 1988-92. Their place,

however, was quickly filled by others. At least this is what the export statistics in Table 2 suggest.¹⁰ If we focus on the physical measure, number of pairs, following a slight dip in 1990 and 1991, exports in 1992 surpassed the 1989 level and reached an all time high in 1993 with over 200 million pairs of shoes exported. Since then exports have declined and by 1997 the industry was, in volume terms, back to where it had been in 1990, exporting 143 million pairs of shoes.

How then should we interpret the export performance in the 1990s? The rise up to 1993 and subsequent decline tells us little about changes in intrinsic competitiveness. Both the boom and the subsequent decline in exports are largely due to exchange rate movements. Compared with 1990-93, the average exchange rate over the period 1994-96 had appreciated by 23.5 per cent (America 1997).

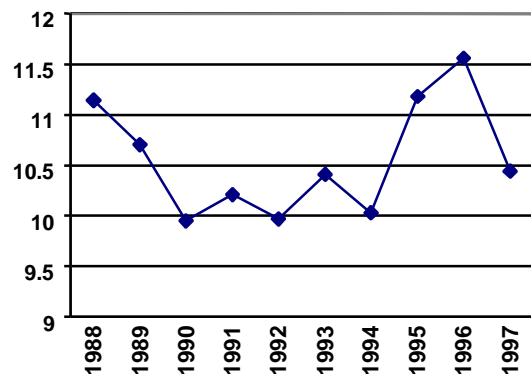
If we consider the entire period of the second globalisation phase we have to conclude that the industry has merely been able to stand still. Figures 3 and 4, based on Table 2, sum this up: in volume terms, the industry does not export more than in 1990; this was already mentioned above; and in value terms, the outcome has hardly been better; the average ex-factory price of exported shoes continues to be around US\$10 or 11.

Figure 3: Exports, 1988-97 (1,000 pairs)



Source: See Table 2

Figure 4: Average prices, 1988-97 (US\$ - constant 1996 prices)



Source: See Table 2

These two statistics do not, however, sum up the industry's export performance. As will be shown later, product quality improved substantially, the speed with which industry responded to orders increased several-fold, and the average batch size decreased substantially. In short, much greater effort is needed in order to achieve the same overall result.

The reason, of course, is that shoe producers in other countries were not idle; on the contrary, it is now one of the most fiercely disputed sectors in the world economy. China, in particular, exerts not only a downward pressure on prices but is itself upgrading. So are other low wage countries in Asia, like India or Vietnam. In trying to stay ahead by producing better and faster, Brazil is competing head on with Portugal and Spain. The main markets in Europe and the US are hardly growing, but competition is. As will be shown later, profitability in the Sinos Valley has declined over recent years. Compared with the 1970s and 1980s, this is certainly the tough phase of globalisation.

This applies not only to manufacturers of shoes but also to their suppliers. It is hard to summarise how the various subsectors of the cluster have fared over recent years, but Table 3 provides a good starting point. The 1991 and 1996 data sets brought together in this table were originally not produced (by ABAEX) for comparative purposes and need to be treated with caution. Some of the 1996 data seem to be overestimates, notably the number of workers in the tanning industry is too high. And the decline in the local (leather and shoe) machinery industry seems to have been more severe than suggested in this table.¹¹ Overall we can conclude, allowing for an optimistic bias in the 1996 employment data of Table 3, that the number of enterprises and jobs in the cluster have not grown over 1991-96.¹²

Table 3: The Sinos Valley footwear cluster – number of firms and workers in 1991 and 1996

Activity	1991		1996	
	Firms	Direct Jobs	Firms	Direct Jobs
Footwear Industry	480	70,000	391	83,800*
Service Rendering Industries - Workshops	710	18,000	759	23,400
Tanning Industry	135	22,000	92	30,100
Leather and Footwear Machines Industry	45	3,600	38	2,800
Components Industry	223	28,000	191	20,400
Rubber Industry	26	1,900	26	2,000
Leather Articles Industry	52	4,900	41	3,700
Export and Forwarding Agents	70	2,000	47	800
Others	80	3,000	88	3,500
Total	1,821	153,400	1,673	170,500

* The published figure is 183,800. The co-ordinator of the report confirmed that this was an error.

Source: Associação Brasileira dos Exportadores de Calçados e Afins (ABAEX), *Brazilian Footwear 92 and 97*, Novo Hamburgo.

To conclude, this section shows that compared with the previous two decades, the 1990s are a much more difficult phase of globalisation. An increasing number of countries are squeezing into the US and European market which is growing very little. After two decades of rapid export growth, the Sinos Valley has merely been able to maintain its level of exports over the period 1990-97; the overall number of firms and jobs is also at roughly the same level. This does not however suggest stability. On the contrary, turmoil has been enormous, caused by two factors: first, short term cycles in the industry produced by exchange rate movements which in turn were due to failure and success of the government's anti-inflation policy. Second, the industry has restructured rapidly in order to cope with the new global competition. Product quality is higher, the response time is faster, and the same overall output is made in smaller batches. As shown in later sections, these changes are not just marginal. Nevertheless, the industry does not receive higher prices for its products, such is the competitive pressure in the international shoe market.

Responding to this pressure required substantial reorganisation both within and between firms. The remainder of this paper is mainly concerned with how the relationships between firms have changed. More specifically, it investigates whether and how firms have stepped up co-operation vertically and horizontally.

This focus does not imply that co-operation is always a good thing. Mainstream economics reminds us of its dangers (e.g. price fixing) while the networking literature stresses its virtues (e.g. learning-by-interaction). Which view applies will always depend on the type of co-operation considered and the empirical case in question. In the case of the Sinos Valley, the elimination of competition is not a concern. On the contrary, there is fierce rivalry at all stages in the local value chain. In several ways there is also competition between collective

institutions, both amongst business associations and technology centres. There are few real life cases in South American industry which come closer to the economist's ideal of perfect competition than the Sinos Valley. Similarly, there are few cases in the manufacturing sector which have a stronger history of local co-operation (Bazan and Schmitz 1997).

5 SURVEY OF INTER-FIRM CO-OPERATION

In order to analyse co-operation and examine the questions set out in the introduction, this and later sections use the categories of Table 4:

Table 4: Types of co-operation

	Bilateral	Multilateral
Horizontal	e.g. Sharing equipment	e.g. Sectoral association
Vertical	e.g. Producer and user improving components	e.g. Alliance along value added chain

Our hypothesis is that there has been an increase in co-operation – in response to the pressures set out above. Whether this has occurred is examined first on the basis of a sample survey of 65 firms. This survey also allows us to examine whether co-operating firms perform better than those who do not co-operate. The actual process of changing bilateral relationships is then examined through case studies of two shoe manufacturers and their suppliers (Section 6). This is followed by the analysis of cluster-wide multilateral initiatives in Section 7.

Between October 1997 and March 1998 a survey was conducted to ascertain whether shoe firms had increased or decreased co-operation with other firms over the previous five years. The questionnaire in the annex details the types of co-operation covered.¹³ The questionnaire was applied to a random sample stratified by size.¹⁴ A total of 68 firms were covered and 65 questionnaires were usable. Table 5 shows the size distribution in the population¹⁵ and the sample.

Table 5: Size distribution of shoe enterprises in population and sample

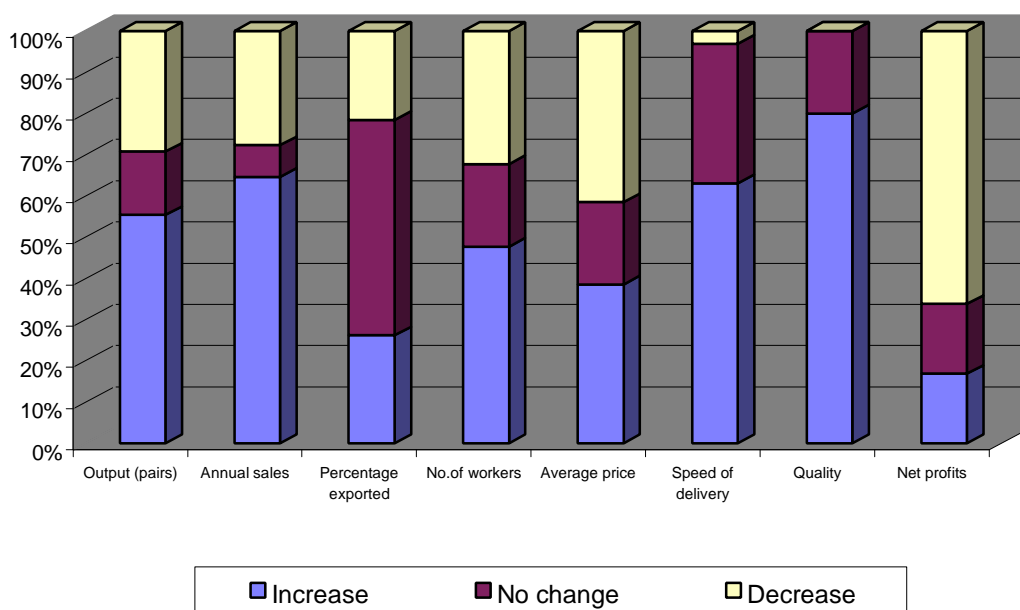
Size (number of workers)	Population	Sample
Small (up to 49)	220	23
Medium (50 to 199)	89	20
Large (more than 200)	90	22
Total:	399	65

Respondents were asked to assess changes in performance and in co-operation by using an ordinal scale: “big increase”, “small increase”, “no change”, “small decrease” and “big decrease” (see questionnaire in Annex).¹⁶ The data were analysed using the “Statistical Package for Social Sciences”¹⁷. In interpreting the data presented below one needs to keep in mind that the survey did not cover firms that had gone out of business.

The performance of the surveyed firms over the period 1992-97 is summarised in Figure 5. It shows that the percentage of firms increasing output is higher than that decreasing output (no significant variation by size of firm). This contrasts with the stagnation of output documented in the previous section. The latter, however, focused on exports whereas the survey covered also firms producing for the (more buoyant) internal market.

The stagnation of exports is confirmed in Figure 5, with the majority of firms reporting no change and roughly equal numbers reporting increases and decreases. The clearest results are the high percentages of firms reporting increases in speed of delivery and product quality.¹⁸ Also noteworthy is the high incidence of decreasing net profits, a finding to be returned to later.

Figure 5: Changes in performance, 1992–97 (percentage of firms)



Source: Author's survey

My previous work on the Sinos Valley had discussed the level and changes in inter-firm co-operation up to 1992/93 (Peasgood and Schmitz 1994; Schmitz 1995b). The purpose of the survey was to examine changes since then. More precisely, had the cluster responded to the new competition by stepping up co-operation? The results are very clear: a substantial rise in vertical co-operation but only a modest increase in horizontal co-operation.

5.1 Horizontal co-operation

As can be seen from Table 6, for the majority of firms there has been no change in horizontal co-operation. This is clearest in the case of joint labour training and marketing. "No change" here means that it remains at a very low level, as shown in a previous survey (Peasgood and Schmitz 1994).¹⁹ In contrast, exchange of information and experiences, already practised by the majority of firms, was intensified by a third of respondents. Variations by firm size were not significant.

Table 6: Changes in horizontal co-operation 1992–97 (percentage of firms)

	Increase	No change	Decrease
Exchange of information and experiences	32.3	63.1	4.6
Quality improvement	21.5	75.1	3.3
Labour Training	13.8	84.6	1.6
Marketing	4.6	92.3	3.1

N = 65

Source: Author's survey

5.2 Co-operation with suppliers

The survey results on vertical co-operation are very different. As shown in Table 7, over 60% of respondents report an increase in co-operation with their suppliers of leather (63.1%) and soles (60.4%). Such increases can be observed both in general exchange of information and experience and in specific concerns of improving quality and speeding up responses. Note that reported decreases are very few.

Table 7: Changes in co-operation with suppliers, 1992–97 (percentage of firms)

	Suppliers of leather			Suppliers of soles		
	Increase	Same	Decrease	Increase	Same	Decrease
Info/exper.exchange	63.1	35.4	1.5	56.3	40.6	3.1
Improving quality	64.6	33.9	1.5	60.9	37.5	1.6
Speeding up delivery	61.6	36.9	1.5	64.0	31.3	4.7
Average (mean)	63.1	35.4	1.5	60.4	36.5	3.1

N = 65 for suppliers of leather; N = 64 for suppliers of soles

Source: Author's survey

Surprisingly, no association was found between increasing co-operation and firm size (Kendall correlation coefficients are low and statistically insignificant). My earlier work suggested that medium and large firms work more closely with suppliers than small ones. Of course this may still be the case because this recent survey does not capture the intensity or quality of co-operation, but only changes from the previous level. And the noteworthy result is that there has been a widespread increase across all firm sizes. The qualitative case studies presented later will provide insights into how this process has occurred and bring out the difference between leaders and followers as well as its connection to firm size.

5.3 Co-operation with subcontractors

In relationships between shoe manufacturers and their subcontractors there has also been a clear trend towards greater co-operation. As stressed in earlier work (Schmitz 1995b), subcontracting is a major feature of this cluster.²⁰ Shoe production consists of a number of discrete stages which, from a technical point of view, need not be carried out under one roof. Few shoe firms in the Sinos Valley carry out all stages in-house.

Over 700 subcontractors (see Table 3 in Section 4) are drawn upon by shoe manufacturers of all sizes, except for five very large companies which are vertically integrated. Table 8 suggests that – over recent years –

the extent of subcontracting has not changed in a major way; the majority of firms report no change. In prime candidates for subcontracting, upper stitching and heel covering, increases outweigh decreases. Overall we can register a slight increase in subcontracting over the period 1992-97; variations by firm size are very small.

Table 8: Changes in extent of subcontracting, 1992-97 (percentage of firms)

	Increase	No change	Decrease
Upper cutting	12.3	72.3	15.4
Upper stitching	32.3	43.1	24.6
Heel covering	30.8	61.5	7.7
Lasting	4.6	87.7	7.7

N = 65

Source : Author's survey

Table 9 suggests that the quality of relationships has tended to improve. 60% of firms reported an increase in exchange of information and experiences with subcontractors, and 67.7% closer co-operation in quality improvement. In other areas of co-operation – technological upgrading, labour training, programming production – the upward trend was less strong. Nevertheless, over all five areas examined, an average of 48% of firms reported an increase in co-operation with subcontractors. The decreases were negligible.

Table 9 : Changes in co-operation with subcontractors, 1992–97 (percentage of firms)

	Increase	No change	Decrease
Exchange of information and experiences	60.0	35.4	4.6
Technological upgrading	37.5	57.8	4.7
Quality improvement	67.7	26.2	6.2
Labour training	41.5	53.8	4.6
Programming production	32.3	61.5	6.2

N = 65

Source: Author's survey

As in relationships with suppliers of materials, associations between increases in co-operation and firm size are weak (reflected in low Kendall coefficients). The only exception is labour training with a Kendall coefficient of .22, significant at 5%. The association with firm size is strongest in the subcategory of ten very large firms (more than 600 workers), eight of which have increased labour training for subcontractors.

