

**Clusters, Knowledge Sharing and the Individual Firm: Focus on  
Dubai**

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## **ABSTRACT**

The introduction of Free Zones has transformed the economic scenario of the UAE over the past couple of decades, bringing about much change in the industrial setting of the emirate of Dubai. The first Free Zone in the UAE was the Jebel Ali Free Zone, which began in Dubai in February, 1985. At the time this was a totally new concept to the Middle East and when set up it received very little attention. In business circles most had never heard of the Free Zone idea and even those who were aware of the concept, were doubtful whether it would work in the traditional environment of the Gulf (Hejmadi, 2004). Over 20 years later the Free Zone concept is still thriving in the UAE. During the last decade hardly a year passed without a Free Zone being established in some part of the country. Thus far, there are 13 Free Zones and more are in the developmental stage.

Despite the growth in free zone clusters in Dubai there has not yet, to our knowledge, been any studies investigating knowledge sharing and competitive advantage for firms operating in such groupings. As a result, this study will investigate two such cluster groupings (education and HRM in Dubai Knowledge Village and information technology in Dubai Internet City) in order to bridge that knowledge gap. The study considers a revised version of Porter's (1990) diamond which includes an additional factor referred to as 'positive social atmosphere' (Persson, Sabanovic and Wester, 2007) as an important aspect of knowledge sharing.

This paper begins by reviewing some of the key literature on clusters, before considering how clusters may support knowledge sharing and competitive advantage. The paper then focuses on Dubai as the setting for the cluster and the introduction of the Dubai free zone clusters before reporting on the findings and conclusions from the study. It is concluded that new paradigms are required in order to generate mechanisms that leverage knowledge sharing within clusters and that these may be engendered through HR processes.

## **WHY CLUSTERS?**

Clusters as defined by Porter (1990) are geographic concentrations of interconnected companies, specialised suppliers, service providers and associated institutions in a particular field. Clusters tend to be located where enough resources and competencies are grouped together in order to reach a critical threshold. This is said to provide the cluster with a key position in a particular economic branch of activity, with competitive advantage over other places and potentially world supremacy in that field (Porter, 1990). Persson et al (2007) point out that it is ironic that in the globalised world of today companies find competitive advantage in locating proximate to each other in such industrial groupings known as clusters. Specifically, this study will address Porter's model with the addition of the 'positive social atmosphere' identified by (Persson, Sabanovic and Wester, 2007). Their study included 72 firms located within clusters in Sweden. They built on the work of Axelsson and Easton (1992) who proposed the positive aspects of relationships in networks can foster trust among network members and reduce risk through social exchange. The term 'positive social atmosphere' was formed as Persson et als study identified that the top ranked benefits for firms in the clusters they studied reported on were related to social relations and knowledge exchange as the major benefits that accrued from being located in a cluster. These issues will be explored further in the presentation.

## **Clusters and knowledge sharing**

Business today is frequently reliant on networks within and between organisations. As a result, knowledge spill-overs are important. Knowledge needs to flow between individuals, groups and firms in different locations, as well as within companies, in order to be used effectively. Channels through which knowledge can spillover include: public presentations; publications, cooperation; labour movement and sub-contracting. Spatial clusters are seen as social systems or networks where it is easier for information to circulate and where social contacts among firms facilitate the communication and the articulation of tacit knowledge (Malmerg and Power, 2005) Hence, it seems the question is (as identified by Mudambi, 2005 on multinationals) how can firms move from a traditional cluster presence to the more active, knowledge-intensive mode? It seems new paradigms are required in order to generate mechanisms that leverage knowledge sharing within clusters. What seems to have been largely absent from discussions thus far is the role of human resources in promoting knowledge sharing in clusters. While Alexopoulos and Monks (2004) argue that a growing body of HRM research has drawn attention to people management issues within the broader knowledge management agenda, little progress has been made in understanding the interrelationships between HR practices and inter-organisational knowledge sharing. Knowledge sharing does not, of course, occur in isolation. Mechanisms need to be in place to assist the sharing of information and ideas between individuals and between firms. As such, a range of HR strategies can support synergies in knowledge management to enhance learning within clusters such as inter-firm HR learning support networks, communication strategies, benchmarking and inter-firm working groups. Grant (2002) associates a number of knowledge processes with knowledge management which include: knowledge creation, acquisition, integration, sharing, storage and organization.

