INTRODUCTION
The international literature on industrial clustering/networking tends to focus on the complexities and possible outcomes of such processes (eg. Schmitz, 1995, 1997; Humphrey and Schmitz, 1996, 1998). It discusses the collective efficiencies derived from clustering and stresses the importance of social capital as a means of ensuring this. Whilst there are a few dissenting voices (eg. Olson, 1982) much of the literature asserts that industrial clustering has the capacity to enhance the economic development of local economies (eg. Piore and Sabel, 1984; Nadvi, 1997). Little exploration has however been given to how such processes of industrial clustering developed.

As a focus of the research, clustering tends to be taken as given and studied in terms of processes of collective efficiency and networking. The role of state institutions in fostering and maintaining clustering certainly forms a focus of industrial policy, but the precise study of how *purposive action* has concretised policy and produced networking to bring about collective efficiency has not been a major focus of endeavour. This is, we believe, an important omission from the international literature.

Another omission lies in the fact that there are very few studies that record and analyse the *role of intermediaries* in facilitating clustering of firms. Setting out government policy aimed at facilitating clustering is one thing. It is quite another implementing such policy and overcoming the numerous institutional obstacles hidden behind the fine words and programmes. We are aware of some recent literature detailing attempts to experimentally create learning networks and thereby foster collective efficiency (eg. Bessant and Francis 1999), however, generally speaking, there seems very little available in a written form upon which to base analysis and policy.

A further surprising gap in the literature lies in the reciprocal relationship between research and the fostering of clustering. Researchers study collective efficiency but seem not to reflect very much on the *role of their research* work on these processes and vice versa.

In this paper, through reflecting on our experience in running a research project focussed on international competitiveness and setting up a benchmarking club of automotive component manufacturers in a developing economy that is being rapidly liberalised in line with WTO requirements, we wish to address these omissions. The paper is therefore a mixture of sharing our experiences of establishing a continuous improvement network, and drawing some conclusions about the role of intermediaries in setting up and maintaining a cluster of firms, the importance of purposive action in facilitating learning through a network, and the strategic role of research in fostering the necessary trust required for a network to operate and glean collective efficiency benefits. Whilst many of our experiences may not be unique, particular issues have played a very significant role in both the success and limitation of our endeavours and we feel that these need to be shared with development practitioners, industry stakeholders and academics.

Critically, the continuous improvement network that we run did not materialise incidentally. An enormous amount of academic research was carried out at both the micro and macro levels prior to the launch of the KwaZulu-Natal Benchmarking Club,
and it was only through the concerted efforts of academic intermediary agents that the Club was established. The cyclical reinforcing role of research and intermediaries played a critical role in establishing the Club on a secure foundation; and the research lessons continually drawn from the running of the Club and shared with its members provided fertile ground for its maintenance and growth.

Outlining how the Club was initially established we believe is therefore a critically important story. Secondly, certain critical lessons have been learnt regarding the conception, establishment and initial functioning of the Club. By teasing these out at the institutional, firm, intermediary agent and academic level we will hopefully be providing some useful material for theoretical debate.

Before considering any of these important areas of exploration, we feel it is appropriate to first outline in very brief detail the parameters of our continuous improvement network – the KwaZulu-Natal Benchmarking Club. We will then go back to the beginning, outlining how the Club was started, the particular issues that have impacted on its success since its inception and then as a way of summarising, the important lessons that we have learnt as both academics and industrial restructuring practitioners.

**THE KWAZULU-NATAL BENCHMARKING CLUB**

The KwaZulu-Natal Benchmarking Club was formed by a group of twelve automotive firms in KwaZulu-Natal province, South Africa, in November 1997, and has as its principal objective the continuous improvement of its members via the generation of comparative benchmarks with both domestic and international firms. A consultancy company, *KwaZulu-Natal Benchmarking*, is the service provider to the Club, and it co-ordinates the Club’s international and domestic benchmarking activities.

Eleven of the twelve firms were automotive component manufacturers whilst the major auto assembler in the province completed the Club membership. Of the eleven automotive component firms, two joined as associate members (ie. firms who were solely interested in being benchmarked against other South African firms) with the other nine joining as full members. These firms were interested in having their competitiveness performance measured against international automotive component firms competing in the same or similar market segments. The OEM also joined as a full member, but without wanting an international comparative benchmark conducted.