5.4 Co-operation and performance

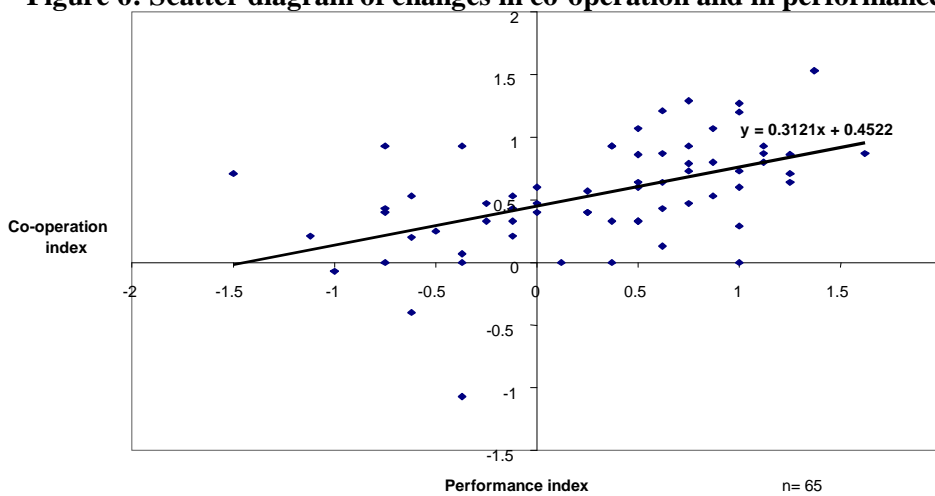
The only uniform result emerging from the survey of the different areas of bilateral co-operation is that decreases have been minimal. Increases however vary: they are much stronger in vertical than in horizontal co-operation. The question is whether such variations matter for the individual firm. Our hypothesis was that co-operating firms perform better. In order to test this hypothesis a co-operation and performance index was constructed. Both indices were generated by attaching equal weights to each performance or co-operation

variable.²¹ The five possible values – from big increase to big decrease – were coded on a range of +2 to –2 respectively, with no change coded as 0. The index for each firm was then constructed by adding up the actual values and dividing them by the number of variables. Thus, firms could be ranked from strong performers or co-operators to poor performers or co-operators.

The main purpose of constructing these indices was to examine the association between the two. *The correlation exercise shows that the relationship between increases in co-operation and improvements in performance is positive with a Kendall co-efficient of .42, significant at 1%. A cross-tabulation (not included here) shows that 63 per cent of firms that reported increased co-operation have also experienced an improvement in performance. The majority of firms reporting no change in co-operation did not experience a change in performance either.*

The scatter diagram (Figure 6) gives visual evidence of the positive relationship between changes

Figure 6: Scatter diagram of changes in co-operation and in performance



Source: Author's survey

in performance and changes in co-operation. Of course, none of the above is evidence of a cause-effect relationship between co-operation and performance.²²

Table 10 disaggregates between different types of co-operation and shows that the correlation with performance varies a great deal. The performance variable used here is annual sales²³: firms reporting an increase appear as “strong performers” and those reporting a decrease as “poor performers” (those reporting no change are not shown). The column which compares the percentage of strong and poor performers that have increased co-operation shows that, in all areas of co-operation, the former is higher than the latter, but the degree of difference varies; it is substantial in co-operation with suppliers but less so in co-operation with subcontractors.

These differences are also reflected in the Kendall correlation coefficients listed in Table 10. Most noteworthy for our purposes is the statistically significant and positive relationship between performance and co-operation in most areas of horizontal co-operation and in co-operation with suppliers. In co-operation with subcontractors, the coefficients are also positive but lower and statistically insignificant. This is partly because also poor performers have increased co-operation.

Table 10: Correlation between changes in inter-firm co-operation and in performance by type of co-operation

	Strong performers increasing co-operation (%)	Poor performers increasing co-operation (%)	Kendall Correlation coefficient	Significance level
<u>Horizontal Co-operation</u>				
Exchange of information and experience	45.2	11.1	.3129	.0026
Quality improvement	31.0	5.6	.3456	.0080
Labour training	16.7	11.1	.1393	.2524
Marketing	7.1	0	.2762	.0251
Use of Business Association (ACI)	21.4	5.6	.2316	.0507
<u>Co-operation with leather suppliers</u>				
Exchange of information and experience	76.2	33.3	.3821	.0015
Improving quality	76.2	38.9	.3397	.0551
Speeding up delivery	69.0	38.5	.2462	.0460
<u>Co-operation with sole suppliers</u>				
Exchange of information and experience	64.3	41.2	.2127	.0778
Improving quality	69.0	41.2	.2480	.0451
Speeding up delivery	73.8	35.3	.2862	.1197
<u>Co-operation with subcontractors</u>				
Exchange of information and experience	66.7	50.0	.1823	.1365
Upgrading technology	39.0	33.3	.0827	.5018
Improving quality	73.8	55.6	.1729	.1608
Labour training	47.6	33.3	.1739	.1468
Programming production	38.1	27.8	.1776	.1291

Note: The performance indicator used is Annual Sales. Strong performer = increase in sales; poor performer = decrease in sales; middle category of no change in sales not shown.

Source: Author's survey

Given the focus on local co-operation in this paper, relationships with the main external agents, the manufacturers' customers, are not examined at length. The survey shows that – in comparison with the past – the majority of firms have more co-operative relationships with their customers, irrespective of whether they operate in the external or internal market. Over 70 per cent of firms report increases in “exchange of information and experiences” and increasing co-operation in quality improvement. However there is no significant correlation with performance.

To conclude, *the survey shows a modest increase in horizontal and a substantial increase in vertical co-operation. Firms which have stepped up co-operation have improved their performance more than those which have not.* These findings refer to bi-lateral co-operation amongst clustering firms. Multilateral co-operation (participation in Business Association) increased only slightly but showed a significant positive relationship with performance. Subsequent sections complement these quantitative findings with qualitative evidence and insights based on in-depth interviews and participant observation. While broadly confirming the survey findings, the qualitative analysis also suggests important qualifications and brings out processes which would be hard to capture with survey methods.

6 CASE STUDIES OF BILATERAL CO-OPERATION WITH SUPPLIERS

One of the clearest survey findings emerging from the previous section is the increase in manufacturers' co-operation with their suppliers and subcontractors. The purpose of this section is to probe the reality of this co-operation. Does practice live up to discourse? Are the manufacturers' views and experiences shared by their

suppliers? And most importantly, how does the process of co-operation unfold over time? In order to answer these questions, qualitative work was carried out focused on two shoe manufacturers, one large and one small, but including their suppliers and subcontractors. Given the emphasis on understanding the reality of co-operation and its evolution over time, I chose two firms which I had visited before and which had made strong statements in favour of co-operation. If real co-operation existed one would expect to find it there. As will be shown, one case proved these expectations correct but the other one much less so. Detailed interviews were carried out in both firms. They also provided a list of their suppliers of inputs and their sub-contractors who were then also interviewed.

6.1 Case study of large shoe firm and its suppliers

The first case study focuses on a large shoe firm and its suppliers. This firm will henceforth be called JW.²⁴ It was visited on several occasions in 1992, 1993, 1996 and 1997 and interviews were held with the two owner-directors and two production managers. Their responses are complemented and contrasted with those of six suppliers of raw materials and components (e.g. leather, soles) and those of six sub-contractors who carried out particular stages of the production process (e.g. heel lining, upper stitching).²⁵

In presenting the findings, the focus is on the *changes* which are occurring *in vertical inter-firm relationships*. JW has been a driving force in bringing about such changes, being itself driven by its buyers and their demand for higher quality, faster delivery and smaller batches. JW's strategy of upgrading seems to have paid off. As shown in Table 11, the enterprise has been able to expand and move into a market segment which, in terms of price (and quality), is above the Sinos Valley average. Breaking into the European market – which is more quality and less price driven than the US market - was central to this strategy. The strategy which JW has adopted vis-à-vis its suppliers is in part a reflection of the relationship with CK, its main client. CK is extremely demanding in terms of quality, speed and price but solutions are sought through “voice” rather than the threat of “exit” (to use Hirschman's terms).

Table 11: Shoe manufacturer JW, 1993–97

	1993	1996	1997
Workers	904	941	1185
Sales (US\$)	19.3 million	25.2 million	34 million
Average price (US\$)	12.85	15.02	15.30
Markets (% of sales)			
- UK	56.3	60.2	68.5
- USA	26.6	22.1	13.3
- Argentina	2.2	3.4	5.8
- Others (mainly Europe)	14.9	14.3	12.4

Source: Data provided by company

Most of the advances in quality and speed have been made since 1992. The turnaround time between order and dispatch (ex factory) in 1992 had been 12 weeks. By 1997 this was reduced to 4.5 weeks and further reductions are on the agenda. This speed of response is not (yet) matched by Chinese factories.

Such speed requires both reorganisation within the firm and changing the relationships with suppliers. Neither has gone smoothly. The most critical stage was 1992-93. In order to remain a significant supplier of CK, JW had to bring its own suppliers on board. JW took the unprecedented step of inviting groups of selected suppliers (often competing firms) to its premises in order to discuss the transition to a 'new regime'.

Being in the same meeting with customers and competitors was a new experience for the suppliers; being confronted so directly with the pressures faced by the customer was another. Indeed, the purpose of the meeting was to help suppliers understand that upgrading requirement had a cascading effect. JW's promise was that more transparency was not a one-off but an integral part of the new relationship. The promise was greater collaboration in the programming of production and in technical matters, and continuity of the relationship. In return, the suppliers had to deliver faster, more frequently (just-in-time) and at a quality which was high and even. These matters were discussed first with groups of owners/directors of supplying firms, then with their managerial/technical staff, again in groups.

These meetings were the first stage, the second was putting these ideas into practice. This required getting to know each other better: learning how the supplier (or conversely, client) organised its production, learning how the technical processes worked. JW's staff observed the difficulties of complying with the new delivery standards in the supplier's factory or workshop, and made suggestions for improvement based on knowing both sides of the operation. Suppliers were asked to do the same in JW's factory. Such learning-by-interaction was one essential trait of the new relationship. The other one was co-operation in the programming of production. This meant, for JW, giving advance notice of changes in order levels, and passing on precise order specifications more promptly. Given the tighter delivery schedules, greater synchronisation was required. Rather than forcing this onto suppliers in a take it or leave it fashion, JW opted to achieve it by transparency, learning-by-interaction and co-operation. Suppliers did not thereby escape competition. JW used more than one supplier for each input and used the cost comparisons in its negotiations. It would not, however, switch suppliers at short notice in order to take advantage of lower prices. JW committed itself to a continuous relationship and to seek joint solutions to problems where problems occurred. This was JW's side of the story.

To what extent is this corroborated by the suppliers? In order to find out, detailed interviews and factory visits were carried out with six of JW's suppliers: an integrated tannery, a tannery specialised in high quality finishing of leather, two producers of synthetic soles and heels (injection moulding), a producer of lasts, and a supplier of chemical inputs such as glues and dyes. Their responses are hard to summarise; I start with what they have in common and then bring out differences.

There is agreement that the challenges faced by the shoe manufacturers have had immediate repercussions for suppliers, most notably in terms of raising quality and speedier delivery. The latter is most easily quantifiable. In the case of synthetic soles, for example, the time between order and delivery was between eight to nine weeks and has been brought down to two to three weeks. In some cases it can be done faster.

The key question, however, is whether the agreed dates can be met reliably, because delivery is expected to be just-in-time (eliminating stocks on both sides). This is where suppliers put their customers (the shoe manufacturers) into three categories: those who have invested in the relationship with suppliers and have reorganised internally to make it work; those who want fast, regular and reliable delivery but have not prepared

accordingly; and those who place only sporadic orders. There is agreement that JW is in the first category and that the number of such customers is increasing.

Relationships with such customers were characterised in terms of 'playing with open cards' on costs and scheduling, mutual visits (for more than just collection or delivery of inputs), knowing each other's technical and organisational possibilities and limitations, helping each other to improve, not taking advantage of each other at difficult moments. The aspect which was stressed more than any other concerned co-operation in logistics, particularly in the planning and utilisation of capacity. In the words of one supplier: "They want us to be an extension of their factory, that takes a lot of communication".²⁶ There was agreement – when I visited the enterprises in 1993 – that such customer-supplier relationships had become more common but had not yet become typical.

This was where the commonality amongst suppliers ended. Age of relationship with JW did not indicate quality. The oldest supplier (in terms of years of dealing with each other) was the most sluggish and the youngest seemed the most advanced in willingness and ability to co-operate. Two suppliers seemed to be ahead of JW in this respect, the other four seemed to be pulled along. When I confronted JW with some of the suppliers' views, the heterogeneity came out even more strongly. The first interview round with JW had brought out the company strategy; the second round showed that this strategy worked unevenly. Focusing in the interview on moments of conflict helped to test where co-operation was rhetoric and where it was practice. However, one also risked drowning in the details of specific products, orders or people involved. Behind all the details and heterogeneity, there was a common aim of solving conflict through "voice" rather than "exit". This was a significant change from the 1980s and clearly discernible in 1993.

By 1997, further change was noticeable. Amongst suppliers, the standards of quality and speed which were exceptional in 1993 had become more common in 1997. Co-operating with clients had become the expected practice. The survey (Section 5) brings out very clearly this improvement. What the survey data does not show is that co-operation has become easier for the shoe manufacturer requiring less investment of time and energy than in 1993. Business cycles play a role here. In the boom years of 1992 and 1993, suppliers were chased by their clients, the shoe manufacturers. The market turned in mid-1994 and has since favoured buyers for most inputs. There is much greater pressure on suppliers to absorb what their customers want.

Paradoxically, the diffusion of new practices amongst suppliers has loosened their bonds to advanced manufacturers. The latter have now more choice. While voice remains the preferred option, the commitment to resolve problems jointly has tighter limits, the willingness to help each other through difficult phases goes less far. JW directors underlined this by citing an example where they had given their old supplier a deadline for raising quality and reducing price. JW was able to do so because a potential new supplier offering better conditions was waiting in the wings. In the end, JW did not (have to) make the switch, but the potential was clearly there.

The talk about stable relationships needs to be seen in this light. It means neither a cushy relationship nor necessarily a long lasting connection. A comparison of JW's list of suppliers of 1992 and 1997, ranked for both years by amount of purchase, makes this very clear: of JW's 25 main suppliers in 1992 only ten were main suppliers in 1997. This statistic from a shoe manufacturer with a proven commitment to a continuous relationship with suppliers gives an idea of the turmoil which the cluster has undergone in recent years.

JW and its subcontractors

There is little doubt that the relationships between shoe manufacturers and suppliers have become more co-operative. In 1992/93 JW was one of the trail blazers. By 1997 the practice was well established though not universal. The question to be examined next is whether relationships with small subcontractors have also become more co-operative. JW affirms that they have. Is this confirmed by the subcontractors themselves? Answering this is tricky because of the asymmetry of the relationship. Some small subcontractors risk (or feel they risk) their livelihood if they speak openly about the relationship with their big 'client'. Guaranteeing them confidentiality and obtaining their trust was essential. Six subcontractors were therefore visited twice in their homes or workshops.²⁷ In JW, interviews were carried out with the production manager and two supervisors who interacted with the subcontractors on a daily basis.

In most cases there was a good match between the JW position and the subcontractors' responses. There were, however, some cases where the two diverged. The reasons are as follows: the small subcontractors fall into two categories. A core is included under the new policy of openness, co-operation and stable relationships. They receive technical assistance from JW, they are invited to JW's internal meetings on raising quality and improving flow, they are used on a regular basis; there is no guarantee of orders but there is advance notice of increases or declines of orders. This is a far cry from the past when they were deprived of any possibility of planning their own operation. In addition to this core, which receives the bulk of outwork, there is a fringe which is used on an occasional basis, suffering from all the old problems of not being able to plan in advance, having too much work at some stage and none at others, receiving minimal technical assistance and having little incentive to upgrade their own operation.

This was the situation found in 1993. Since then the policy of co-operating with a core of subcontractors has continued. Enterprises in this core have increased in size and the use of the fringe has diminished. Exchange of information and experience with core operators has become more intense, focusing in particular on improving quality and flow. JW emphasises however that the aim is not to turn the subcontractor into a mere appendage. The latter is encouraged to work also for others since ups and downs in orders are inevitable. Early warning about changes is central to this relationship. In spite of the asymmetry, the language is one of mutual respect.