As Solvell et al (2003) point out it is not enough just for a firm to be located in a cluster to assume that knowledge sharing will take place. They found that cluster failure is likely to come about when there are weak frameworks, facilitators lack strong networks, have insufficient budgets and neglect brand building.

## **About Dubai**

Not long ago it was a fishing village and smugglers cove but until recently it was poised to become one of the world capitals of the 21<sup>st</sup> Century. Already Dubai boasts the top two of the top ten world's tallest buildings and the top two of the world's largest shopping malls. Referred to as the CEO of Dubai the goal of Sheik Mohammed al-Maktoum is to be number one in the world and for Dubai to be known as 'world class'. But what of the future of Dubai Inc as it is referred to? This is where the 'cities' or clusters of the future have become a major drawcard for companies looking to invest and relocate in Dubai. Developed as part of Sheik Mohammed's Strategic Plan 'Vision for Dubai' (2000) the plan was to increase GNP to \$30 billion by 2010. In 2005 that figure was exceeded, with GNP reaching \$37 billion. In five years (Arab News, 2007). Referred to as free zones, unlike other areas in Dubai the clusters enjoy 100 foreign ownership (elsewhere a local has to jointly own 51%), pay no taxes or import/export taxes and are largely free from the censorship applied elsewhere. Beginning in 2000 with Internet City, now there is Media City, Academic City, Health City, Industrial City, Children's City and many more to come. As stated earlier this paper reports on two such cluster groupings (education in Dubai Knowledge Village (DKV) and information technology in Dubai Internet City (DIC).

## **METHOD**

As this study falls largely into the category of exploratory research, the authors approached the two free zone clusters as case studies. Exploratory research often relies on secondary research such as reviewing available literature and qualitative approaches such as informal discussions with employees, management and others and more formal approaches through interviews case studies or pilot studies (Kotler et al. 2006). Questions were constructed around the four factors of Porter's (1990) diamond; the support for the theme of a 'positive social atmosphere' arose from these. Apart from the semi-structured section of the interview, interviewees were also asked some specific questions with regard to the cluster which related to their 'motives for participation and preferred cluster attributes' statements that were replicated from Perry's (2007) study on business environments and cluster attractiveness to managers. Once the interviews were conducted the results were coded using SPSS software.

The decision was made to interview key people (owners, managers or their representatives) in three main firm categories within the DKV and DIC clusters. That is across a range of small, medium and large firms. The intention of the study was to uncover key themes arising from the interviews and compare the findings from DKV and DIC. The sample firms included in the study were selected by the Partner Relationship Managers located within the two freezone clusters. Prior to the interviews being undertaken with cluster firm managers, interviews were carried out with two cluster firm managers at DKV and DIC.

## **THE FREEZONE CLUSTERS AND FINDINGS**

### **Background to Knowledge Village (DKV)**

Dubai Knowledge Village (DKV) was launched in 2003, and according to its website, places DKV on the map as a destination for learning excellence. Its 1 KM long campus provides an environment for a variety of knowledge-based entities including training and learning support centres. The DKV cluster comprises 400 firms and DKV management 21 people. In 2007 (DKV) Events was launched with the main objective of supporting the knowledge-based economy of Dubai and offering a platform for knowledge and best practice sharing.