The member firms of the KwaZulu-Natal Benchmarking Club fund 35 percent of its budget, with the South African government’s Department of Trade and Industry through its Sector Partnership Fund funding the other 65 percent. The Club has an executive committee that oversees its activities, with the executive comprising four individuals, two from the firms themselves and two from the service provider.

The services offered to KwaZulu-Natal Benchmarking Club members are we believe significant, with all full members receiving:

- A detailed annual ‘like with like’ comparative benchmark with an international firm that competes in the same or a similar market segment, as well as customer benchmarks. The benchmarks are undertaken using the service provider’s unique
benchmarking tool and take place annually for the purposes of analysing longitudinal trends. The findings are presented to the firm in the form of a concise written report, as well as a formal presentation. These are more than simply recordings of numerical benchmarks but take the form of diagnostic reports analysing the firm’s competitiveness. Critically, all benchmark findings are treated as strictly confidential - with no other firms having access to the firm specific ‘like with like’ benchmarking material;

- A monthly newsletter, outlining aggregated benchmark findings;
- Quarterly workshops where important generic findings are debated and solutions to competitiveness problems explored. Simulation games and practical exercises outlining improvements that could potentially be made are utilised.

Associate members receive the same range of benefits as the full members, with one important exception - they do not receive international benchmarks, but rather ‘like with like’ domestic benchmarks.

The like with like benchmarking methodology that we use is critically important to the networking dimension of the Club. We are fundamentally opposed to standard benchmarking practices that hide real performance figures at firms via ranking and indexing figures, and believe that the benchmarking activities at firms need to lay bare actual performance figures as well as the processes underpinning them. Firms we believe cannot effectively use benchmark findings if they simply indicate for example that their external quality performance ranks at 37 out of 40 firms. Firms need to know that their performance of 2,500 parts per million in customer returns is poor in comparison to another manufacturer of the same product who performs at 150 parts per million.

It is these hard comparative figures between their own firm and their benchmarked partner firm that allow managers to direct intra-firm purposive action at their operations. Furthermore by generating average and best in class performance figures at the Club as well as against the internationally benchmarked partner firms, the findings aggregated at the level of the Club provide leverage for discussion between firms. In terms of both intra and inter firm levels, this allows the Club members to pinpoint where they are lagging or surpassing average performance levels, and even more importantly why their performance levels vary.

During the course of 1998 all of the KwaZulu-Natal Benchmarking Club members were benchmarked against domestic and/or international counterparts, with a total of fourteen domestic and nine international benchmarks conducted. The domestic benchmarks were undertaken in various parts of South Africa, with seven of the international benchmarks being undertaken in Western Europe and two in Brazil. All of these benchmark findings were compiled in firm-specific reports and presented to the Club’s members.

The monthly newsletters that went out to Club members ensured that all Club members were fully cognisant of the progress of the Club, and also highlighted both general findings to the Club members, as well as other points of industrial restructuring interest.
Four quarterly workshops were held with the highlight of these being the participation of international experts such as Profs. Raphael Kaplinsky of the Institute of Development Studies at the University of Sussex and John Bessant of the Centre for Research in Innovation Management at the University of Brighton. Not only was an enormous amount of information shared with Club members at these workshops, Club members themselves began communicating with one another in order to generate new ideas regarding the improvement of their competitiveness. The role of the international experts cannot be underestimated here. First, they provided an important attraction in terms of ensuring firm attendance at the workshops, and second by supporting the role of the intermediary agents they confirmed the importance of the Club’s activities.

The KwaZulu-Natal Benchmarking Club, apart from being a benchmarking network, therefore operates as a learning/clustering network. The information being generated through the benchmarking process is not only being used for the purposes of reflection, but also for the development of a new culture of competitiveness excellence at member firms. It is strongly felt that the Club’s benchmarking activities can be used as an effective mechanism for the continuous development of Club members through shared learning processes. This intention is highlighted schematically below.

---

**ESTABLISHING THE CLUB**

The roots of the Club lie in the KwaZulu-Natal Industrial Restructuring Project (KZN IRP), an academic research project established in January 1996 to analyse and support the process of restructuring manufacturing industry in KwaZulu-Natal in order to facilitate international competitiveness. The project was conducted as a partnership between the School of Development Studies at the University of Natal and the Institute of Development Studies at the University of Sussex. The KZN IRP’s specific purpose was to consider the impact of globalisation on manufacturing in the province, as well as the possibility for restructuring specific sectors of manufacturing industry in order to attain greater levels of international competitiveness. This was deemed to be of critical importance given the domestic economy’s liberalisation in line with
WTO requirements. Firms that had operated in isolation from international competitiveness forces for decades were suddenly confronted with the need to improve their efficiency levels to that of their international competitors. The research project was thus launched at a very relevant moment in time.