The change from adversarial to a more co-operative relationship occurred in stages. The first stage was decentralisation. Until 1989, JW had a centralised system; all outwork was distributed by one central department. This was reorganised so that each subcontractor worked directly for one of the newly established mini factories within JW. In other words, the reorganisation of outwork was directly linked to the reorganisation of internal production. Since the early 1990s, JW's main factory is divided into four mini factories; three further mini factories are located in nearby villages. Each of them organises daily operations directly with its subcontractor within standards of quality, pay and speed which are set and monitored from the centre.

Greater co-operation did not automatically result from this decentralisation. Stage two started in 1992 with the explicit policy of JW to upgrade their subcontractors and introduce more transparency and stability. This included the participation of (selected) subcontractors in discussions where quality, cost or scheduling problems

of “their” mini factory were discussed. Assistance in training the subcontractors' workers also started and indeed continues.

Then there is the third stage for which it is, however, impossible to give a definite starting date. While JW was an exception in 1992/93, today it is not. An increasing number of firms seem to have recognised the benefit of greater co-operation. Making it work still requires specific efforts but the early general work of raising awareness and changing mental models is largely done. The new thinking about quality and speed is now widely diffused. The old image of the subcontractor as a mere provider of cheap labour that can be drawn upon and discarded at short notice is no longer dominant.

JW: interdependence of internal and external upgrading

This case study has provided some insights into the process of transforming relationships with suppliers and subcontractors. In order to complete our understanding of this process, we need to return to the centre of this network, to JW itself. The impression given so far is that of a pacesetter for the rest of the cluster. This needs to be qualified because JW's progress has not been smooth. They were one of the first to call for a change in supplier relations. Precisely because they succeeded in external relationships, their internal limitations were exposed. Practising openness and co-operation with suppliers, pursuing joint solutions, receiving inputs just-in-time, all these make enormous demands on internal know-how and organisation. During 1995-97, JW merely consolidated external practices and concentrated more on internal re-organisation and re-skilling. The critical internal switch was from production *lines* to production *cells*. Until 1990, the production line was considered undisputed best practice. It meant each worker dealt with one operation only, being stationed along a conveyor, which set the pace of work. To many, the removal of this pacesetter and the introduction of cell production seemed like a step back in time. Who would maintain flow and discipline? Where would the extra skills come from? In cellular manufacture a group of workers, arranged in a loop, is responsible for a sequence of operations. The group itself works out how to organise this part of the production process and decides who does what. Typically this means less fragmentation of work, workers swapping or covering for each other and hence needing the skills for a range of operations.

The advantages of the cellular approach were seen initially mainly in avoiding the monotony of line work and increasing workers' motivation. The central idea was that better product quality could only be achieved with a more involved workforce. JW management believed in the approach but initially found it difficult to make it work. In 1993 I witnessed a phase in which experiments with cells were abandoned and the conveyor was re-introduced to the despair of a messianic production manager keen on a simultaneous root and branch transformation of all internal and external production relations. The owner directors overruled him because order books were full and the production targets were in danger of not being met.

Under a more patient production manager, the cellular manufacturer became finally, in 1995, the common practice in all JW's mini factories – but only after new experiments had shown that production targets could be met reliably. More than that, JW found that the new approach improved flow because it avoided a common problem of the production line. Balancing the line so that each operation can reasonably be performed at the set pace requires considerable preparation. For a cell it is easier to find a smooth flow because the division of

labour in the cell is flexible. This advantage came to count particularly with the reduction in batch size mentioned earlier on. The combination of operations – and the length of time they take – is different for each batch. JW found that the cells both made the change-over easier and delivered a faster flow.

In retrospect this may seem obvious and easy, but – as indicated above – the process of changing from one form or organisation to another was difficult. JW had to invest more in training: the cellular approach only works if workers are trained to perform a range of operations. Labour relations also changed from authoritarianism towards greater co-operation. Managers had to show more respect for workers and workers had to assume greater responsibility. Again neither was easy. I witnessed a staff meeting at JW where a production manager resorted to authoritarian methods to impose the new approach onto the supervisors of mini factories – and subsequently failed. Finally, for the new approach to work, there need to be financial incentives. Payment systems were modified but net increases remained very small.

These intra-firm changes are a research topic in themselves and have been studied in several Sinos Valley firms (Antunes 1995; Bazan 1997; Cruz 1995; Piccinini 1995; Roesch 1995). They are mentioned in this study on inter-firm organisation because we are concerned with the process of change in response to global pressures. Three features are central to this process: (1) in order to raise quality, speed and flexibility, both intra- and inter-firm change is needed. This is now undisputed but was barely recognised until the early 1990s. (2) Both compete for scarce management resources. This may seem rudimentary but is only beginning to be taken on board.²⁸ (3) Both are inter-dependent. It remains however to be established how far this inter-dependence goes and whether there are optimal sequences. In theory the reorganisation should start internally and then be taken outside. In practice, the external pressure that comes from co-operating more closely with suppliers and buyers can be the trigger for internal change. Conclusive answers can only come from observing more firms over a period of time.

6.2 Case study of a small shoe firm and its suppliers

The survey results reported in Section 5 show a clear trend towards more vertical co-operation. The case study of JW, a large shoe manufacturer, helped to understand how this process unfolds. A similar exercise was carried out for a small shoe manufacturer with 40 workers. The first question was whether the small enterprises face the same challenges. Whereas large enterprises produce mainly for the export market, small enterprises operate more in the internal market. There is, however, no rigid dividing line. A survey of 50 enterprises of up to 100 workers, carried out in 1993, showed that 40 per cent of their output was exported (Peasgood and Schmitz 1994). It also showed that within this size category, the smaller the enterprise the smaller the percentage of output exported; it was zero amongst enterprises of less than 10 workers.

Producing for the internal market does not mean that producers can escape the demands of the new competition. As pointed out by Humphrey (1998), in recent years Brazil has gone through a phase of 'quality mania'. Respondents have confirmed that this is also noticeable in the shoe trade where retailers demand higher quality from manufacturers. This is however hard to quantify and there are enormous variations because the internal market is fragmented. The change is clearer and more pronounced in the issue of speed of delivery. In line with international practice, Brazilian retailers have cut down stocks and try to place orders as close as

possible to the point of sale. This process began around 1988–1990 and then accelerated. By 1993, the shoe business was transformed. Traders and producers who used to think in terms of months, had to count in terms of weeks and then days. The market was pulling shoemakers and suppliers into ever smaller orders and shorter delivery times.

Coping with small orders was not a problem for the small manufacturers but timely delivery was. Late delivery has always been penalised in the export business. Deadlines in the internal market were taken less seriously, but this was to change in late 1993/early 1994. Ironically it was inflation which had a ruthless disciplining effect. The suppliers of the shoe industry had imposed prices fixed in US dollars (though invoiced in cruzeiros – the Brazilian currency at that time) whereas the shoe manufacturers' own sales were negotiated in cruzeiros for future delivery dates (prices included the anticipated rate of inflation). If delivery was late, the loss in real terms was around one per cent for every day of being late (as mentioned before, inflation was running at one per cent *per day*). To put this in perspective, net profits were approximately ten per cent of sales if delivered on time.

Since then the situation has eased, inflation is down to less than ten per cent *per year* and the internal market has been growing, whereas exports suffered from an over-valued exchange rate and a stagnant market in the US and Europe. The main point to retain is that the semi-dollarisation of 1993/4 imposed international standards of speed and punctuality in the internal market, which is the main market for small manufacturers.

How did the small enterprises respond? Did they establish closer vertical links? In order to find out I concentrated on a manufacturer (henceforth called PL) and his relationships with suppliers and sub-contractors. PL had 40 workers, produced mainly for the internal market and relied heavily on buying in inputs and services. In this sense his operation mirrored that of most small firms in the Sinos Valley. In comparison with most other small producers, PL was however better organised internally and more likely to succeed in establishing co-operative relationships with suppliers and sub-contractors. In-depth interviews with the owner-manager were carried out in 1993 and 1997; additional insights came from discussions with other small shoe manufacturers. Particularly critical to the assessment of co-operation were interviews with four suppliers and four subcontractors of PL.

PL and suppliers

As stated above, appreciating the pressure to shorten the time between order and delivery is the key to understanding relationships with suppliers. In 1993, PL (and other small producers) stressed that the balance between time management spent inside and outside the factory was changing. The attention given to some of the input suppliers had increased, visits were more frequent and the knowledge of the suppliers' problems had improved. However, interpreting this as a sign of more co-operation is only partially correct. The time given to such relationships often had only one objective: to secure a slot at the right time in the supplier's production schedule.²⁹

In order to understand this feature of the relationship and the process of change, it helps to refer again to business cycles. In the boom year of 1993, the shoe manufacturers were 'courting' their suppliers. The initiatives for closer relationships tended to come from the customers. The pendulum began to swing the other way in late 1994 and since then the initiatives to improve relationships has come more often from suppliers. Indeed, by

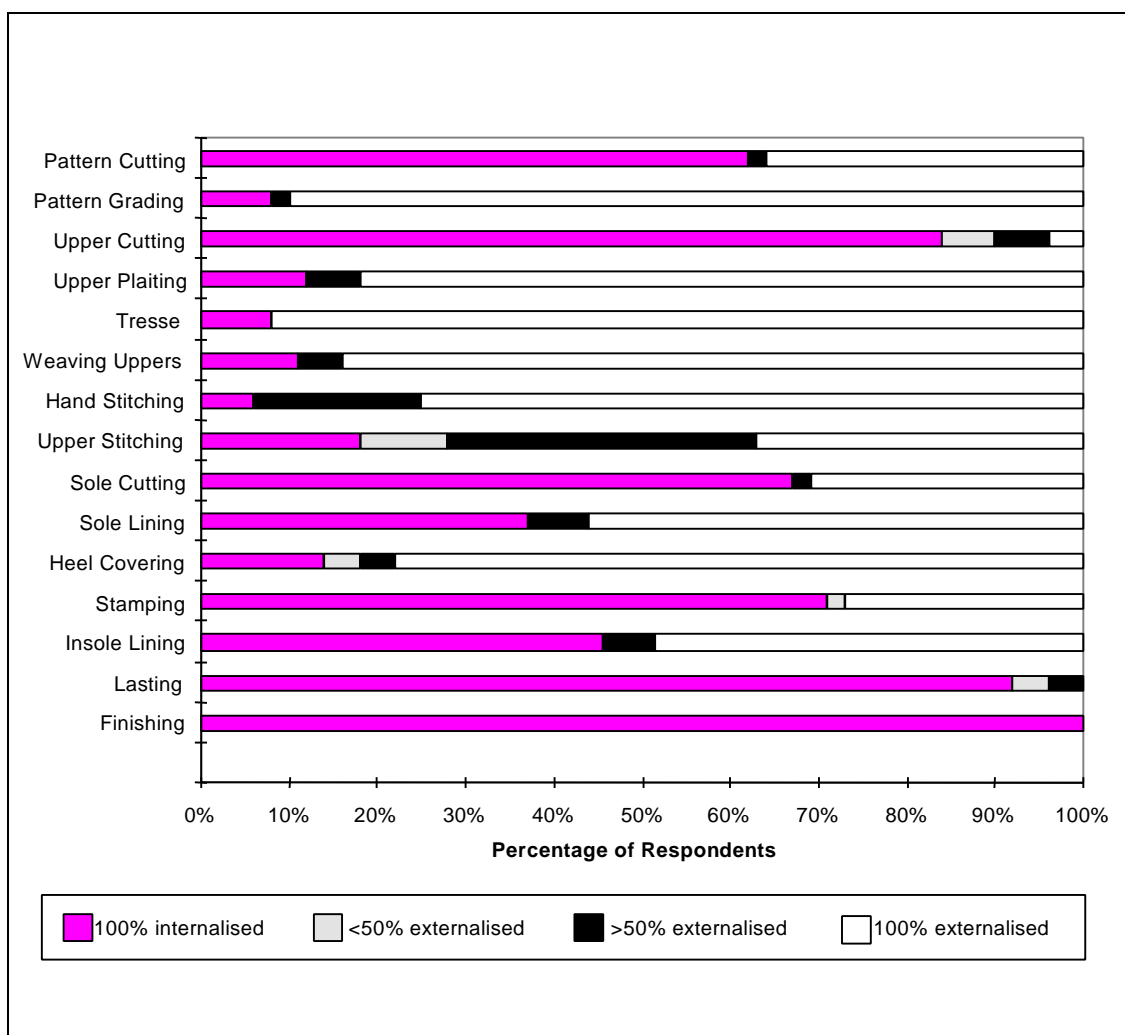
1997, most suppliers were competing not just on price, but also on quality, timeliness, and some even on technical assistance.³⁰

This brings to the fore another feature of the process. Because the new practices were more widely diffused by 1997, PL felt that co-operative supplier relations required less effort on his part. This is not just PL's perception, other manufacturers expressed the same view. The survey data on increases in co-operation with suppliers (see Table 7) need to be seen in this light. In making this link between diffusion and effort it is important to stress that the size of the cluster is such that for each type of input there are several competing suppliers.³¹

PL and subcontractors

In comparison with large and medium enterprises, small manufacturers in the Sinos Valley draw more heavily on subcontractors. Figure 7 – based on survey data – shows the extent to which they externalised their production tasks in 1992-93. PL was amongst those relying heavily on subcontractors; for example, the stitching of uppers was 90 per cent farmed out in 1993. His 1997 levels were similar.

Figure 7: Externalisation of production tasks by small firms (%)



Source: Author's survey of 50 enterprises with up to 100 (internal) workers, carried out in 1992-93

How co-operative were these relationships and did they change over time? PL stressed on both occasions (1993 and 1997) that he maintained good relationships with his subcontractors and that it was in his interest to do so.³² This took the form - according to PL - of giving advance notice about changes in demand, bi-monthly meetings to discuss problems and technical assistance.

The responses of the subcontractors were not entirely consistent with PL's version. They stressed that PL had a better reputation than most small manufacturers and that they sought to work for him because he was well organised and always paid on time. In other respects, however, their description of the relationship had less to do with co-operation or partnership. In their perception, the bi-monthly subcontractor meetings were occasions to which they were summoned and where they were lectured at or reprimanded about mistakes; technical assistance - they felt - was rarely more than instructions which the driver gave when he delivered the parts; and advance notice about ups and downs was not general practice; two subcontractors had experienced it and the other two had not. Indeed, the main impression was one of instability in order levels and relationships.