The focus of DKV is on business companies, in particular trainers and consultants. DKV is the only FZ with a management body to help companies position themselves in the market and interact with other firms. Three cluster firms (DKV, DIC and DMC – Dubai Media City, share marketing, HR and accounting services. DKV hosts companies involved in training and consultancy with the intention of complementing businesses in DMC and DIC. With DKV being a free-zone, there are no taxes and no labour and ownership restrictions.

One of the main advantages for firms based in DKV is that it provides value-added services for its "business partners". These involve events aimed at specific groups (e.g. management companies) as well as providing more general appeal (e.g. open-days, breakfast meetings); DKV also undertakes market research (such as issues faced by businesses operating in Dubai) which is fed-back to their partners in DKV. The Relationship Manager demonstrates a proactive approach not only organising and hosting a series of networking events to encourage knowledge sharing and innovation but also obtaining sponsorship of such events from organisations in the region. DKV also hosts HR breakfasts and recently began an HR networking group.

## **Background to Dubai Internet City**

In February 2000, Dubai's then ruler Sheikh Maktoum bin Rashid al-Maktoum issued a decree setting up a free-trade zone for electronic commerce and technology with the aim of making Dubai a centre for technology and electronic commerce. In September 2000 Dubai officials announced that more than 100 IT companies had been granted licences to operate. The companies, which included industry giants Microsoft, Oracle and Compaq, invested \$250 million in the technology, e-commerce and media free zone. By mid-2004, the number of companies operating out of DIC had risen to more than 500 and by 2008 this number had risen to over 1000 with over 35,000 employees based there.

In common with DKV, Dubai Internet City provides a 'one-stop-shop' environment for a variety of services required for setting up and running a business. Also in common with DKV there is a single point in DIC from which businesses can interact with different government entities such as the police, immigration, and postal authorities. Companies can host independent web and e-commerce sites with DIC's sister company, eHosting DataFort (EHDF), who provide hosting services from a secure data centre, with strong service level agreements and collaborative platforms. Also on offer are satellite broadcasting and Internet services, through a dedicated teleport, and in-house services such as event management and hospitality. Other support services operating within the community include food courts, banks, travel agents, car rentals, beauty salons, pharmacies, clinics, supermarkets and gymnasiums.

## **Inside Dubai Internet City**

The main benefits for DIC cluster firms were stated as being located in a free zone. Also the branding of DIC itself is very strong. During interviews it was stated repeatedly that 'anyone who is anyone wants to be there who is in the ITC business'. The main competitive advantage for DIC firms was said to be Dubai itself, what is happening in DIC and the region as both provide credibility. The main problem for the DIC management is space as they were running out of it. Companies such as Microsoft were said to be desperate for more space which resulted in more DIC buildings being constructed that were located some distance away from the original DIC location although they would retain FZ benefits. Each person in the Partner Relations Group has 6 or 7 DIC buildings to look after who support the firms through provision of customer relationship management.

DIC also supports partner firms through the service levels offered, networking through activities such as 'get to know your neighbour' where all firms in a building are invited to breakfast to get to know other firms/employees in the same building. Often it was said that even if such events do not lead to direct business interaction then contacts will know someone that can link up to provide leads, new business relationships and so on. DIC also host 'CEO interact' which is a quarterly event whereby prominent CEOs are invited to speak and then there is a chance for participants to interact. It was stated that many small/medium sized firms work with larger firms on various projects so it appears that the networking initiatives are paying off for some.

Unlike DKV staff, DIC staff have not had complaints about the cost of being located in DIC. This is thought to be because there are higher profits to be made overall in the ITC industry so that location cost is not such an issue there.

## **Findings from the Study**

As stated previously 18 firms were included in the study, 9 each in DKV and DIC, three small, three medium and three large as selected by the cluster Partner

Managers. Interviewees comprised either the most senior person or their delegate which included: Managing Directors; CEOs/Partners; Presidents; Marketing Managers; Office and Facilities Managers; and Sales Directors. Their length of tenure varied from 9 years to 1 year with the median being 2 years. Where applicable selected comments have been included in this paper.