The KZN IRP, which now operates at the national level with formal linkages to the national government’s Department of Trade and Industry, started off its activities by giving consideration to the impact of globalisation on three important provincial manufacturing sectors - the clothing, textiles, and automotive components industries. In addition a cross-sectoral study focusing on successful exporting firms was also undertaken. The three case studies and the export study formed the focus of the project in its early stages.

The mode of inquiry was built around a participatory action research model. This took as its starting point the active participation of industry, unions, and government in all research activities. Studies of pipelines (ie. studies of various suppliers, producers and marketing agents), firm-level competitiveness and macro economic and international issues in the respective manufacturing sectors formed the nucleus of the research undertaken. The implicit assumption underpinning the KZN IRP then was that industrial development was not the preserve of national government. Strategic industrial development agents could also be, for example, regional or local governments, business associations, intermediary agencies, or universities – all necessarily working in partnership with industrial enterprises.

The research implications of such an approach are of course enormous, with the automotive components study in particular taking on board the notion that stakeholder participation was key to its success. The functioning of the automotive components study consequently followed the action-oriented model very closely. The first part of the programme included an up-front study of the key competitiveness issues impacting on the industry in the province. Numerous automotive stakeholders were interviewed, including both business and trade union representatives. On completion of this study an open invitation was sent to all the firms in the industry to attend an automotive workshop outlining (a) the key issues impacting on automotive component firms in the province, as well as (b) the role that an action-oriented project such as the KZN IRP could play in supporting the industry. Prior to the workshop all of the key automotive stakeholders in the province were visited requesting that they facilitate their members’ involvement in the workshop. The promise of two international experts, Raphael Kaplinsky and John Bessant, to address them on the critical competitiveness issues confronting the automotive industry in the province at no cost was used as a way of attracting stakeholder participation in this crucial first workshop.

This tactic worked and the workshop proved to be a crucial building block for the future success of the KZN IRP’s automotive programme. The findings generated from the research undertaken over the previous nine months was shared with all present. All of the major automotive stakeholders attended the workshop and confirmed their commitment to a detailed firm-level research study that was to be undertaken in the industry over the following five month period. Importantly, it was reiterated at the workshop that all research would be conducted on an action oriented basis and that
the university academics involved would disseminate the information back through the industry on an ongoing basis.

The five months after the September workshop were therefore critical in terms of consolidating the presence of the KZN IRP in the provincial automotive industry. A survey of 35 automotive component manufacturing firms in the province was undertaken, as were a number of detailed firm-level case studies. In addition the two principal OEMs (Toyota SA and Bell Equipment, a manufacturer of Articulated Dump Trucks) in the province were also surveyed in order to gauge how they viewed the competitiveness of the provincial automotive components industry relative to their international competitors. The survey was extremely detailed, focusing on both value chain and firm-level competitiveness issues. Using our market driver approach we assessed the competitiveness capacity of the sampled firms in terms of a number of cost control (finished goods, work in progress and raw material inventories), quality performance (customer returns, internal defects), flexibility (lead times, throughput times, supplier delivery frequencies), human resource development (training expenditure, labour turnover and absenteeism rates) and research and development (expenditure) measures.

For the detailed firm-level case studies we were also able to generate production flow, labour value-adding and machine changeover time measures. The case studies were therefore instrumental in the generation of quantitative data, with the firms who participated receiving the added benefit of a detailed written analysis of their operations as well as firm-level feedback.

Once the study was completed another workshop was held in February 1997. As per the first workshop all of the firms in the industry were invited to participate, with once again the presence of international experts (Raphael Kaplinsky and John Bessant) again paid for by the research project acting as an added incentive. All of the detailed findings that were generated were fed back to the participants at the workshop. It was quite clear that the findings had resonated amongst firms who were only just starting to confront the challenges posed by international competition. The OEM survey highlighted where the sampled firms lagged behind their international competitors. The firm-level performance indicators illustrated the magnitude of the performance gap between the domestic manufacturers and international best practice firms.