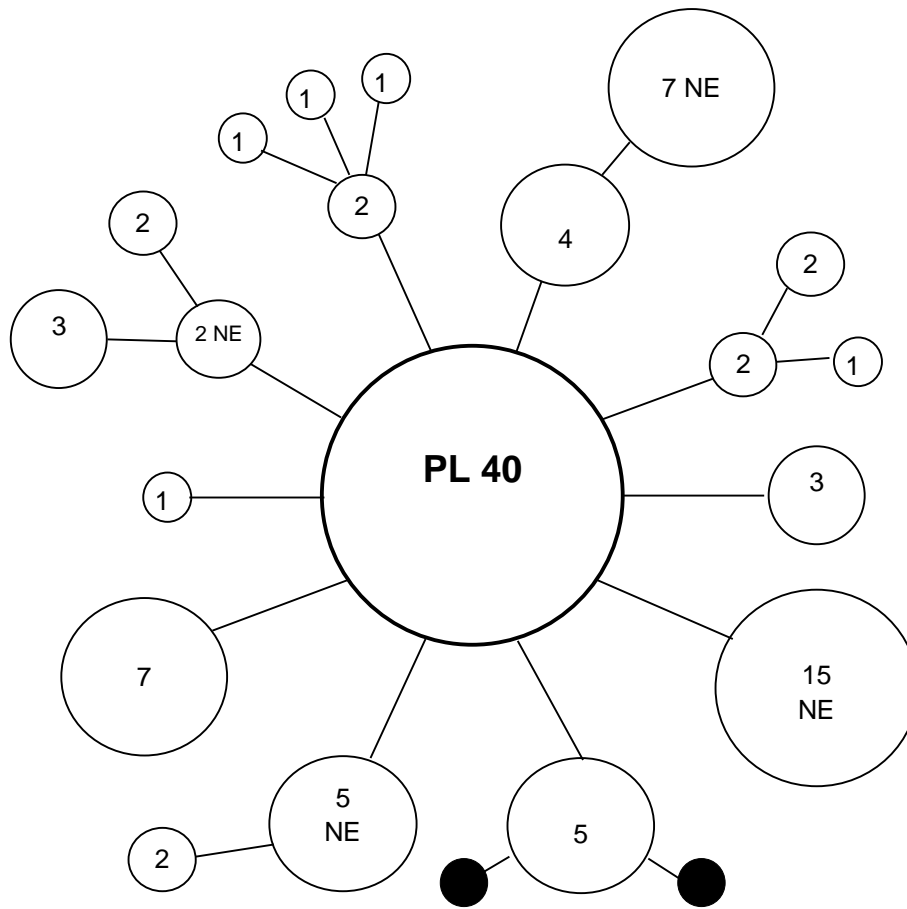
In order to understand the difficulty of establishing co-operation in this part of the industry, two of its features need to be highlighted. The first is seasonality. All enterprises suffer fluctuations but small enterprises seem to contract and expand most with seasons and fashions. For example, PL's internal labour force contracts by half (and then expands again) in most years. This fluctuation extends to his subcontractors who can be divided roughly into two halves, a regular core and frequently changing workshops.

A second feature which makes co-operation difficult is the 'pulverisation' of subcontractors. A small enterprise, like that of PL, was dealing with ten subcontractors directly and more indirectly. Figure 8 underlines the multiplicity of relationships and the small size of the establishments, most of which consist of between one and seven people working in their garage, backyard or living room, and some of which pass on part of the work to the next layer of self employed pieceworkers.³³

To conclude, the survey suggested that co-operation between shoe manufacturers on the one hand and suppliers and subcontractors on the other had improved substantially, irrespective of the size of enterprise. The purpose of the case studies was to detect the reality of this co-operation and the process through which it evolved. This section focused on PL because he was acutely aware of the demands of the need to upgrade, was well organised internally and was strategic in organising relationships with suppliers and subcontractors. If co-operation existed in the small firm segment one would expect to find it here. The case study showed that, while PL may be small in comparison with JW, he 'calls the shots' with regard to his subcontractors who operate from their backyard, garage or living room. They all suffer from instability but there is a core - about half - of subcontractors who works regularly for PL and receives advance notice of changes in work levels; learning however tends to be of the grudging type resulting from PL's reprimands rather than an interactive process. By comparison, JW's regular core was substantially bigger, not just in absolute but also relative terms, and enjoyed a more pronounced change to co-operative practices.

As regards supplier relations, there is the obvious difference that large clients such as JW have much more leverage to improve relationships. JW was shown to be particularly active in this respect: key lessons were the management intensity of a change to co-operative supplier relations and the interdependence of intra-firm and inter-firm upgrading. Small manufacturers like PL also sought closer relations with suppliers but this was driven more by despair of obtaining supplies than by an agenda of learning-by-interaction.

Figure 8: Subcontractor network of small shoe manufacturer



Note: The numbers in the circles refer to the number of workers in each establishment. 'NE' means not working exclusively for PL in the month of the interview.

Source: Author's fieldwork

A common experience of both PL and JW is that the effort required to obtain their suppliers' co-operation has diminished with time. This is partly a result of business cycles, partly a result of co-operative practices having become more common. Clients can now expect it from their suppliers without major investment in the relationships. The sheer size of the cluster which allows space for several competing suppliers (in all inputs) has been essential for this to occur. Where such circumstances apply there seems to be a general lesson: vertical co-operation, that is relationships which imply more than exchange of goods and which require a mutual commitment and purposeful learning by interaction, is particularly critical when a substantial change in behaviour pattern is required.

The individual enterprise has the choice between lamenting the status quo and doing something about it. The latter is only possible with a few selected partners and – as seen in the case of JW – requires commitment to these partners and investment in these relationships. Once the new practices are more widely diffused, less effort is required to achieve the same result. This point crystallised in discussions with free riders. They confirmed that suppliers have become more customer-oriented but then added: this is not due to co-operation or partnership, but market forces!

7 MULTILATERAL INITIATIVES

This section is concerned with *multilateral* joint action, both of the horizontal kind (amongst shoe manufacturers) but also of the vertical kind, that is, involving *groups* of firms representing different stages of the value chain (tanners, component producers, shoe manufacturers, etc.).

Associations and other self-help organisations have played an important role in the history of the Sinos Valley (Bazan and Schmitz 1997). It shows particularly in the periods when this cluster broke into new markets. Holding trade fairs was critical to its ability to conquer distant *national* markets. It was multilateral horizontal co-operation in the early 1960s that gave rise to these trade fairs. They continue to be held twice yearly, organised by FENAC, a professional trade fair organisation. FENAC and the local Business Association also played a major role in the late 1960s/early 1970s, 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 indeed declined. As set out elsewhere (Schmitz 1995b), the export agent became the critical actor in connecting a distant cluster “tucked away” in South America to the North American market. Cluster wide co-operation all but disappeared in the 1980s. The reasons were the strategic role of outsiders (most export agents were American) and the increasing differentiation by size and specialisation within the cluster. With the rise in shoe exports conflicts of interest became unavoidable: for example, shoe manufacturers wanted easier access to inputs and equipment from abroad while local suppliers fought against it; the needs of large shoe exporters differed from those producing for the internal market. As a result, five new and separate associations were formed by the tanners, the synthetic component producers, the machinery suppliers, the export agents and the large shoe manufacturers.

Such splitting up into separate associations is a common occurrence and a natural outcome of differentiation in the economy. The problem is that there ceased to be a concern for the cluster as a whole. The new associations were more concerned with defending the interests of their sub-sectors than with common problems. This occurred partly because conflicts amongst the sub-sectors were real and partly because each association sought to project itself. In the words of an angered manufacturer (interviewed in 1992): “This is the most dis-united sector in the world”. This changed subsequently and an impressive alliance emerged. But it failed in the end for two reasons: some key players were more committed to global than to local partners and the state failed to mediate at key moments. As a result, an ambitious but feasible strategy of cluster-wide upgrading collapsed. The story is specific to the Sinos Valley but the causes of failure are probably not unique.

7.1 Successive delays in joint action

This section focuses on cluster-wide responses to global pressures. Since the concern is not just with outcome but also process, it is important to register delays in responses – particularly when delays stretch over several years. Time lags can arise between (a) new events and perceiving them, (b) perceptions and action, and (c) action and results. Much of this section is about how and why the process got stuck at stage (b). Let us recall that the Chinese squeeze began to be felt from 1988 onwards. It took several years for joint cluster-wide initiatives to emerge. A brief chronological account might help. In 1991, some entrepreneurs and association officials tried to set up an Industrial Chamber (*camara*) which would bring the separate associations together.

This failed. In 1992, the Federal Government provided a concrete opportunity for collaboration amongst all institutions involved. The Government launched a 'Quality and Productivity Programme' in which all the above mentioned sectoral institutions were expected to play a role. They produced joint terms of reference which specified a range of activities and identified lead agents, but there was little follow up.

In 1993, the Brazilian Association of Shoe Producers (ABICALÇADOS) organised a seminar entitled 'Partnership in the Footwear Supply Chain', a two day event which was well attended and included some of the most influential industrialists of the supply chain. I was allowed to participate and was impressed with the sense of strategy that emerged from some of the presentations and contributions. Indeed, the seminar provided a rare opportunity to capture views and perceptions, in a way that visits to individual enterprises cannot provide or only at an enormous cost. The researcher's dream (or nightmare!?) came true, many of the key informants were in one (large) room for two days, debating how to respond to the Chinese threat. In terms of the dynamics of the seminar, it was most fitting that one of the first speeches was a blast from the past. It was given by the representative of one of the largest enterprises who had not grasped what the event was about. The speech was a litany of complaints about the lack of attention and support from the Federal Government. Judging from reactions amongst the seminar participants (especially informal reactions gathered during breaks), this was dismissed as the old-style whining and clamouring for outside help instead of concentrating on self-help.

The rest of the seminar was mainly concerned with ways of improving relationships between enterprises and between associations. The common thread running through the presentations and discussions was that raising quality required more constructive relationships between all stages of the supply chain. Significantly, all relevant associations were represented, reported on obstacles they confronted and made proposals for co-operation. The spirit and discourse in late 1993 was markedly different from previous years. In terms of the above categorisation of time lags, the seminar showed that the cluster had reached stage (b). The perceptions were utterly clear but would they be translated into joint action?

The seminar helped to prepare the ground for the 'Shoes from Brazil Programme' (Programa Calçado do Brasil) which was launched in 1994. This initiative was formally endorsed and actively supported by *all* the relevant associations. It proceeded by setting up six working groups each with a brief to diagnose, make proposals for action in specific areas such as marketing abroad, marketing in Brazil, reorganisation at the firm level, relationships within the supply chain. All working groups reported back to a joint seminar in December 1994. An analysis of these reports³⁴ confirms the clear perception of the new challenges and shows some ideas of how to respond.

But more important than what these reports said was how they were put together. They were the joint product of groups which consisted of shoe manufacturers, suppliers, association officials and consultants from the university. Precisely because the main stakeholders participated in the diagnosis and prescription, there was a good basis for proceeding to the next stage of implementing some of the ideas put forward.

This did not happen. On the contrary, 1995 was a year of collective inaction. It was only in 1996 that this alliance across the value added chain was reactivated. Why the delay? Why the *slow* process? The main reason was that an influential section of the local shoe industry was no longer interested in collective efficiency. It consisted of some of the largest enterprises who had integrated vertically and thus reduced their dependence on the cluster. Their hidden influence on collective initiatives will be analysed later on.

In view of the divisions amongst shoe manufacturers, it is perhaps not accidental that the supplier industry became the driving force behind the next round of cluster wide initiatives. The impetus came from the Association of Component Producers (ASSINTECAL) led by some large suppliers of chemical inputs (glues, dyes, synthetic soles, etc.). Between them, they had the entire shoe industry as their customers and were concerned about the threat to their clients from foreign competition and over-valued exchange rates. These suppliers played a critical role in the re-launch of the 'Shoes from Brazil Programme' in 1996. This took the form of four workshops. I shall focus on one of them entitled 'Collective Efficiency in the Value Added Chain'. I was fortunate to participate in this event, in fact I was the main speaker. This afforded a rare insight into the process of forging a coalition and the difficulties in bringing about effective joint action.

The billing of the event was impressive.³⁵ Its promotion in the press, on radio and TV was in terms of: there is a global challenge - how do we respond locally? Being presented as a joint initiative of all associations (which it was) also helped. The turnout was excellent - some 150 people attended: owners and managers of shoe firms and their suppliers as well as the heads of related support institutions and consultancy firms. The reports in the press were supportive and constructive, picking up one of the main themes of my talk, namely the Sinos Valley's achievements of the past and the seeming failures of the present. I had expressed the latter by way of questions to the audience: how come there was such a clear perception of the problems on the one hand and successive delays in responding on the other?

When I addressed a similar open seminar of industrialists, association officials and consultants a year and a half later in October 1997³⁶ I had to rephrase my question: how come the 'Shoes from Brazil Programme' had fallen apart. While still existing formally, the programme had become irrelevant. The seminar itself underlined this. The attendance was poor, only 50 people attended and few of them were influential. In my talk I stressed the impressive increase in bilateral vertical co-operation but concluded with an invitation to the audience to join me in a post-mortem of the 'Shoes from Brazil Programme': why had it failed? While nobody objected to the question itself, the public discussion did not yield the answer.

In contrast, in the course of individual interviews, the reasons began to emerge – but often only after reminding the respondents that the discussion was confidential and that sources would not be named.³⁷ While there were differences of views on some aspects of the programme the responses led to the same main reason for its demise: the largest enterprises were not interested in it succeeding. Whilst not boycotting it openly, their lack of support and – in some instances – obstructions led to its demise.

7.2 Collective failure and its causes

The obstructing enterprises were small in number: five. Given that the Sinos Valley has several hundred shoe manufacturers two questions arise: why did these five enterprises matter so much? And why did they not identify with the others? Answering these questions is critical to understanding the lack of progress in multilateral co-operation.

The position taken by the five enterprises matters because they are both admired and feared by the others. They are admired because they have been so successful. They started as small enterprises two or three decades ago and today are amongst the biggest shoe manufacturers in the world. In 1996, they ranked as the five biggest

shoe exporters of Brazil, with a joint total export of \$410 million. Even during the recent difficult years (referred to earlier) they were able to continue to grow and increase their share of Brazilian exports from 15 percent in 1994 to 25 percent in 1996.

They are feared for two reasons. They are known to have collaborated very closely amongst themselves, practising openness towards each other but being inaccessible to outsiders. More importantly, they have a special relationship with the main buyer of Brazilian shoes, the US company NW. For historical reasons these large local firms and NW have a strong commitment to each other. The five manufacturers export virtually all their shoes through TP, the Brazilian arm of NW, but the latter also has other suppliers in the Sinos Valley. It is hard to be precise on the clout of NW but a respondent who specialises in export cargo handling for the local shoe industry estimates that the company absorbs at least 40 percent of local exports. Being a NW supplier is most manufacturers' dream. Actually becoming one does not just require excellence in production but also towing the line of the preferred suppliers (the five largest manufacturers) when controversial issues arise.

The combined effect of the admiration and fear helps explain the clout of these large enterprises. The next question is why they have not used this clout to strengthen cluster wide co-operation. Two propositions are worth considering: first, such co-operation is against their immediate economic interests; second, the lack of co-operation results from the mental models which guide their action. My conclusion is that the second proposition applies but it is to some extent conditioned by the first. Let me elaborate.

The five largest enterprises were, like virtually all others, small in the early 1970s. Their initial growth was in good part due to the advantages which the cluster afforded (Schmitz 1995b) However, once they reached a certain size they reinvested their profits by integrating vertically. Unlike the majority of enterprises they reduced their dependence on the cluster for the supply of inputs. This strategy was encouraged by their main buyer who needed reliable large supplies produced to tight specifications and made a commitment to absorb virtually their entire output. Hence, neither for the supply of inputs nor the sale of outputs was there a need to co-operate with the rest of the cluster. In this sense, their lack of interest in the 'Shoes from Brazil Programme' reflected their objective economic interest. But did it?

Competitiveness is not achieved once and for all. It requires continuous upgrading. The 'Shoes from Brazil Programme' sought upgrading not just in production but across the whole value added chain, in particular marketing initiatives such as strengthening design capabilities, establishing Brazilian brands, collective participation in the world's major fairs and diversifying markets. The question is why the major companies did not regard this as being in their own long term interest.

My proposition is that this is about mental models.³⁸ The model which had served them well for many years was internal hierarchy and external dependence. Within Brazil they avoided dependence on others, integrated vertically and attained supreme control over the entire production process. For marketing they were willing to rely almost exclusively on one US outlet – a dependence which can only be described as extreme even if there were strong personal bonds with the external buyer. Not challenging this division of labour is part of this model of being an internal ruler and external dependent. In contrast the central idea underlying the 'Shoes from Brazil Programme' was interdependence among local actors and moving up the value chain.