### **Why locate within a freezone cluster?**

One of the first questions asked of interviewees concerned the perceived benefits for partner firms of being located within a freezone cluster. The majority of interviewees from both DKV and DIC responded that the freezone location and benefits were the major reasons for setting up business there although two people said it was to be close to the competition and customers. One interviewee commented that DIC was very attractive due to its strong branding, “the DIC logo is highly credible” and another that “the big names help to identify the industry and make it a legitimate cluster to be part of”.

### **Recruitment for Cluster Firms**

One of the key areas of Porter’s diamond are the factor conditions which includes human resources and the benefits of access to labour through cluster location. When interviewees were asked about recruitment for the cluster firms it was clear that the majority do not benefit from location within either DKV or DIC as they go overseas to recruit employees. The latter point appeared particularly evident when firms were recruiting from their ‘country of origin’ where the common language spoken may have stressed a perceived commonality in value systems and the like. At the time of this study there were also problems associated with recruitment within the UAE as the labour market was generating approximately 300,000 new jobs each year and there were not enough locals to fill them.

Another difficulty associated with recruitment was the rising cost of living in Dubai especially with regard to accommodation costs. One interviewee noted that although there were potentially a lot of talented people from India who are located in Dubai he noted that the market in India was also booming. “The big problem is that people get high salaries there now so India itself is competitive. Now they look at India and see Accenture, Intel and a lot of other big names are there and there is strong pressure to return. That means that competitiveness is affected overall here and many workers are worried about inflation”.

### **Knowledge Flows in the Clusters**

In relation to knowledge flows there were some differences between the responses from interviewees located in DKV and those located in DIC. Interviewees were asked whether certain factors were motives for location within a cluster and their preferred cluster attributes. For example in DKV 70% of interviewees indicated that it was important that knowledge was shared among cluster firms, 60% said it mattered a lot that being in a cluster reduced the need for in-house provision of some activities and 39% said that it mattered a lot that the network provided opportunities to form new business relationships with other members.

In DIC the situation was different with 50% of interviewees stating that it mattered a lot that other cluster firms were businesses they know and trust. 40% indicated that it was important that knowledge was shared among cluster firms and 40% that the network provided opportunities to form new business relationships with other members. A major difference from the DKV interviewees was that only 10% indicated that it was important that being in a cluster reduced the need for in-house

provision of activities. One firm stated that not only can their staff get involved in the activities held at DKV and training but that they also invite their customers to come along as this helps to provide more impact and that way they can all get the most out of it.

Another said that “there is very little knowledge sharing happening at DIC. Potentially, there could be business opportunities coming from such networking – it is of course up to us to follow up leads - I did get one contact from CEO interact”. Another said that ‘new buildings go up but there is nothing to say what they are for, no project information. Overall information and communication are lacking’. Another said “DIC need to continue the ‘meet your neighbour’ initiative. Maybe monthly networking events held at 5pm in the evening. Also appreciate CEO interact but this is more formal than meet your neighbour. Need much more information overall – currently there is a gap, there needs to be a sense of belonging to the place, need to be motivated to stay in DIC. There is a newsletter but we still don’t know what is going on around DIC”.

### **Competitive Advantage for Cluster Firms**

When asked about the main factors influencing competitive advantage interviewees indicated these were mainly their own skills and competencies, other competitors and suppliers, support industries and labour markets affecting the clusters. A DIC firm said the competitive advantage of being located alongside Microsoft and Cisco is important. Another said “now we want to have 100 people in the business but to do that will probably have to have an office in India. Would have liked to expand here but it is not possible due to the high costs involved. Dubai makes it difficult to be competitive. For example there are 30 days holidays, Ramadan, ‘Bush Days’ and similar”.