As a result of this workshop, invitations were received from numerous business associations, trade unions and firms to highlight the findings that had been generated. Over the course of the next few months in excess of 60 KZN IRP presentations were therefore given to firms, trade unions, business associations and government departments by the auto component sector researcher. It was becoming increasingly clear that firms were beginning to question whether their poor economic performance was really only a simple reflection of a stagnating domestic economy or whether it was the material outcome of poor operational competitiveness in the face of a rapidly shifting international automotive environment.

Some of the senior executives at the firms participating in the research believed, however, that whilst the findings were interesting and of general benefit to the industry and government in terms of policy formulation, they were not playing a catalytic role in improving the operational competitiveness of their own operations.
They argued that a clear indication of the competitiveness performance requirements of firms’ in particular sub-sectors of the industry would be even more beneficial than general provincial studies. This required more detailed benchmarking – preferably at the firm-specific level.

At the same time that this argument was being presented, the national government announced that it had launched the first of its new supply side support measures to bolster the competitiveness of South African manufacturing firms. The Sector Partnership Fund (SPF), using money from the World Bank, was launched as a mechanism to facilitate partnership-based learning between firms and by implication firm-level competitiveness. The fund operates on a matching grant basis of 65:35, with partnerships only being eligible if they have at least six partner firms. On the basis of the advertising carried out by the DTI we put together a multi-faceted benchmarking and continuous improvement networking programme as per the services carried out as part of the KwaZulu-Natal Benchmarking Club’s 1998 activities. The idea of a SPF sponsored benchmarking programme was then discussed with two of the firms which had actively participated in the research project and with whom a substantial relationship had been established. When they gave the green light the Managing Directors of the other fifteen leading automotive component firms in the province were approached.

At the end of the process twelve of the firms gave written confirmation of their support and commitment to financially contribute to the programme. This took an inordinate amount of time and energy tying up a junior researcher for the better part of four weeks. During this period we decided that we had stepped outside the bounds of normal academic activity and registered a business services consultancy, which was to operate as the Club’s service provider.

Getting ‘in principle’ commitment from the firms turned out to be only the easiest obstacle to surmount. Armed with the support of the twelve firms the DTI was approached at the end of May 1997 for the SPF application form – only to be informed that a bureaucratic bungle had occurred and that the fund was not yet operational. We were, however, informed that the fund would be operational within four weeks, which then dragged out to 12 and then 16 weeks. After repeated and at times heated discussions with the DTI, as well as numerous complaints from some of the firms about government reneging on its policy commitments, we were finally informed in September 1997 that the fund was operational and that the application form was available. Completing all of the formalities and submitted our application was by no means a simple task, as it involved re-organising the firms and getting them to provide detailed (mostly useless) individual company information as well as a signed declaration of their collective agreement. One of the Club members who is listed on the Johannesburg Stock Exchange refused, for example, to provide some of the information, stating that if the government did not know who they were they were not willing to participate.

We were verbally informed in late October that our application, the first received by the government, had been accepted and that we could proceed with the launch of the Club. This happened with great fanfare on the 22nd of November 1997 despite no formal contract having been received. Only in mid-December was a formal two-year funding contract finally signed with the government. As a result the Club became
fully operational only at the beginning of January 1998, roughly seven months after the originally intended date.

At this stage the government threw another curve ball, informing the Club that, as per government regulations it needed to put out to tender the service provider contract, which we would then have to competitively bid for alongside any other potential service provider. Government regulations required operating within set bureaucratic parameters designed to ensure fairness for all potential service providers and avoid possible corruption. It required an arms length approach rather than one based on trust, mutual co-operation and reciprocal obligation. The regulatory paradigm of the former was antithetical to that underlying that of clustering. Understandably in the terms of the existent bureaucratic paradigm the fact that we had facilitated the establishment of the Club, set the parameters for all future Club activities, secured the services of international benchmarking consultants, and secured both government and firm-level support for the undertaking was deemed irrelevant. It was only after substantial discussions with the DTI, and after receiving member firm confirmation that they were only willing to participate in the Club on the basis of the relationships of trust they had developed with us, that the government changed its tendering conditions and agreed to allow the status quo to remain.

The physical and legal establishment of the Club failed moreover to rapidly catapult it towards being a true learning network. In many respects, its establishment as a true cluster of firms took significantly longer, and even today, 18 months after its launch, we would consider the Club to be only an incipient learning network. The reasons for this are multifarious, although most can be traced back to the issue of path dependency – both at the institutional and at the firm level.