7.3 Two associational approaches

These two mental models exist side by side in the Sinos Valley and are reflected in two of the main local associations. In ABICALÇADOS, the shoe manufacturer's association, the first model gained the upper hand whereas in the ASSINTECAL (the association of component manufacturers) the interdependence thinking prevailed. Both associations are very active, both employ an executive director and small clerical staff, both have been useful for their members, ABICALÇADOS mostly through lobbying government and ASSINTECAL more by providing services. Providing a full account of their work is not the objective here (and in any case not easy because the level of activity varies with the association president). The purpose here is to contrast two associational approaches and then show how this affected cluster-wide co-operation.

The profile of the shoe manufacturers' association has since its beginning been determined by the largest manufacturers. In itself this is nothing unusual, strong associations require the involvement of strong enterprises. In the case of ABICALÇADOS however they have used their influence more to control the sector than to promote it. This is not to deny certain benefits for the industry as a whole. For example, a former US ambassador in Brazil was contracted to lobby for ABICALÇADOS in Washington – relevant particularly during bouts of protectionist fever, in the 1980s. The largest manufacturers were the driving force behind this initiative but all exporters benefited.

At the same time, ABICALÇADOS was also an instrument of control for the largest enterprises. While not easily visible it can be detected in their opposition to initiatives which aim to change the status quo. The 'Shoes from Brazil Programme' was the most ambitious initiative to change this status quo. An attempt within this programme to improve the leather supply for the shoe industry as a whole was blocked (detailed in the next section); and attempts to advance the cluster's design and marketing capacity were not supported. According to some respondents the large vertically integrated exporters regarded the rest of the cluster as a nuisance.

This view is rarely openly expressed but the association gave the large manufacturers an instrument to control the sector when they felt it necessary. The president of the association either came from one of these enterprises or needed their support to be elected. While formally an open contest, the largest enterprises had *de facto* a veto over who became the president. Those in control had no real interest in promoting the sector as a whole, let alone changing the position of the cluster in the global value chain.

These observations are not driven by a naïve idea that successful entrepreneurs should neglect their self interest and promote the common good. The critical distinction is between successful entrepreneurs who regard their local economy as a hindrance and those who regard it as a source of strength. The leaders of ASSINTECAL approximate the latter.

As input suppliers they recognised that their own prospects depended on the well-being of their customers, the shoe manufacturers. They were the driving force, in terms of finance and time, behind the 'Shoes from Brazil Programme'. They believed that ABICALÇADOS was pursuing the same objectives – until they discovered that, when it came to the crunch, the shoe manufacturers' president was not on their side. Disillusioned, the presidency of ASSINTECAL then concentrated on its own subsector and partnerships with other collective institutions.

The key differences between the two associations are drawn together in Table 12. This contrast cannot do justice to the two associations not least because they changed over time.³⁹ The diagram does however capture the main differences in 1997. More than that, these differences reflected the different mental models which guided the dominant industrialists in both associations.

Table 12: Profiles of two associations, 1997

	ASSOCIATION OF SHOE PRODUCERS (ABICALÇADOS)	ASSOCIATION OF COMPONENT MAKERS (ASSINTECAL)
Ambition of leaders	control cluster	promote cluster
Membership	exclusive	inclusive
Main purpose of association	defend	provide services
Marketing support	passive	active
Technology support	ignores technology institutes	partnership with technology institutes

The leading shoe exporters' concern with *controlling* the cluster and the component manufacturers' attempt to *promote* the cluster has been stressed. While the latter failed within the 'Shoes from Brazil Programme', the idea that progress means accepting interdependence and moving up the value chain shows in other ways. Take marketing: ASSINTECAL helps its members to exhibit at key national and international trade fairs. This has included negotiating with fair organisations an attractive collective exhibition space and price, and negotiating financial support from SEBRAE (Brazilian Small Enterprise Service), particularly for smaller member firms. Contrast this with the passive attitude of ABICALÇADOS: a major and regular joint Brazilian stand at the key international shoe fairs was often talked about but did not materialise. I was able to confirm this at the international shoe fair in Düsseldorf (the main fair for the European market) in March 1997. Of the total of 1,612 exhibitors, only seven came from Brazil, that is 0.43 percent.⁴⁰ Statistics for previous and subsequent fairs show a similar picture.

Marketing is only one example where the associations differ. The ethos of ASSINTECAL is to provide services which help their members to innovate and break into new markets. This has not always been the case. The new vision is propelled by the competitive pressure (imports of components increased because tariffs have been reduced to 12 per cent) and the form it takes is influenced by the leading entrepreneurs. Their position is reminiscent of Porter (1990): competitiveness grows out of having a strong pool of local enterprises. Indeed they seek to broaden the membership of their association to include small and medium sized enterprises. Membership doubled from 40 in 1993-4 to 80 in 1997-8.

In contrast, attempts of ABICALÇADOS to increase its membership remained half-hearted and it stagnated at around 80. Set this against the total of almost 400 shoe producers in the Sinos Valley.⁴¹ The absentees include not only the small but also the medium sized enterprises.⁴² They saw no point in joining. The general perception was that ABICALÇADOS was the 'club of the big firms'. My point is that amongst the big, a group of five enterprises with a particular agenda called the tune. They had no real interest in promoting the sector as a whole, let alone changing the position of the cluster in the global value chain. Criticism of

ABICALÇADOS was expressed from within and outside the association. Perhaps the most incisive statement came from one of the most active associates who concluded that the association had lost its way.

In conclusion, this section has examined whether industry in the Sinos Valley responded to the new global competition through multi-lateral co-operation. It has shown that there is a clear perception of the challenges and of the need for joint action. There was also a clear idea of what concrete steps needed to be taken. Both the challenges and required responses were formulated succinctly in the Strategic Plan of the 'Shoes from Brazil Programme'. The programme even had a mission statement: "To promote joint action which raises the competitiveness of the Brazilian leather-shoe supply chain".⁴³ This programme was not imposed by outside consultants or government organisations but emerged from within the industry. This in itself was an achievement, but ultimately the programme failed due to five very large and influential shoe firms no longer dependent on the cluster as a whole. They started as small enterprises three or two decades ago and were able to grow because of the advantages that the cluster afforded, but once they reached a certain size they reinvested their profits by integrating vertically. While reducing their economic interaction with the cluster, they maintained a political influence over the cluster through their dominant position in the Association of Shoe Manufacturers. They did not use this influence to advance joint action for upgrading; on the contrary, at decisive moments they held it up. As a result, the multi-lateral programme for upgrading along the value chain collapsed. The following section suggests however that the anatomy of collective failure is incomplete without considering the role of public agencies.

8 THE ABSENT MEDIATOR

Collective failure is not rare but the collapse of the "Shoes for Brazil Programme" is unsettling for all those who believe in the importance of inter-firm co-operation for economic performance. The Sinos Valley has such favourable conditions for joint action. There is a long history of co-operation in the Valley. A previous paper (Bazan and Schmitz 1997) has shown the importance of social capital for local economic growth. This social capital was critical for the establishment of local self-help institutions. Indeed, the Sinos Valley is probably a prime example of "institutional thickness". The formal institutions include six sub-sectoral associations and two professional associations, a trade fair organisation and four technology and training centres.⁴⁴ The institutions recognised that there were certain strategic tasks which they could not resolve individually. Yet the main attempt of multi-lateral co-operation along the value chain failed as shown in the previous section. The question is whether this was a necessary or predictable outcome. I believe not. There were instances in the evolution of the programme which could have triggered an upward rather than a downward spiral in co-operation. In other words, there were moments when the programme could have gone either way. Informed political mediation was required for the alliance of private sector institutions to work. But government agencies did not recognise their opportunity of industrial policy by mediation.

There was agreement among the respondents that the issue over which the alliance across the value chain finally unravelled was the export of semi-processed leather (wet blue). In the course of 1996, leather exports were increasing fast, infuriating tanneries specialised in final processing and also shoe manufacturers. Their concerns were that (a) local raw material prices rose, (b) the best leather was exported, especially in the

specification needed for high quality shoes, and (c) most of this leather went to the countries which were Brazil's main competitors in the international footwear market – especially Italy and Hong Kong (for re-export to other Asian countries).

It is hard to judge the immediate effect on the shoe firms because some of them imported leather from other countries. Local tanneries specialised in final processing certainly were affected in a direct and immediate way. Such weakening is of concern also to the shoe industry best illustrated by the Italian experience. It is widely recognised that the competitiveness of the Italian shoe industry depends critically on its sophisticated tanning (and component) industry. The increasing export of semi-processed leather by Brazil was thus clearly a value chain issue. Indeed it became a test case for the “Shoes from Brazil Programme”. Within the Programme, ABICOURO, the tanners' association, took the lead in negotiating a solution.

The proposal which they put forward was that a 7% export tax should be levied on semi-processed leather. The reasoning came from a differential in EU tariffs of zero import tariff on semi-processed leather and 7% import tariff on finished leather. This EU regulation clearly benefited the Italian (and other European) tanners so the proposal that the Brazilian government should counterbalance the differential seemed modest and reasonable. Yet it caused an enormous fight – widely reported in the local press.

This is not the place to set out all the dimensions of this conflict, except one. The largest shoe exporters contributed to the downfall of the proposal. As mentioned earlier, they had integrated vertically and had established their own tanneries (to some extent supplied with hides from their own cattle ranches). They were also trading in leather beyond the needs of their own shoe factories or tanneries. They favoured complete freedom to export (without export tax on wet blue) and were able to obstruct a negotiated settlement. Their influence in ABICALÇALDOS led to the President of the association withdrawing its support for the proposal. They also used their political connections in the federal and state government to kill off the proposal. They had financed the election campaigns of local representatives in the federal and state assemblies and “cashed-in” on their investment in this wet blue export conflict. This is not, however, the main point in this section.

To understand the key point it is important to realise that the fight over the wet blue exports was a close contest. Public agencies and figures were asked to mediate in this conflict. I witnessed this almost desperate call for public mediation at a meeting of industrialists and association officials in June 1996⁴⁵. In the end these calls failed. It is tempting to refer to the political influence of the large exporters as the main reasons – or blame the lack of unity between the associations representing the industries concerned: ABICOURO, CICB⁴⁶, and ABICALÇADOS. But such conflicts are common, as is the attempt to buy political influence.

My main message is that there is no capacity within government to assess different claims and assess their validity and likely impact. Nor is there much interest in building up such a capacity. Neither at the federal, nor at state level does a serious attempt exist to conduct industrial policy. Neo-liberalism might be on its way out in Washington (World Bank 1997) but it continues to dominate in Brazil, a country which used to practice an active industrial policy. The actors involved in the “Shoes for Brazil Programme” were not hoping for a return to the old-style top-down industrial policy. On the contrary, they had taken the initiative, they had done the institutional groundwork, they had explicitly recognised their interdependence in the value chain, they had created a forum for discussing their differences. But here was a case where they could not overcome their differences. What they were hoping for was intelligent mediation by a public actor. This did not materialise. The

repercussion was not just defeat in the wet blue conflict but – because of the symbolic importance of the conflict – the “Shoes from Brazil Programme” lost credibility and support.

The demise of the programme gives rise to a wider question. If cluster wide joint action across the value chain did not work here, can it work anywhere? The answer seems to be that sectoral governance – this is what the “Shoes from Brazil Programme” aimed at – cannot be left to the private sector alone. Even where the private sector institutions are well developed, government plays an important role as a regulator and mediator.

This seems particularly important when some of the actors are not local, as illustrated by the wet blue conflict. The leather trade is important not just in the South of the country (where the Sinos Valley is located), but also in the North East and Centre-West. The latter regions have weaker linkages between producers and users of leather so it is not surprising that they preferred untrammelled export of semi-processed leather. Without public mediation and regulation, this time at the federal level, private co-operation is hard to attain.

Informed mediation did not take place. Instead, government adopted the position that, since the private sector could not agree, it would take no action – which was conveniently in line with the dominant neo-liberal sentiment. In fact, those opposing the export tax campaigned in the press with an explicitly neo-liberal manifesto: 'the free market with its potentially perverse effects – is better for the private sector than a situation of state intervention' (*Exclusivo*, 3-9/06/96).

To conclude, it is impossible to know whether private multi-lateral co-operation would have succeeded with public mediation. It is, however, clear that with public mediation there would have been a much greater chance of overcoming private conflicts. While this section focussed on a specific conflict, certain configurations of this conflict are probably fairly common (for example, some private actors being not local or some local actors having very close ties with foreign firms). In other words, searching for the causes of collective failure in the private sector alone is unhelpful.

9 THE CENTRIFUGAL FORCES OF GLOBALISATION

A previous paper on the shoe industry of the Sinos Valley referred to it as a 'supercluster' (Schmitz 1995b). The fast growth of the export industry, especially during the 1970s and 1980s, had given rise to a deep structure of suppliers of products and services. As shown in the previous sections, interdependence within the cluster increased in the 1990s. Bilateral vertical co-operation increased significantly. Multi-lateral vertical co-operation was attempted but failed. Other strains in local linkages have become apparent, including the disruption of some linkages. They all have a common cause: enterprises at all stages in the value chain have been sucked into global competition. If during the easy phase of globalisation (1970s and 1980s) centripetal forces seemed to dominate, the question is whether the current phase of globalisation has unleashed above all centrifugal forces which threaten to pull the cluster apart. This section cannot give a conclusive answer but provides some further insights into how global forces affect local relationships.

9.1 The local machinery industry: decline and conflict

Global competition does not just affect the shoe producers but enterprises at all stages of the local supply chain. There is widespread agreement that the subsector which suffered most is the production of machinery for tanning and shoemaking. Most enterprises in this subsector started as workshops carrying out mere repair and maintenance. The transition to manufacturing machinery started in the 1960s and accelerated in the 1970s and 80s. The *proximity* of a critical mass of customers and protection from external competition provided a captive market. Protection took mainly the form of the “similarity law” (*lei do similar*) which meant that imports of a type of machinery which had a local equivalent would carry a 60 per cent tariff and other taxes.

In the 1990s, the subsector declined for a number of reasons: first, the shoe industry stopped growing. Some shoe enterprises continued to expand but others went out of business. The latter fuelled a boom in the trade of second-hand machinery. (In 1993 I counted over 20 local dealers of used, sometimes reconditioned, machinery). Process innovation in shoe making was more organisational than technological. As a result, demand for new machinery increased relatively little.

Second, some large shoe enterprises broke the “similarity law”; in other words, these enterprises imported machinery duty free even though local equivalents were available. It seems that fiddles and corruption were at play. For example, the specification in the import request did not always match with the machines that were actually imported. It is hard to be precise and definitive about such practices, but interviews with machinery producers and other independent sources confided that this led to unprecedented tension between shoe and machinery enterprises, particularly in 1993.

Third, import liberalisation, particularly from 1993 onwards, meant that the industry lost much of its formerly captive market, in particular due to competition from Italy. According to data from the Machinery Producers' Association (ABRAMEC), the number of affiliates had shrunk by 38 per cent and the number of workers in affiliated enterprises by 70 per cent over the period 1993-1997. Machinery producers suggested they also suffered from a “foreign is better” mentality amongst some of their clients. While hard to assess, I found no evidence for this in my interviews with shoe producers. They confirmed that they had tested both local and imported machinery and that the decision rested on comparing quality and price.

Fourth, shoe firms did, however, admit that supplier credit was an important criterion, and sometimes the decisive one. This confirms the local machinery makers' grievance that they are losing out against their Italian competitors because the latter can offer terms of payment which they cannot hope to match. Financial markets and export assistance in Italy make long term supplier credit at low interest rates possible. In contrast, high interest rates have prevailed in Brazil, kept high in order to combat inflation and, more recently, to stop the outflow of capital – and thus fend off the danger of Brazil becoming engulfed in the global financial crisis.

As a result of these factors, machinery producers are embittered and their relationships with the rest of the cluster are tense, if not hostile. This hostility was noticeable in interviews at both the enterprise and association level – sometimes open, sometimes barely disguised. Certainly the earlier finding of increasing vertical co-operation does not extend to the machinery producers.