With regard to DKV it was seen as important to boost its image and plan for DKV to get beyond some of the traditional barriers that exist between businesses. Also helping firms to get to know other staff/firms in DKV – such as an open day would be beneficial it was suggested. The theme of stronger branding for DKV was also picked up by others with another commenting “outside firms still do not appear to be clear what clusters such as DKV can add to society. The branding of DKV would be important to help in this way”.

### **CONCLUSION**

Clusters have emerged as an industrial organisational form that is recognised as having a more superior ability than single firms that operate in isolation to foster national economic development and growth. Cluster development was created with the aim of developing the knowledge-based economy in Dubai which focused on a variety of industry sectors including education and training, media and technology clusters. So far, the clustered approach has proved successful in the information and communication technology industry as well as in the media, education, and biotechnology sectors.

The complexity of the business processes leads many firms to establish networks as such partnerships may provide vital access to new ideas, perspectives and business practices. As Bessant (2004) says no man is an island, and these days, few businesses are either. Companies operate in a complex web involving a host of different players, including suppliers, customers, competitors, regulators and collaborators. The challenge is said to no longer be about how to manage the

business, but how to manage it within the wider context of networks. Networks are especially relevant in the context knowledge sharing and the potential to combine a wide range of knowledge elements to create something new.

The question (as identified by Mudambi, 2005) was posed earlier as to how firms can move from a traditional cluster presence to the more active, knowledge-intensive mode. It seems new paradigms are required in order to generate mechanisms that leverage networking within clusters.

With regard to the findings from this study it appears that some of Porter's (1990) four diamond factors operate as expected by the model and some do not. For example, competition was considered healthy, but the factor conditions relating to human resources were not enhanced by the cluster location. This is because Dubai has a population where expatriates constitute 80% of the working population, therefore skilled labour generally has to be recruited from elsewhere. That is not to say there is no movement between cluster firms, just that there are added restrictions from visa regulations in Dubai. Related and supporting industries through spatial proximity was a key issue in the clusters studied as indicated previously particularly with regard to competition from other firms which was largely considered to be a positive factor. Demand conditions were also slightly different in Dubai to what might be expected from a 'traditional' cluster grouping as the majority of firms were exporting to places outside of Dubai so were not competing directly with firms in similar markets in most cases. Hence, it was evident that two out of four of the cluster factors identified by Porter (1990) were relevant in the Dubai freezone clusters. However, it is argued that the most relevant factor in this study was the modification to Porter's model which is referred to as the creation of a 'positive social atmosphere' (Persson, Sabanovic and Wester, 2007). As one of the interviewee's said "currently there is a gap, there needs to be a sense of belonging to the place, a need to be motivated to stay" (in the cluster).

This was evident both in DKV and in DIC. The findings and implications indicate that more could be done to enhance knowledge sharing for the firms within both the clusters. They were managed very differently – with DKV firms, perhaps not surprisingly, experiencing more human resource management and activities to bring firms together to share knowledge and ideas than were DIC firms.

As pointed out earlier by Solvell et al (2003) it is not enough just for a firm to be located in a cluster to assume that knowledge sharing will take place. They argued that cluster failure can come about when there are weak frameworks, facilitators lack strong networks, have insufficient budgets and neglect brand building. So, it is argued that although DIC have strong branding they would be well advised to strengthen the frameworks and networks for individual firms within the cluster. Many DIC interviewees identified the need for more facilitated interaction to enhance knowledge sharing amongst firms. Although the networks within DKV were stronger and more facilitation was occurring to enable knowledge sharing, it is suggested there was still room for more such as inter-firm HR learning support networks and inter-firm working groups. So potentially, the point is that being in a cluster does not necessarily bring advantages for a firm. Although in the case of Dubai there are the obvious freezone benefits, and for DIC very strong branding, which was considered a major source of competitive advantage, some firms within both clusters were considering moving to another freezone with cheaper accommodation - particularly if they were not experiencing the knowledge-intensive interactions within the 'positive social atmosphere' they desired with the other firms located in the cluster.

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