On the institutional side, the government which had no experience of operating a supply side support measure failed to inform us that whilst our application had been accepted and a written contract drawn up, no formal procedures had been established for the administration of the SPF and that our budget structure did not conform to the DTI’s auditing requirements. Whilst the Club’s activities started in earnest then at the outset of 1998 and the first tranche of government funding was requested at the end of January, the Department of Finance refused to pay stating that our budget needed to be restructured in line with government’s accepted expenditure format. Despite the fact that this was immediately done, the government continued stalling on its payments, until at the end of April we threatened to cease all Club activities. Either coincidentally or through fear of the failure of its sole functioning supply side support programme the government paid the Club all monies outstanding, thus allowing us to plough ahead and continue providing Club members with the multi-faceted services that form the nucleus of the Club’s activities.

Apart from these institutional glitches, it soon became apparent that a number of additional hindrances to the success of the Club existed at the firm-level. Many of the firms needed to learn how to learn. Our first benchmarking attempts were plagued by the fact that the firms did not measure their own operational performance. It was therefore imperative that before we benchmarked the firms that we highlight to the firms what to measure and critically why such measures were important. This was particularly true of the smaller firms where our maxim ‘in God we trust, everything else we measure’ was definitely not taken for granted.
It soon also became apparent that, whilst the Club members were very happy to work with the service provider on a one-to-one basis, certain firms were reticent to talk with one another, let alone collaborate in terms of the sharing of information. Whilst a few of the firms were very eager to use the Club’s quarterly workshops as open information sharing forums other members were obviously very unhappy and could possibly have resigned from the Club if this was the case. We consequently decided to proceed at the speed of the least comfortable firm at the Club and managed to get all the firms to agree to this. The first two workshops were therefore little more than benchmark information sharing forums, where firm representatives were simply requested to discuss some of the critical aggregated findings generated. Our enthusiasm for generating some level of collective efficiency between Club members was therefore knocked back a peg or two. Fortunately, however, firm representatives soon began sharing their own company’s experiences in terms of dealing with certain of the critical competitiveness issues highlighted, thus slowly breaking down the high levels of mistrust that existed initially between Club members. The issue of trust cannot therefore be underestimated in the context of the Club’s activities. Firms are only slowly adapting to the idea that ‘co-opetition’ is not simply academic rhetoric, and that collective efficiency can be generated through the Club’s activities.

Finally, although the firms who joined the Club were definitely committed to improving their operational competitiveness, it soon became obvious that import substituting industrialisation mindsets were still firmly entrenched. Some of the firms were still looking to blame others for their problems, particularly the government and the labour movement. It was therefore critically important for us to assert extremely tight control over the agenda of our first workshops and firm-level interactions. This was done to ensure that they remained focused on operational competitiveness issues only – and not on broader governmental regulations and other external economic factors that firms have little control over and yet spend an enormous amount of energy attempting to influence.

Although the Club has been a formalised legal structure for some period of time, the actual networking component of its activities is consequently a more recent development. It is really only from about October 1998 that signs emerged that the firms as a collective were willing to move beyond very arms length relationships with one another and begin looking at critical issues on a joint basis. The ‘best in class’ firms have, for example, now agreed to formally present their success stories to the other firms at the Club workshops. And, as highlighted in the table below, given the length of the tail and wide dispersement of performance levels relative to the European firms, ‘best in class’ Club members have an enormous amount to teach the firms that are weak in particular operational areas. The basis for collective engagement clearly exists.