9.2 FENAC: from integrator to divider

Increasing conflict rather than co-operation is also noticeable in the relationship between FENAC (the local trade fair organisation) and some subsectors of the cluster. The conflicts are a direct result of globalisation which affects not only manufacturers in the local supply chain but also service providers.

FENAC is owned by the municipality of Novo Hamburgo, “capital” of the Sinos Valley, and has played an important role in the history of the cluster (as indicated in Section 7). In the 1960s and 1970s it was a major integrating force giving all manufacturers in the supply chain an opportunity to show their products to customers who came from all over Brazil and later also from other South American countries. It started off as a fair held every two years and then established a rhythm of two annual shoe fairs (summer and winter collection) and a separate fair for leather, components and machinery, called FIMEC.

Major conflicts began in 1993/4 when FENAC decided to hold FIMEC every year, rather than every second year. The local machinery producers in particular were opposed, arguing – with some justification – that they could not come up with technological novelties every year and that a yearly exhibition would only help their foreign competitors. They contrasted their concept of FIMEC as a “technological fair” to FENAC's thinking in terms of “commercial fairs” (interviews with president of ABRAMEC and other machine makers).

FENAC did indeed think commercially but, more importantly, was increasingly driven by a global rather than local rationale. Holding trade fairs is a business characterised by increasing global competition. FENAC's ambition was to establish FIMEC as the main Latin American exhibition for inputs into shoe production, that is, leather, components and machinery. In order to achieve this aim and not share it with another organisation, an annual fair was considered essential.

In 1997, FENAC went further and established an alliance with its Italian counterpart (Bologna-Fiere). The outcome was a further addition to the fair calendar, namely a summer and a winter FIMEC, with tanning machinery shown in one and shoe making machinery in the other, both with the aim of increasing international participation. The idea was an inversion of the fairs held in Italy, also held twice yearly. The result was war between FENAC and some local actors.

The component makers protested but the machinery producers went further. Their association (ABRAMEC) entered an alliance with FENAC's main competitor (FRANCAL) that holds a similar fair in São Paulo. ABRAMEC proceeded to organise (with support from FRANCAL) a substantial presence at that São Paulo fair in October 1997. While individual machine makers are free to exhibit also at FIMEC in Novo Hamburgo, their association no longer supports the fair.

As a result, FIMEC, which used to be the third largest fair of its kind in the world, risks becoming a minor fair – a disastrous development for one of the world's major clusters in leather and footwear. Whether this will occur is hard to predict. It is, however, clear that FENAC's attempts to become a global player led to major conflict with local producers and their association. Conflict was inevitable but its escalation was not. Again, what calls for attention was the lack of mediation by local or state government. It is impossible to tell whether such mediation would have led to a different outcome. However, it is almost certain that there would have been more local consultation than did occur. And presumably more attention would have been given to the importance of local synergies in the discussion of global pressures and opportunities.

9.3 Outward investment in the North East

The cases of the local machinery producers and the trade fair organisation presented above underline the difficulty of restraining the centrifugal forces of globalisation and of achieving cluster-wide co-operation. This section brings out what has been perhaps the most significant centrifugal development: the export of capital and managerial resources from the South to the Northeast of Brazil. Attracted by lower wages and fiscal incentives, a number of Sinos Valley firms have set up subsidiaries in the Northeast of the country. 'This is our China!' exclaimed one of the respondents. Indeed, stiff competition from the low wage economies of Asia has been the driving force. This section cannot provide a full assessment of this recent outward venture but – given the concern with local responses to global competition – one needs to ask whether and how it disrupts synergies in the Sinos Valley.

“Migration” to the Northeast occurred in two stages. In the early 1990s it was undertaken in order to produce there for the internal, especially regional, market. Subsidiaries set up since 1994 are mainly to produce for export, in particular for the US market in the price range which Brazil had previously lost to China and other Asian countries. The new factories tend to be large and are dispersed over the states of Ceará, Paraíba, Pernambuco and Bahia. The main local input is cheap labour, managerial and technical staff tends to come from the South. Some inputs are produced locally – mainly by new subsidiaries of Southern suppliers – but most materials and components come from the Sinos Valley. It is a logistical nightmare but the new plants seem to have come onstream fairly fast. Total output of the Northeast is estimated to be about ten per cent of that of the Sinos Valley (*Técnicouro*, No.144, 1998, p.11).

The attraction of the Northeast is clear. First, the majority of workers earns one minimum wage (US\$120 per month in 1997) compared with twice that amount in the Sinos Valley. Second, fiscal incentives are massive. Governments of the various North-eastern states out-compete each other in foregoing tax revenue and offering factory sites and infrastructure at 'symbolical prices' (*Técnicouro*, Nos.133 and 144). According to Costa et.al. (1997), the cost advantage for a Southern firm of producing shoes in the Northeast is in the order of 16 per cent, but there are wide variations.

Whether this strategy makes economic sense for the Northeast cannot be discussed here.⁴⁷ Our concerns are the repercussions for the Sinos Valley. Not surprisingly, the new factories in the Northeast have caused much discussion in the Valley, fuelled by workers' fears of unemployment and employers' attempts to obtain concessions on taxes and social security payments for their workforce. Repercussions for the collective efficiency and upgrading of the Sinos Valley received much less attention but this is the main concern in this section. Three considerations stand out: first, there has been no disruption to the local supply chain. None of the shoe enterprises that has invested in the Northeast has closed down operations in the Sinos Valley.⁴⁸ However, net expansion at the cluster level has not occurred.

Second, some respondents suggest that the profile of the Sinos Valley will become more like that of Italian clusters: the more predictable shoes that can be made in long runs will be produced in the Northeast and the Sinos Valley will focus on shorter runs, requiring fast response and/or high quality, produced in small or medium sized firms or in highly de-centralised large firms.⁴⁹ Two factors support this proposition: (a) There continues to be a stream of new entrants,⁵⁰ mainly skilled ex-employees of shoe or supplier firms seeking to

realise their life ambition of setting up their own business. (b) Local enterprises have already internalised the need to raise quality, speed and flexibility and made enormous progress in this respect – as documented in the survey and case studies. In one respect, however, the Italian scenario is suspect: the Sinos Valley has long neglected the development of brand names and design capability.

Third, 'Operation Northeast' has upstaged the more ambitious upgrading plans for the Sinos Valley. This is an extension of the previous point but important in its own right. Moving Northeast is about competing against China, particularly in the US market. The upgrading discussion is about avoiding direct competition with low wage producers, and competing more on parameters other than price. In production itself such upgrading has occurred, in design and marketing (of exports) progress has been very limited. In principle, there is no conflict between expanding capacity in the Northeast and ambitious upgrading in the South. In practice, however, there is a clash in that both compete for scarce management resources. This is particularly so in family enterprises run by members of the owning family, a feature shared by virtually all enterprises in the Sinos Valley. Only some of them have extended into the Northeast but virtually all leaders were drawn into the debate either privately or publicly. Perhaps the main outcome of the new North-eastern option is that entrepreneurial energies remain focused on production and fail to shift the focus to developing the design and marketing capacity of the Sinos Valley. For most firms, this is very difficult to achieve individually. This is why the "Shoes from Brazil Programme" was so important. But it failed.

10 CONCLUSION

'The Dragon Advances'. This was the headline of a Special Report by a Brazilian journalist on the Chinese shoe industry. He had gone to China to see for himself how and why China was able to out-compete the Sinos Valley. The low wages, long working hours and low taxes in China were the main themes in his report which was published in three instalments in the main local newspaper (*NH*, 13,14,15 April 1995). Coinciding with the news of several local factory closures it sent ripples of fear through the Sinos Valley. It seemed that the whole cluster had finally internalised a threat had been known for several years. This paper has analysed how this cluster has responded to the intensified competition from Asia, paying particular attention to joint action in the cluster.

The focus in this paper on a cluster is not accidental. As shown in Section 2, several academic specialisms converge in stressing the importance of clustering economies and local synergies for competing globally. While most of this literature relates to advanced countries, recent research has shown that such local sources of competitiveness are also important in developing countries. Several unexpected success stories have emerged of developing country clusters breaking into international markets. However, there are also failures. Identifying the reasons for success and failure is where the research frontier lies. The reasons are likely to be several. Mono-causal explanations rarely succeed. But we need to proceed by examining hypotheses which focus on particular factors. This is what this paper seeks to do. This concluding section recapitulates the main steps and findings of the empirical work and then sets out why these findings are of relevance not just for the debate on industrial clustering but for the wider debate on globalisation.

As suggested in the introduction, success or failure tend to be decided at particular turning points in history - times which open up new opportunities or bring new pressures. In the case of clusters, responding to opportunities and crises requires a shift in gear from passive to active collective efficiency. Relying on the incidental economies of agglomeration is not sufficient, consciously pursued joint action is required. This is the hypothesis which emerged from my previous work. Hence this paper investigated – whether in response to the Chinese threat – local firms had stepped up co-operation, whether enterprises that co-operated performed better than those that did not, whether such co-operation as did occur led to an escape from the Chinese squeeze and, conversely, whether the failure to do so was linked to a lack of co-operation.

Before summarising the results, let us recall that equating the turning point with China's entry in the international footwear market is simplistic. There were multiple triggers and time lags. The triggers were a) Taiwanese manufacturers relocating to mainland China and using their production expertise and trade networks to export at unprecedented low prices; b) the rapid growth of US imports slowing down and c) buyer behaviour - in external and internal markets - changing from just-in-case to just-in-time. These three changes began to make themselves felt in the late 1980's but a clear perception of these new challenges only emerged in the early 1990s. In a way this is not surprising, few entrepreneurs had direct knowledge of the international market, inflation rates fluctuated wildly, as did exchange rates. The time lags, first in perception and then in responses, have to be seen in this light. Not surprisingly, the time lags in bilateral co-operation were shorter than in multilateral co-operation.

10.1 The direction and process of local co-operation

The focus on inter-firm co-operation in this paper does not imply that individual excellence does not matter. Far from it. Performance within clusters varies and the excellence of one firm tends to have incidental positive effects on others. Proximity ensures that such external effects do not 'evaporate'. The proposition of this paper is that relying merely on such spontaneous effects is not sufficient to cope with crisis, hence the focus on joint action.

One of the main results of the survey is the positive and significant relationship between co-operation and performance. Enterprises which increased co-operation improved their performance more than those which did not. The survey, combined with other fieldwork methods, showed however that changes in co-operation over the period 1992-97 varied with the type of co-operation considered. The findings are summarised in Table 13.

Table 13: Changes in co-operation, 1992–97

	Bilateral	Multilateral
Horizontal	No change	Varies with association
Vertical	Substantial increase	First increase, then decline

What stands out is the strong increase in bi-lateral vertical co-operation, notably between shoemakers on the one hand and their input suppliers and subcontractors on the other. The results of the survey are very clear in

this respect, but so is the limitation of the research instrument. How real is the reported 'increase in co-operation'? The detailed case studies of shoe manufacturers and related firms confirmed the increase but also provided important qualifications. In subcontracting relationships, the co-operation was selective in that it was limited to core subcontractors.

The case studies also give insights into the *process* of achieving greater co-operation. In his article 'From models to trajectories', Humphrey (1995) stresses that studying whether firms adopt new practices (conforming to a model) is important but that the main lacuna is in the *process* of change. Visiting enterprises several times over a period of five years helped to recognise first, that business cycles explain who pushes for co-operation and second that the investment in relationships with suppliers diminishes with time - as the new practices of delivering higher quality, with greater speed and more reliability, diffuse. With hindsight this is obvious but neither the cluster nor the related supply chain literature has made this clear. It tends to argue that vertical co-operation or obligational relationships are required in the quality-driven product lines. Indeed they are, but only if the existing standard of supplying is poor. As the standards improve, the size of the investment and the focus on specific relationships can diminish. In other words, the need to invest in vertical co-operation depends on the size of the change that needs to be brought about and the unevenness amongst suppliers/customers.

The fast diffusion of improved supplying and ordering practices is also relevant for the collective efficiency argument. Nadvi (1996) pointed out that the distinction between external economies and the benefits of joint action does not capture an important source of collective efficiency, namely the external economies of joint action. The diffusion of improved supplying practices is a good example of this.

As shown in summary table 13, horizontal co-operation changed little. This is clearest in bilateral horizontal relations, but less so in multilateral co-operation. The latter is more difficult to summarise because there are several business associations in the Sinos Valley which have developed in different directions. More interesting than discussing them individually is their joint initiative, the 'Shoes from Brazil Programme'. The mere existence of this programme commands attention because it encompassed associations representing the entire local value chain, because it was based on the explicit recognition of interdependence and because raising competitiveness was its mission. This included a number of upgrading proposals which ranged from the targeting of new markets, to raising the image of 'Made in Brazil', eradicating child labour, joint participation in fairs, and creating a local design capacity. While a lot of the groundwork was carried out by local consultants and association officials, the entrepreneurs themselves were involved in the analysis and formulation of proposals.

Based on a combination of in-depth interviews and participant observation, Section 7 traces the rise and fall of this programme. The reason for its decline was that some of the leading enterprises were not interested in the programme succeeding; they put their alliance with a powerful foreign buyer above local co-operation, but they did not do so openly. Presumably such conflicts of interest - whether carried out openly or not- are not unique to the Sinos Valley. The question is whether their resolution follows a global or a local rationale. I argued in Section 8 that the decline of the programme was not a necessary consequence. The local rationale might have prevailed had there been a knowledgeable public mediator. Of course, one cannot be certain about this, but the dynamics of the process were such that good opportunities for public mediation existed.

There is a potentially important policy conclusion not just for the debate on clusters but for the debate on business development services. One of its main tenets is that such services can be provided by the private sector itself - either through specialised enterprises or collective organisations such as business associations, consortia or the like. The 'Shoes from Brazil Programme' underlines this view but also shows its limits. The private sector did all the preparatory work for what could be called a programme of local sectoral governance but it could not - on its own - resolve the emerging conflicts. What is striking is that even in Brazil, where inefficiency and corruption have discredited the state, it is still seen as the most legitimate mediator. But in addition to legitimacy, mediation requires knowledge in two areas: the sector in question and techniques of mediation. In summary, conflict mediation is an important role even, or especially, for the lean state which relies on the self help of the private sector.

This policy conclusion is also important for the recent debates on regional development and innovation systems, mentioned in Section 2. Both have stressed the importance of institutions, especially the relevance of collective institutions. The Sinos Valley has this kind of "institutional thickness"⁵¹ in its professional associations, business associations and technology centres. Clearly this is not sufficient because fragmentation occurs and conflicts arise. Even in an institutionally well endowed region, government is needed to mediate conflicts and help foster an upgrading consensus.⁵²

10.2 Upgrading and globalisation

As summarised above, the fieldwork shows that bilateral vertical co-operation increased and that multilateral co-operation across the entire local value chain collapsed. So what? Why should these findings be of interest to anybody not specialising in the local sources of competitive advantage? I believe they feed into the wider debate on who wins and loses from globalisation. Indeed, this is the question with which I started this paper. I suggested that one would expect the Sinos Valley to be a winner because by the end of the 1980s it already had substantial experience in export manufacturing. It certainly was a winner in what I called the easy phase of globalisation. In footwear this covered the 1970s and 80s and the same probably applies to clothing and various other labour intensive sectors.⁵³

I suggested that the chances of being a winner in the next round, which I called the tough phase of globalisation, were good because the competitive advantage was not just based on cheap labour but the collective efficiency of highly specialised manufacturers and suppliers. I then suggested that winning this tough phase could not rest just on the spontaneous economies of clustering but required strategic co-operation. As shown above, such an increase in co-operation took place in bilateral vertical relationships. This was essential for achieving the increase in quality, speed and flexibility. The survey findings show very clearly this improvement in performance. This self assessment of the manufacturers is confirmed by European buyers (ongoing research) who suggest that - on the above parameters - their Brazilian suppliers are close to the Italian competitors. In this sense, stepping up co-operation has helped the Sinos Valley to live up to the challenge of the tough phase.