<p>| Summary Table: Best and worst performance for Club members and European benchmark partner firms |
|-------------------------------------------------|------------------------------------------|------------------------------------------|
| Market driver | Club member performance (n=11) | European firm Performance (n=8) |</p>
<table>
<thead>
<tr>
<th>Measure</th>
<th>Best</th>
<th>Worst</th>
<th>Best</th>
<th>Worst</th>
</tr>
</thead>
</table>
...
<table>
<thead>
<tr>
<th>Cost control</th>
<th>Raw material stock days</th>
<th>4</th>
<th>86</th>
<th>4</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIP days</td>
<td></td>
<td>0.5</td>
<td>54</td>
<td>1.1</td>
<td>15</td>
</tr>
<tr>
<td>Finished goods stock days</td>
<td></td>
<td>0.2</td>
<td>52.4</td>
<td>2</td>
<td>15.4</td>
</tr>
<tr>
<td>Total inventory (days)</td>
<td></td>
<td>9</td>
<td>128.1</td>
<td>11.5</td>
<td>47</td>
</tr>
<tr>
<td>Quality</td>
<td>Customer returns: ppm</td>
<td>38</td>
<td>80000</td>
<td>50</td>
<td>499</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Lead time: days</td>
<td>7</td>
<td>56</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Capacity to change</td>
<td>Output per employee (R000’s)</td>
<td>298</td>
<td>76</td>
<td>1053</td>
<td>547</td>
</tr>
<tr>
<td></td>
<td>Absenteeism rate (%)</td>
<td>2.5</td>
<td>18</td>
<td>4.1</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>Labour turnover (%)</td>
<td>0.5</td>
<td>8</td>
<td>3</td>
<td>24.9</td>
</tr>
<tr>
<td></td>
<td>Training expenditure as % of turnover</td>
<td>3.3</td>
<td>0</td>
<td>2.6</td>
<td>1</td>
</tr>
<tr>
<td>New product development</td>
<td>R&amp;D expenditure as % of turnover</td>
<td>8</td>
<td>0</td>
<td>12.5</td>
<td>1</td>
</tr>
</tbody>
</table>

**CRITICAL LESSONS**

The broader lessons learnt from our experiences as academic intermediaries and industrial practitioners can be categorised into four important areas of analysis:
- Institutional
- Firm-level
- Intermediary agent (service provider)
- Research

**Institutional lessons**

One of the most striking difficulties experienced in terms of the establishment and initial functioning of the Club has been the institutional difficulties associated with the supply-side support received from the national government. The South African government, in its radical break with import substituting industrialisation, fundamentally altered its policy approach to supporting industry, with demand side support measures (e.g. tariffs) rapidly reduced and new supply side support policies adopted in order to assist firms becoming more internationally competitive. The bureaucratic structure of the government’s Department of Trade and Industry however remained intact. Whilst new policies were put in place there was insufficient re-conceptualisation of the deployment implications of these new policies and hence reconfiguring of its institutional arrangements to ensure that implementation followed the policy shift. As such, the supply side support measures that replaced the previous protective regime were immersed in bureaucratic red tape – to the extent that it was extremely difficult for firms to access them. Using the language of lean production we would argue that the government failed to reconfigure its internal operations in line with new market demands. The long lead times associated with its previous operations were no longer adequate in the face of the international competitiveness demands.
being placed on the firms relying on some level of government support. The knowledge implications of its shift in policy also entail the retraining of government staff, from ‘paper pushers’ to agents of change fully attuned to the competitiveness demands being placed on South African firms.

Whilst it was therefore very easy obtaining government formal support for the Club, given its new policy reorientation and industrial development agenda, it was extremely difficult obtaining the practical supply side support required for the establishment of the Club. This is borne out by the fact that the Club was launched seven months later than originally envisaged and that it took nearly five months from the Club’s launch to receive the first disbursement of government money. This is further illustrated by other anomalous developments such as the demand that the Club put out to tender a service provider contract.

 Whilst this criticism of the government’s role is we believe fair it must be highlighted that without the government’s support the Club’s launch would not have been possible. The government may have struggled in terms of policy deployment, but at least its policies were directed towards improving the competitiveness capacity of South African firms. The business associations supporting the automotive components industry in South Africa on the other hand were still firmly locked into lobbying government for import protection (Aniruth, Barnes and Morris, 1998). Whilst the associations backed the launch of the Club, they consequently did not promise any material – or for that matter intellectual - support.

The broader institutional environment from which the Club emerged was therefore still more oriented towards import substituting industrialisation than promoting global competitiveness, with the net result being the dragging out of the Club’s initial activities.

**Firm-level lessons**

Not all of the difficulties associated with the establishment of the Club can of course be blamed on the broader institutional environment. The firms who joined the Club, whilst keen to be benchmarked and improve their competitiveness, were themselves locked into the previous operating system prevalent in South Africa. The Club has consequently had to overcome numerous difficulties associated with inherited mindsets: not understanding why, and more importantly, what they needed to learn; their tendency to blame operating difficulties on outside forces; and very significantly their mistrust of other Club members. These are moreover all very strong forces that lend themselves to homeostatic tendencies.

As a result of these tendencies the Club’s service provider had to keep relatively rigid control over the parameters of the Club’s activities. Firms needed to be made constantly aware that the Club has a particular competitiveness agenda and that all of its activities are geared towards a specific objective. This is why the monthly Club newsletters are so important. Whilst the firm-level benchmark undertakings are the key to the success of the Club, they only take place on an annualised basis at the firms. They may therefore be the ‘big hit’ that ties the firms into the Club and may have been the criterion by which firms initially evaluated whether they should join the Club, but they are too dispersed to generate a sense of collective ownership of the Club’s objectives. The newsletter through its monthly dissemination to the
management of each of the Club members ensures that firms are constantly locked into the Club as a learning network. This is then reinforced through the quarterly workshops where meaningful firm-level debates and firm to firm networking takes place. As with the issues raised under the institutional banner, the net result of these firm-level tendencies has been slow progress.

**Intermediary agent (service provider) lessons**

This issue of slow progress is critically important, as one needs to bear in mind that the Club did not originate in November 1998. Its existence goes back to the launch of the KZN IRP in early-1996. Given the dynamics underpinning institutional and firm level behaviour in South Africa prior to the liberalisation of the economy, it was perhaps unsurprising to see the slow progress made. The establishment of the Club does, however, demonstrate the importance of intermediary agents to develop intellectual capacity, build relations of trust, and even the provision of financial resources. In our case the intermediary agent was an academic project but this does necessarily have to be the case. One important point appears to be relatively certain, though, and that is the firms would not have started along the collective efficiency path that we have followed under their own cognition without the critical intervention of intellectual intermediaries. Management mindsets at South African manufacturing firms are only now starting to change in line with international competitiveness demands (c.f. Barnes, 1998; Barnes, Bessant, Dunne and Morris, forthcoming).

The academic basis of the Club was extremely important for tying in firm-level support. Firstly, the research undertaken as part of the KZN IRP’s activities convinced firms that there was a need for them to improve their operational competitiveness. Secondly, the frequent and on-going firm-level research undertaken by the automotive researcher facilitated the development of trust relations between the firms and the project. Thirdly, when the plans for a benchmarking club were put in place and slowly followed through the government bureaucracy, as well as with firms, it was the academic intermediaries that sustained interest in its success, provided energy and intellectual leadership, administered the process, and bore the cost of the bureaucratic morass that slowed its establishment. The firms themselves would not have been able to sustain the process. And even if a business services consultancy alone had borne the brunt of these difficulties the Club would probably still not have been established. The immediate returns for a business services consultancy would in all likelihood have been too small to justify the effort put into securing institutional and firm-level commitment, as well as material buy-in.

From a purely operational perspective a number of additional lessons for service providers have been learnt. The most important relates to the fact that firms operate on the basis of doing multiple cost benefit analyses, and that when operating an improvement network of any sort one needs to find tangible forms of benefit for Club members. The small monetary fee that members pay the Club on a monthly basis is not done out of good will or altruistic intentions. The firms want material gain from the relationship. The monthly newsletters, quarterly workshops and annual firm-level reports and presentations are all consequently very important as part of a set of material benefits that secure firm-level buy-in. The supply side support received from the government is critical in this regard. If the Club had not received the 65 percent subsidy through the Sector Partnership Fund it would not presently be operational. It was the subsidy that in many ways secured firm commitment.
Importantly, moreover, in providing such a large subsidy, and by implication lowering firm-level financial commitment to the Club, initial firm expectations regarding benefits were tempered. When the benefits of participating began flowing through to the Club members they were consequently even more pleased than they would have been had they been paying the full amount needed for the Club to function. Whilst we believe that we could now operate the Club without, or perhaps with a significantly reduced, government subsidy our experiences do highlight the importance of financial inducements for securing firm commitment to networking processes, particularly when these processes are completely alien to them. These financial inducements are obviously not enough but they do lower the risk of firm participation, which is critical important, when, in our case, we requested that firms join for a minimum two year period.