The problem is that these improvements in production have merely enabled the cluster to stand still. As shown in Section 4, exports in 1997 were at the level of 1990 - with some fluctuations in between. More

problematic still, profits declined. The survey shows this very clearly, particularly for exporting firms. Detailed interviews suggest that this is not just the usual tendency of entrepreneurs understating their profits and that profits fell by more than half. As a result there is downward pressure on wages.

Thus this case study confirms recent writings on globalisation, notably (Kaplinsky 1998), warning that a focus on labour intensive export manufacturing may not lead to sustainable income growth and that a shift to other stages of the value chain - such as design or marketing - may be a more rewarding target. This is of course precisely what the 'Shoes from Brazil Programme' tried to do. Its failure means that the chances of the Sinos Valley differentiating itself in the international market are a more distant prospect.

Instead the enterprises are digging themselves deeper into fighting the production battle by establishing new plants in the Northeast, a region whose only advantages are low labour costs and tax exemptions. Moreover, these advantages are transient because the competitors of the Sinos Valley are doing the same. Italian clusters are extending into Romania and Taiwanese manufacturers are setting up plants in Vietnam - in order to have a low wage alternative to China. It seems a race to the bottom, in which competition is over which enterprises pay the lowest wages and which municipality can forego most tax income. 'In previous eras, participation in industrial segments of the value chain provided the source for sustainable income growth. But increasingly, in a globalising economy these industrial niches have become highly competitive, raising the spectre of immiserising industrial growth' (Kaplinsky 1998).

The implication is not that clusters like the Sinos Valley should move out of production but that the emphasis in the search for competitiveness should shift further to non-price factors. Some possibilities for further differentiation from the South and East Asian competition exist in the sphere of production. For example, the time between order and delivery can be reduced further through on-line communication with suppliers and customers and closer backward and forward co-ordination.⁵⁴ However, upgrading the production process alone is not sufficient for differentiation. Other initiatives are needed in design and marketing.⁵⁵

10.3 Further research

Co-operation for upgrading was a key theme of this paper. It was shown that an ambitious joint upgrading initiative failed mainly because some of the leading and most influential entrepreneurs identified more with their main overseas customer than with their local colleagues. The main argument in this final section is that this connection between local producers and global buyers requires more research. First I elaborate on why this is important and then suggest some hypotheses arising from the Sinos Valley experience.

In the currently prevailing enthusiasm for local producers to insert themselves into global value chains, clashes of interest between the two sides tend to be neglected. In some cases there is a fundamental clash when it comes to upgrading. The reason is that buyers are interested in manufacturers upgrading production but rarely in them acquiring their own design capability, developing their own brand names, or establishing their own marketing channels. In the case of the Sinos Valley, export manufacturers were kept firmly to the sphere of production. In fact, it was a division of labour which had served them well in the 1970s and 80s. Producers acknowledge openly: '*não vendemos, somos comprados*' (we do not sell, we are bought). The implication is that

even successful exporters to the North American or European market would have problems exhibiting at trade fairs because they do not have designs of their own.

In this connection it is startling that a recent increase in exports to other Latin American countries is largely due to enterprises which used to produce mainly for the Brazilian market. Supplying the internal market required developing their own design and marketing expertise. Such expertise was directly useful for breaking into markets of neighbouring countries. Nevertheless, it is known that the initial export phase requires considerable investment (Roberts and Tybout 1995). Presumably it is not accidental that the most successful recent initiative is a consortium of four enterprises, all focussed previously on the internal market. Together they set up a company for marketing their products in other South American countries.

It would however be wrong to draw a rigid dividing line between those enterprises exporting to North America or Europe and the rest. For example, one large shoe manufacturer produces mainly for the internal market but exports also to North America and more recently to Eastern Europe. And another large firm which used to export all its output to North America has started to produce also for the Brazilian market, relying mainly on its own new stores. Nevertheless it remains true that the majority of Sinos Valley export manufacturers is locked into production and that breaking out of this would take them into direct conflict with their existing buyers. This suggests that the argument of learning by exporting (which lies implicitly or explicitly behind the enthusiasm for integrating into global chains) has severe limits.

I am not suggesting that the argument is wrong, but that one needs to distinguish between stages. 'Stage' here has a double meaning, referring both to a stage in time and a stage in the value chain. The Sinos Valley experience can be summed up as follows: learning by exporting is enormous in the early years of manufacturing when buyers provide not just a trading link but help local producers to upgrade their production methods. These buyers however obstruct learning for moving up the value chain in later periods.

The question is whether these experiences can also be found in other cases. The proposition is that the answer will depend on the degree of concentration amongst buyers. The fewer the number of buyers, the more difficult it is to move up the value chain. It is suggested that this applies to both individual and joint strategies for upgrading. In the case of the Sinos Valley, the relationship between large local producers and the main global buyer disarticulated an ambitious cluster-wide programme for upgrading.

Indeed the case study has shown the limitation of focussing on the local level. While confirming the importance of local co-operation for upgrading, the research agenda needs to move on and ask under what external conditions such co-operation is possible. Fortunately such research can link up with the recent literature on global commodity chains (Gereffi 1996) in which the governance of such chains is a central issue. The purpose of this final section was to suggest a concrete way of connecting the work on local clusters with research on global value chains.

NOTES

- ¹ Support of local researchers in the data collection was critical in both early and later stages. I am particularly indebted to Luiza Bazan who worked with me in various rounds of the fieldwork and to Vanessa Fleck who assisted with the survey.
- ² The term 'cluster' is also central to Porter's (1990) analysis where it is sometimes used, as in this paper, to refer to a sectoral and geographical concentration of firms; for example, the ceramic tile cluster of Sassuolo, Italy. In other parts of Porter's work, however, 'cluster' is much broader, referring to a group of industries with strong vertical ties and located within one country, but not always geographically close.
- ³ The same questions are being investigated for clusters in Mexico (by Rabellotti), India (by Knorringa) and Pakistan (by Nadvi). These studies are part of the "Collective Efficiency Project – Phase 2" financed by the Department for International Development, London.
- ⁴ The most reliable statistics on the Sinos Valley shoe industry come from the *Censo do Calçado* which was carried out until 1987.
- ⁵ This was the size distribution according to ACI/NH, *Censo do Calçado*, 1983. Reliable data for the Sinos Valley in the late 1980s is not available.
- ⁶ In the US, over 600 shoe factories closed down and 160,000 jobs were lost in the course of the 1970s and 1980s (source: Footwear Industries of America).
- ⁷ Brazil accounted for 11.6 per cent of US non-rubber footwear imports in 1987.
- ⁸ To some extent, this is due to China replacing Taiwan. In search of cheap labour, Taiwanese shoe producers moved to the mainland, taking with them their technical and managerial staff and trading connections (Hsing 1998).
- ⁹ The 'Plano Real' (new currency) came into force in mid 1994. The average real exchange rate between the first and second half of 1994 differed by 22.6 per cent (calculated from monthly index of real exchange rate. Source: America, 1997:54).
- ¹⁰ Separate statistics for the Sinos Valley are not available. The cluster accounts for approximately 80 per cent of the country's shoe exports.
- ¹¹ Import liberalisation seems the main reason but, as will become apparent later, the weapons used in the intensifying global competition are not just price and quality.
- ¹² The rise in unemployment leads some interviewed observers to conclude that there has been a decline in employment, but they tend to make comparisons with the boom year of 1993 or ignore in-migration.
- ¹³ The questionnaire was designed jointly with Peter Knorringa, Khalid Nadvi and Roberta Rabellotti who applied it – with some modifications – in India, Pakistan and Mexico.
- ¹⁴ The firms were selected randomly from the 1997 register of shoe enterprises of the Associação Comercial e Industrial of Novo Hamburgo (ACI/NH). A random check conducted with the help of a local consultant confirmed that the register was reasonably reliable. A pilot test of eight was carried out by Luiza Bazan and myself. The bulk of the survey work was carried out by Vanessa Fleck, some of it jointly with Luiza Bazan.
- ¹⁵ The ACI/NH register shows a total of 419 enterprises. Of these, 20 were excluded for being engaged in "beneficiamento" which means they were subcontracted stage firms rather than shoe manufacturers.
- ¹⁶ To simplify the presentation of findings "big" and "small" increases (decreases) are often merged.

- ¹⁷ The data was entered and analysed by Manuel Albaladejo and Monica Oliber. I am grateful for their assistance.
- ¹⁸ Independent evidence of the increasing effort to improve quality comes from two local technology centres (CTCCA and SENAI). Their records show that the demand for tests of materials (which enterprises have to pay for) has increased. There are oscillations but the trend has been upward.
- ¹⁹ This is confirmed in a more recent survey undertaken by (Galvão 1997).
- ²⁰ (Galvão 1997) provides a useful recent survey of the types and levels of support which shoe manufacturers offer their subcontractors in the Vale do Paranhana – an extension of the Sinos Valley.
- ²¹ For the performance variables, see Section 2 of the annexed questionnaire. The co-operation variables included refer to the following items of the questionnaire: 3.1; 3.4a)b)c)d); 4.1a)b)c); 4.3a)b)c) and 5.2a)c)d)e). Some questions were inappropriate and were therefore excluded.
- ²² Regression analysis shows $r^2 = .25$, significant at 1% (sample size 65). The coefficient is low because of several outliers and because, from the wide range of variables affecting performance, only co-operation was examined.
- ²³ If one uses a single performance variable (rather than composite index) “changes in annual sales” is probably the most meaningful – see Section 2 of annexed questionnaire.
- ²⁴ JW is not one of the very large enterprises which integrated vertically. The strategy of the latter are discussed in a later section.
- ²⁵ Most of the visits and interviews were undertaken jointly with Luiza Bazan. Some of the sub-contractors were visited and interviewed by Bazan on her own.
- ²⁶ It became clear that even a relatively advanced firm like JW at times faltered and put in last minute orders or challenges. However, there was the commitment to find a solution whether it concerned organisational, technical or financial matters.
- ²⁷ While I participated in some of the visits, most of the interviews were carried out by Luiza Bazan in the course of 1993.
- ²⁸ For example, Humphrey, Kaplinsky et al. (1998) show for the case of an Indian firm, which has a clear upgrading strategy, the problems of transforming supplier relations and reorganising internally at the same time. In the literature on technological capabilities, there has long been a recognition that upgrading requires specific resources and does not simply come from 'learning-by-doing' (Bell, 1984).
- ²⁹ Sometimes these relationships seemed characterised more by anxiety than trust in the supplier's ability to deliver.
- ³⁰ Local producers of glue and dyes, in particular, have a widely recognised policy of providing prompt technical assistance.
- ³¹ The only exception is the production of lasts, in which a local firm has a virtual monopoly. Interestingly this has not led to abuse. On the contrary, this last supplier was often referred to as a model of customer orientation.
- ³² Indeed, he was consistent, since when asked in 1997 whether co-operation with his subcontractors had increased he responded that there had been no change since already in 1992-93 he had made the switch to more partnership.
- ³³ On the different types of subcontractors and reasons for externalisation in the shoe industry see (Ruas 1995)

- ³⁴ They are summarised in Programa Calçado do Brasil, Comitê de Competitividade, 'Repensando o Negócio Calçados', Síntese Conclusões e Propostas, mimeo, Novo Hamburgo, 1994.
- ³⁵ This workshop took place in Novo Hamburgo, 11th June 1996.
- ³⁶ The occasion was the '5. Seminario Nacional do Setor Coureiro –Calçadista', Novo Hamburgo, 16 November 1997.
- ³⁷ I can however reveal that the sources include shoe manufacturers, suppliers as well as former and current officials of collective institutions.
- ³⁸ This argument is inspired by Visser's (1996) analysis of mental models and entrepreneurial behaviour in a Peruvian cluster, but based empirically on interviews with (ex-) managers of the large companies. Attempts to interview the owners failed, confirming their reputation of being secretive and keeping to themselves.
- ³⁹ For example, in 1993 ABICALÇADOS was the more active association, convening the seminar 'Partnership in the Footwear Supply Chain'. The executive director also elaborated a plan for a more inclusive association and joint action for conquering new markets ('Plano estratégico ABICALÇADOS', Junho 1993) but it remained a mere plan. Similarly, following a change in its presidency in 1998, the association declared its intention to work more closely with technological institutes and trade fair organisations (*Técnicouro* 146, 1998:32).
- ⁴⁰ By comparison, Spain, which is one of Brazil's main competitors in the leather shoe market, has put on a regular and massive display at the Düsseldorf fair, orchestrated by the shoe producers association.
- ⁴¹ Formally these associations covered the whole of Brazil but in terms of membership and activities they are focused on the Sinos Valley.
- ⁴² This was confirmed in the 1997 survey in which respondents were asked whether they used ABICALÇADOS more frequently than in the past. For the majority of respondents this was a “non-applicable” question.
- ⁴³ Programa Calçado do Brasil, 'Planejamento Estratégico Setorial', Novo Hamburgo, 1996, p.7. For a report on the programme's workshops see Programa Calçado do Brasil, Comitê de Competitividade e Qualidade, 'Anais do Projeto Repensando o Negócio Calçado', Novo Hamburgo 1996.
- ⁴⁴ There are four centres: the Technological Centre for the Leather, Footwear and Related Industries (CTCCA), the Technical School for Shoe Manufacture of SENAI, The Technological Centre of FEEVALE, and the Tannery School of SENAI. These centres have been given little attention in this paper because they were unable to assume any kind of leadership in the cluster's struggle for upgrading. While undervalued and taken for granted by local industry, they have contributed enormously to the build up of local human resources. There are overlaps in the courses and services offered which some regard as wasteful but which contribute to a healthy competition between the centres.
- ⁴⁵ On 11th June 1996, following a public seminar on 'Collective Efficiency in the Value Added Chain', a select group of industrialists, association officials and consultants met to discuss solutions to the key problems affecting the footwear chain.
- ⁴⁶ Centro das Indústrias de Curtumes do Brasil used to be the main national tanners' association until its rival ABICOURO was set up in 1996. The split occurred due to the wet blue conflict.
- ⁴⁷ The main factors to be taken into account in assessing the viability of the shoe industry in the Northeast are: (a) All observers agree that without fiscal incentives these investments would not have occurred. (b) The dispersion of enterprises over several states, and within states over different towns, makes it likely that wages can be kept low. (c) The dispersion, however, means that – even with some suppliers moving to the Northeast – a fast and flexible supply of input will remain a major problem. (d) Only one area, Campina

Grande in Paraíba, shows signs of developing into a cluster of specialised enterprises and institutions (Pinhanez 1998).

- ⁴⁸ The only exception is a large firm producing *plastic* sandals.
- ⁴⁹ Based on interviews with consultants and manufacturers. This view is clearly articulated in an interview with Luís José Coelho, published in *Abicalçados Notícias*, No.67, January 1997.
- ⁵⁰ The client register of the main producer of lasts had 664 new entries in 1996-7.
- ⁵¹ For a wider and critical discussion of “institutional thickness” and its role for regional development in the European context, see chapter 1 of Amin and Thrift (1994).
- ⁵² This is also a central feature of Cooke and Morgan's (1998) *Associational Economy*.
- ⁵³ The most comprehensive analysis of the employment implications of these decades has been carried out by Wood (1994; 1995). His work shows clearly that semiskilled workers in export industries of developing countries gained and the same category of workers in developed countries lost. Most of the gains occurred in East Asia. The employment growth in the Sinos Valley is one of the clearest examples of a South American gain. However, unlike in some East Asian countries, real wages did not increase because of in-migration.
- ⁵⁴ Some specialists suggest that speed will become the critical order-winning criteria in an increasing number of product lines and that the “time to market” may reduce to ten days. (Interview with H. Hartkopf in *Abicalçados Notícias*, April 1998).
- ⁵⁵ For example, comfort-led (as opposed to fashion-led) design is under-explored in many markets. For a discussion – by sector specialists – on upgrading strategies for the Sinos Valley, see *Técnicouro* 123, 1996:34-39 and *Técnicouro* 139, 1998:12-17.

QUESTIONNAIRE: INTERFIRM CO-OPERATION SINOS VALLEY 1992-97

+ increase	= neither increase nor decrease	- decrease
IF INCREASE OR DECREASE, PLEASE SPECIFY:		
+ increase	OR	++ strong increase
- decrease	OR	-- strong decrease

Date: _____

Questionnaire No: _____

1. GENERAL INFORMATION

- 1.1 Name of enterprise and telephone _____
- 1.2 Name of respondent _____
- 1.3 Position in enterprise _____
- 1.4 Total number of employees _____
- 1.5 % of output exported _____

2. PERFORMANCE

What has happened to the following over the last five years?:

	+	=	-
a) Output pairs			
b) Annual sales			
c) % exported			
d) Number of workers			
e) Average price of products (US \$)			
f) Average speed of product delivery			
g) Average quality of products			
h) Net profit			

3. HORIZONTAL COOPERATION WITH OTHER SHOE FIRMS

3.1 Do you now use the **ACI** more than five years ago?

+	=	-
+ ++		- --

3.2 Do you now use **ABICALÇADOS** more than five years ago?

+	=	-
+ ++		- --

3.3 Do you now use the (employers') **SINDICATO** more than five years ago?

+	=	-
+ ++		- --

3.4 Do you now co-operate with **other local shoe producers** more than five years ago? Specify for the following areas:

	+	=	-
a) Exchange of information and experiences			
b) Quality improvement			
c) Joint Labour training			
d) Joint Marketing			

4. BACKWARD COOPERATION WITH SUPPLIERS OF INPUTS

4.1 Has co-operation with your main **suppliers of finished leather** changed over the last five years? Specify for the following areas:

	+	=	-
a) Exchange of information and experiences			
b) Improving quality			
c) Speeding up delivery			

4.2 Do you now change **suppliers of finished leather** more often than five years ago?

+
+ ++

=

-
- --

4.3 Has co-operation with your main **suppliers of soles** changed over the last five years? Specify for the following areas:

	+	=	-
a) Exchange of information and experiences			
b) Improving quality			
c) Speeding up delivery			

4.4 Do you now change **suppliers of soles** more often than five years ago?

+
+ ++

=

-
- --

5. BACKWARD COOPERATION WITH SUB-CONTRACTORS

5.1 Are you now **putting out** more or less work than five years ago? Specify for each of the following stages of production:

	+	=	-
a) Upper cutting			
b) Upper stitching			
c) Heel covering			
d) Lasting			

5.2 Has co-operation with your main **sub-contractors** changed over the last five years? Specify for the following areas:

	+	=	-
a) Exchange of information and experiences			
b) Technological upgrading			
c) Quality improvement			
d) Labour training			
e) Programming of production			

5.3 Do you now change **sub-contractors** more often than five years ago?

+
+ ++

=

-
- --

6. FORWARD COOPERATION WITH BUYERS

6.1 As regards the **internal market** has co-operation with your main buyers changed over the last five years? Specify for the following areas:

	+	=	-
a) Exchange of information and experiences			
b) Quality improvement			
c) Setting of product specifications			
d) Organisation of production			

6.2 Do you now change **buyers for the internal market** more often than five years ago?

+
+ ++

=

-
- --

6.3 Has co-operation with your main **foreign buyers** changed over last 5 years? Specify for the following areas:

	+	=	-
a) Exchange of information and experiences			
b) Technological upgrading			
c) Quality improvement			
d) Setting of product specifications			
e) Organisation of production			

6.4 Do you now change **foreign buyers** more often than before 1992 ?

+
+ ++

=

-
- --

REFERENCES

- America Consultoria e Projetos Internacionais, (1997) 'Estudo de Reestruturação Produtiva da Industria Coureiro - Calçadista do Rio Grande do Sul', Relatório Final, Porto Alegre: Secretaria da Coordenação e Planejamento, Governo do Estado do Rio Grande do Sul.
- Amin, A. and Thrift, N., (Eds), **Globalization, Institutions and Regional Development in Europe**, Oxford: Oxford University Press
- Antunes, E. D. D., 1995, 'Atitudes gerenciais quanto à participação dos trabalhadores na gestão da qualidade' in J.E. Fensterseifer (ed.), **O Complexo Calçadista em Perspectiva: Tecnologia e Competitividade**, Porto Alegre: Editora Ortiz: 331-370
- Audretsch, D. B. and Feldman, M. P., 1996, 'R & D spillovers and the geography of innovation and production', **American Economic Review**, No June: 630-640
- Bazan, L., 1997, 'Etnia, Cooperação e Conflito: mediações da identidade nas relações industriais - um estudo de caso no setor calçadista do Vale dos Sinos', Master Dissertation, Federal University of Rio Grande do Sul
- Bazan, L. and Schmitz, H., 1997, 'Social Capital and Export Growth: An industrial community in Southern Brazil', **Discussion Paper** No 361, Brighton: Institute of Development Studies, University of Sussex
- Becattini, G., 1990, 'The Marshallian industrial district as a socio-economic notion' in F. Pyke, G. Becattini and W. Sengenberger (eds), **Industrial Districts and Inter-Firm Cooperation in Italy**, Geneva: International Institute for Labour Studies, ILO: 37-51
- Bell, M., 1984, 'Learning and the Accumulation of Industrial Technological Capability in Developing Countries', in M. Fransman and K. King (eds.), **Technological Capability in the Third World**, London: MacMillan.
- Braczyk, H.-J., Cooke, P. and Heidenreich, M., (Eds), **Regional Innovation Systems**, London: UCL Press
- Brusco, S., 1990, 'The idea of the industrial district: its genesis' in F. Pyke, G. Becattini and W. Sengenberger (eds), **Industrial Districts and Inter-firm Cooperation in Italy**, Geneva: International Institute for Labour Studies, ILO: 10-19
- Cooke, P. and Morgan, K., 1998, **The Associational Economy : Firms, Regions and Innovation**, , Oxford: Oxford University Press
- Costa, A. B., Fligenspan, F. B. and al., e., 1997, 'Avaliação do Movimento de Relocalização Industrial de Empresas de Calçados do Vale do Sinos', **mimeo**, Porto Alegre: SEBRAE
- Cruz, R., 1995, 'A qualificação de trabalho na adoção das novas técnicas de organização do trabalho: estudo de caso na indústria calçadista do Vale do Rio dos Sinos' in J. E. Fensterseifer (ed.), **O Complexo Calçadista em Perspectiva: Tecnologia e Competitividade**, Porto Alegre: Editora Ortiz: 307-330
- Dei Ottati, G., 1996, 'Economic changes in the district of Prato in the 1980s: Towards a more conscious and organized industrial district', **European Planning Studies**, Vol 4 No 1: 35-52
- dos Santos, A. M., 1992, 'Padrão de crescimento das empresas do setor calçadista do vale do Sinos', **Dissertação de Mestrado**, Porto Alegre: Faculdade de Ciências Economicas, Universidade Federal do Rio Grande do Sul
- Edquist, C., 1997, **Systems of Innovation: Technologies, Institutions and Organizations**, , London and Washington: Pinter

- Freeman, C., 1995, 'The national system of innovation in historical perspective', **Cambridge Journal of Economics**, Vol 19 No 1
- Galvão, C. A., 1997, 'Sistemas Industriais Localizados: O Vale do Paranhana - Complexo Calçadista do Rio Grande do Sul', **Mimeo**, Brasília: Instituto de Pesquisa Econômica Aplicada
- Gereffi, G., 1996, 'Global Commodity Chains: New Forms of Co-ordination and Control among Nations and Firms in International Industries', **Competition and Change**, Vol 4: 427-439
- Heidenreich, M., 1997, 'Wirtschaftsregionen im weltweiten Innovationswettbewerb', **Kölner Zeitschrift für Soziologie und Sozialpsychologie**, Vol 49 No 3: 500-527
- Hsing, Y., 1998, **Making Capitalism in China - The Taiwan Connection**, , Oxford and New York: Oxford University Press
- Humphrey, J., 1995, 'Industrial reorganization in developing countries: from models to trajectories', **World Development**, Vol 23 No 1: 149-162
- Humphrey, J., 1998, 'Competition, context and the use of Japanese management techniques: Brazil and India compared' in Y. Takahashi, M. Murata and K. Rahman (eds), **Management Strategies of Multinational Corporations in Asian Markets**, Tokyo: Chuo University Press: 71-90
- Humphrey, J., Kaplinsky, R. and Saraph, P., 1998, **Corporate Restructuring: Crompton Greaves and the Challenge of Globalisation**, , Part 3: 'Transforming Supplier Relations', New Delhi: Sage
- Humphrey, J. and Schmitz, H., 1996, 'The triple C approach to local industrial policy', **World Development**, Vol 24 No 12, December: 1859-1877
- Kaplinsky, R., 1998, 'Globalisation, Industrialisation and Sustainable Growth: The Pursuit of the Nth Rent', **Discussion Paper** No 365, Brighton: Institute of Development Studies, University of Sussex
- Knorringa, P., 1996, **Economics of Collaboration: Indian Shoemakers between Market and Hierarchy**, , New Dehli and London: Sage
- Krugman, P., 1991, **Geography and Trade**, , Cambridge, MA: MIT Press
- Krugman, P., 1995, **Development, Geography and Economic Theory**, , Cambridge, MA: MIT Press
- Krugman, P. and Venables, J., 1995, 'The Seamless World: A Spatial Model of International Specialization', **Discussion Paper** No 1230, London: Center for Economic Policy Research
- Locke, R., 1995, **Remaking the Italian Economy**, : Cornell University Press
- Lundvall, B.-A., 1993, 'Explaining interfirm cooperation and innovation: limits of the transaction-cost approach' in G. Grahber (ed.), **The Embedded Firm - On the Socio-economics of Industrial Networks**, London: Routledge: 52-64
- Maillat, D., 1996, 'From the industrial district to the analyses of territorialized productive organisations', **Working Paper** No 9606b, Institut de Recherches Economiques et Regionales, Université de Neuchâtel
- Markusen, A., 1996, 'Sticky Places in Slippery Space: A typology of industrial districts', **Economic Geography**,: 293-313
- McCormick, D., 1998, 'Enterprise Clusters in Africa: On the Way to Industrialisation?', **Discussion Paper** No 366, Brighton: Institute of Development Studies, University of Sussex
- Meyer-Stamer, J., et.al., 1996, **Industrielle Netzwerke und Wettbewerbsfähigkeit: Das Beispiel Santa Catarina**, , Berlin: Deutsches Institut für Entwicklungspolitik

- Nadvi, K., 1996, 'Small Firm Industrial Districts in Pakistan', Doctoral Thesis, University of Sussex
- Nadvi, K., 1997, 'Cutting Edge: Collective Efficiency and International Competitiveness in Pakistan', **IDS Discussion Paper** No 360, Brighton: Institute of Development Studies, University of Sussex
- Nadvi, K. and Schmitz, H., 1994, 'Industrial clusters in less developed countries: review of experiences and research agenda', **Discussion Paper** No 339, Brighton: Institute of Development Studies
- Peasgood, T. and Schmitz, H., 1994, 'Individual Struggle and Collective Efficiency: A Survey of Small Shoe Manufacturers in the Sinos Valley, Brazil', **Mimeo**, Brighton: Institute of Development Studies, University of Sussex
- Piccinini, V. C., 1995, 'Mudanças na indústria calçadista brasileira: novas tecnologias e globalização do mercado' in J. E. Fensterseifer (ed.), **O Complexo Calçadista em Perspectiva: Tecnologia e Competitividade**, Porto Alegre: Editora Ortiz: 115-141
- Pinhanez, M., 1998, 'Training and social liaisons in Northeast Brazil's shoe industry', **mimeo**, Cambridge: Department of Urban Studies and Planning, Massachusetts Institute of Technology
- Porter, M., 1990, **The Competitive Advantage of Nations**, , London: Macmillan
- Porter, M. E. and Wayland, R. E., 1995, 'Global Competition and the Localization of Competitive Advantage', **Advances in Strategic Management**, Vol 11A: 63-105
- Pyke, F., 1994, **Small Firms, Technical Services and Inter-firm Cooperation**, , Geneva: International Institute for Labour Studies, ILO
- Pyke, F. and Sengenberger, W., (Eds), **Industrial Districts and Local Economic Regeneration**, Geneva: International Institute for Labour Studies, ILO
- Rabellotti, R., 1997, **External Economies and Cooperation in Industrial Districts: A comparison of Italy and Mexico**, , London: Macmillan
- Roberts, M. J. and Tybout, J. R., 1995, 'An empirical model of sunk costs and the decision to export', **Policy Research Working Paper** No 1436, Washington: Policy Research Department, Finance and Private Sector Development Division, The World Bank
- Roesch, S. M. A., 1995, 'Flexibilidade no trabalho e estratégias de recursos humanos' in J. E. Fensterseifer (ed.), **O Complexo Calçadista em Perspectiva: Tecnologia e Competitividade**, Porto Alegre: Editora Ortiz: 285-305
- Ruas, R., 1995, 'O conceito de cluster e as relações interfirmas no complexo calçadista do Rio Grande do Sul' in J. E. Fensterseifer (ed.), **O Complexo Calçadista em Perspectiva: Tecnologia e Competitividade**, Porto Alegre: Editora Ortiz: 55-96
- Schmitz, H., 1995a, 'Collective efficiency: growth path for small-scale industry', **Journal of Development Studies**, Vol 31 No 4: 529-566
- Schmitz, H., 1995b, 'Small shoemakers and Fordist giants: tale of a supercluster', **World Development**, Vol 23 No 1: 9-28
- Schmitz, H., 1997, 'Collective Efficiency and Increasing Returns', **IDS Working Paper** No 50, Brighton: Institute of Development Studies, University of Sussex, **Cambridge Journal of Economics** (forthcoming)
- Scott, A., 1996, 'Regional Motors of the Global Economy', **Futures**, Vol 28 No 5: 391-411

- Scott, A. J., 1994, 'Variations on the theme of agglomeration and growth: the gem and jewelry industry in Los Angeles and Bangkok', **Geoforum**, Vol 25 No 3: 249-263
- Sengenberger, W. and Pyke, F., 1991, 'Small firm industrial districts and local economic regeneration: research and policy issues', **Labour and Society**, Vol 16 No 1: 1-24
- Storper, M., 1995, 'The resurgence of regional economies, ten years later', **European Urban and Regional Studies**, Vol 2 No 3: 191-221
- Tendler, J. and Amorim, M., 1996, 'Small firms and their helpers: lessons on demand', **World Development**, Vol 24 No 3
- Triglia, C., 1989, 'Small-firm development and political subcultures in Italy' in E. Goodman and J. Bamford (eds), **Small Firms and Industrial Districts in Italy**, London: Routledge
- Visser, E.-J., 1996, **Local Sources of Competitiveness: Spatial Clustering and Organisational Dynamics in Small-Scale Clothing in Lima, Peru**, Tinbergen Institute Research Series 133, Amsterdam: University of Amsterdam
- Wood, A., 1994, **North-south trade, employment and inequality: changing fortunes in a skill-driven world**, , Oxford: Clarendon Press
- Wood, A., 1995, 'How trade hurt unskilled workers', **Journal of Economic Perspectives**, Vol 9 No 3: 57-80
- World Bank, 1997, 'The State in a Changing World', **World Development Report, Oxford University Press**, New York: World Bank