Service providers also need to be aware that there is no set template for running a network of firms. There may be basic do’s and don’ts, such as ensuring firm confidentiality and providing a quality service to members, but it is clear from our experience that networks evolve out of the particular sets of experiences of the various constituent parts. Service providers therefore need to be flexible in terms of adapting to this evolutionary process. Given issues of path dependency and the fact that trust levels may be low in liberalising economies service providers need to be sensitive to firm apprehension regarding the sharing of information. These are not issues that can be attacked with a sledgehammer. They need to be treated sensitively and chipped away at with an ice-pick, whilst at the same time ensuring that the broader objectives of the network are rigidly adhered to.

Additionally, it is critical that firms take ownership of the network at some stage. The intermediary agent needs to step away from being the central focus of the network at some point. This is moreover the point at which the network becomes a truly self-contained learning one, with the intermediary agent (or service provider) a mere facilitator. We are slowly seeing this change take place at the Club workshops. As the firms make more direct contact with one another the interface between them becomes less of a mediated activity and the information and knowledge flow through the Club more directly. This change is illustrated in the figures below.

![Flows of information: The Club as an incipient learning network](image_url)
Research lessons
In many ways one could argue that the establishment of the Club was a ‘natural’ culmination of the action-oriented design of the KZN IRP. It could be argued that by working closely with industrial stakeholders and through a process of rigorous research and information dissemination, the academic project developed an insight into the key competitiveness drivers in the regional automotive industry. On the basis of stakeholder support a programme that would help facilitate the international competitiveness of the industry was then structured with this programme being the KwaZulu-Natal Benchmarking Club. We would contend that in many ways this is the case, although at some point one has to recognise that this necessitates a clear shift from academia to consulting. The services offered to members as part of the Club’s activities are hard services of a consulting nature. Notwithstanding the rich generalised research data they provide, the individual firm-level diagnoses that are carried out as part of the benchmarking approach are for the firms only.

Importantly, however, this shift does not mean that the Club offers few academic research benefits, as the exact opposite is actually the case. In working closely with firms on an ongoing basis and in having the resources to benchmark firms internationally and measure their progress against these benchmarks over time, the Club is in academic terms an almost perfect research laboratory. Firm-specific benchmarking information that may lead to company identification cannot be divulged but the Club does allow the KZN IRP access to all of its quantitative data and process findings thus helping to build the academic capacity of the project. A number of academic studies have consequently been generated from the Club’s findings, as well as the access that the project now has to the firms. The level of detail in terms of the data being generated is moreover unparalleled in South Africa, and we believe perhaps even internationally, with the net result being a research payback for the enormous amount of academic time and effort that went into the establishment of the Club. This mutually reinforcing relationship between academic research and the Club is illustrated in the figure below.
CONCLUSION

This paper started with some comments about the need to get behind the existence of clusters and the collective efficiency they generate by understanding the processes that lead to the establishment and maintenance of such clusters. It is clear from the experience of the KwaZulu-Natal Benchmarking Club that targeted purposive action has a major role to play in ensuring the success of such processes. Intermediaries can play a critically important role in ensuring that the gap between government policy on the one hand and implementation on the other is narrowed. Without such intermediaries it is highly unlikely that this particular cluster would ever have come into being notwithstanding the enormous goodwill exuding from government. Finally, as a pleasant surprise for academics, the mutually reinforcing role of research in the process has been demonstrated to be of critical importance if used in the correct manner.

Measuring the success of the Club in quantifiable terms will only be possible when we complete the second round of benchmarks at the end of 1999. The competitiveness improvements made at the companies will then be analysed in order to ascertain how effectively the Club has contributed to improving operational efficiencies.

However at a qualitative level it is clear that the Club has made important progress in changing the way in which firms operate. Club members are clearly more aware of the operational competitiveness requirements being placed on them by market changes, and at the conceptual level at least they are attempting to reorient the way in which they operate. Significantly, it would appear from the on-going Club member firm visits that a continuous improvement culture is slowly being endogenised within the firms. As an example, a number of members have as a direct result of their involvement in the Club restructured and more rigorously implemented their operational measurement systems.

Despite the progress made thus far, and as clearly highlighted, the Club is still however only an incipient learning network. Given issues of import substituting path dependency at both the institutional and firm-level, progress made has been slow. There are definitely no quick-fix formulations capable of driving manufacturing firms forward at either the individual or cluster level. This is hopefully where the critical lessons learnt from our experiences can be helpful to academics, industry stakeholders and practitioners.

FOOTNOTES

1. The 35 firms that were surveyed both qualitatively and quantitatively generated well over 80 percent of automotive component manufacturing output in the province.
REFERENCES


