

POLICY-DRIVEN CLUSTERS AND INTERNATIONALISATION: THE MISSING LINK

ABSTRACT

This paper investigates whether clusters created by policymakers are able to enhance the internationalisation of firms by generating knowledge flows through regular, face-to-face social interaction between cluster members, as seen in many successful, 'organic' clusters. Based on in-depth interviews with 10 firms and other key actors operating in Malaysia's Multimedia Super Corridor cluster, we reveal that knowledge that may enhance internationalisation does not readily diffuse within a policy-driven cluster through spontaneous social interaction, because such interaction does not always occur automatically or instantaneously in such clusters. However, authorities may compensate for this somewhat by organising regular trade shows, conferences, workshops, and other events in the cluster, through which firms can acquire some knowledge about conducting international business.

1. INTRODUCTION

Various scholars have pointed out that the modern era of globalisation, which is dominated by global competition and rivalry, is, paradoxically, characterised by the growing importance of *local* knowledge, relationships and competition (Audretsch 1998; Porter 2000; Solvell and Birkinshaw 2000). The growing research focus on industrial clusters in the international business literature is a reflection of this, even though this literature is still relatively small. In particular, the impact of industrial clusters, or 'geographical and sectoral concentration[s] of enterprises' (Schmitz 1999, p. 466), on firm internationalisation, broadly defined as 'the process through which a firm moves from operating solely in its domestic marketplace to international markets' (Javalgi et al. 2003, p. 185), has received relatively little attention in the literature (Andersen 2002; Pla-Barber and Puig 2009; Prashantham 2008). In order to shed some light on how internationalisation may be affected by clusters, we investigate the case of a policy-driven cluster. This is important because the few existing studies which *have* looked into cluster effects on firm internationalisation have placed little emphasis on the nature of the cluster's development. In other words, they have, by and large, considered 'clusters' generically, and have not adequately addressed important differences between those clusters which evolve gradually, and largely through 'organic' market forces, and those which are pre-planned and 'made-to-order' by policymakers with the expectation that they will replicate successful clusters elsewhere and stimulate regional economic growth.

Due to the widespread suggestion within the literature that clustered firms acquire tacit knowledge through regularly interacting and socialising with other actors in the area (Camagni 1991; Dahl and Pedersen 2004; Garnsey 1998; O'Hagan and Green 2002; Saxenian 1994), firm performance is often perceived as being enhanced by operating in clusters. The thick social framework in clusters has also been shown to have some positive effects on firm internationalisation, with firms exchanging relevant knowledge with one another after establishing close social relationships with

fellow cluster members (Becchetti and Rossi 2000; Brown and Bell 2001). However, it is largely unknown whether policy-driven clusters can enhance firm internationalisation by stimulating the diffusion of knowledge through social interaction amongst its members.

Given that (a) replicating the success of famous clusters (e.g. Silicon Valley) is one of the main aims of many cluster initiatives (Feldman et al. 2005), and that (b) arguably the key to the success of these well-known clusters lies in the propensity of firms therein to interact socially and exchange knowledge with one another (Saxenian 1994), it is fairly prudent to assess the success of clusters on the basis of knowledge flows, particularly through social interaction. The aim of this study is thus to investigate factors that can affect the propensity for interaction and cross fertilisation between firms that participate in a policy-driven cluster, and how these can influence the internationalisation of firms. Thus, we want to know: *How does social interaction in policy-driven clusters affect firm internationalisation?* We combine insights from extant literature with the findings from our case study to generate three important propositions related to the nature of social interaction in policy-driven clusters and its impact on internationalisation.

We adopt Malaysia's Multimedia Super Corridor (MSC), a policy-driven cluster of information and communications technology (ICT) firms and related institutions, as our case study. In recognition of the importance of knowledge-intensive industries for achieving wealth generation (Mudambi 2008), the MSC has been designed to spearhead Malaysia's transformation from a manufacturing to a knowledge-based economy, with the international competitiveness of Malaysian firms considered a vital tool for achieving these objectives.

2. LITERATURE REVIEW

2.1 Social interaction in clusters and firm internationalisation

Traditional firm internationalisation models suggest that the process is incremental, due primarily to the process through which knowledge accumulates (Cavusgil 1980; Johanson and Vahlne 1977). These models implicitly adopt a view whereby learning is closely connected to experience, particularly experience gained through operational activities. However, experiential knowledge of international business operations can be acquired through several alternative means (Forsgren 2002), including through business and social networks (Andersen 2006; Ellis 2000; Sharma and Blomstermo 2003; Zhou et al. 2007). The international business literature on embeddedness also demonstrates the relevance of 'learning through networking' (Forsgren et al. 2005). Through business interactions between customers and/or suppliers, and specifically through the cumulative adaptation process, subsidiaries develop technological and organisational competencies. Thus business relationships develop into technological and organisational interdependencies between business partners, and these enhance the general competence and innovative performance of partners (Araujo 1998; Tyre and von Hippel 1997; von Hippel 1988). Inter-business networks within clusters can nurture knowledge and skills of cluster members. Thus, by improving their 'ownership' advantages, cluster membership can enhance the *capability* for internationalisation. Business networks may also be an important driver of the internationalisation *process* (Chetty and Holm 2000; Johanson and Vahlne 2003). Once a close business relationship develops in a business network,

internationalisation may be a by-product of relationship maintenance by network members across borders (Chen and Chen 1998; Forsgren et al. 2005). There are also suggestions that accessing knowledge (e.g. concerning opportunities in foreign markets) through networks within clusters can directly speed the internationalisation process (Brown and Bell 2001; Fernhaber et al. 2008; Pla-Barber and Puig 2009; Sopas 2001).

This observation provides analytical support to the relevance of clusters for internationalisation as studies reveal that opportunities to acquire knowledge through social relationships between individuals in clustered firms is one of the most significant advantages of cluster membership (Bell 2005; Porter 1990; Saxenian 1994; Storper and Venables 2004). Research has shown that geographical proximity between firms in clusters can facilitate regular, informal, face-to-face interaction (Dahl and Pedersen 2004; Saxenian 2000), which in turn may enhance trust and, therefore, possibly generate collaboration (Moodysson and Jonsson 2007), information-sharing (Doring and Schnellenbach 2006; Gertler 2003), and technology spillovers (Baptista 1998).

Other studies suggest that knowledge flows through face-to-face interaction and social relationships can directly enhance the internationalisation process (Becchetti and Rossi 2000; Brown and Bell 2001; Fernhaber et al. 2008; Pla-Barber and Puig 2009; Sopas 2001), particularly as foreign firms are also frequently attracted to clusters, seeking to take advantage of knowledge spillovers, a high level of entrepreneurial culture, and high localised demand (Birkinshaw and Hood 2000; Majocchi and Presutti 2009; Tallman et al. 2004). Head (1995) argues that, while technical information often flows between entrepreneurs, designers, and engineers in close proximity, the presence of *foreign* firms may help to enhance the international growth of local firms because a large part of the spillovers may include experience-based knowledge on how to operate in a particular market, including, for example, experiential knowledge of meeting local regulations, and more ‘mundane’ but practically useful advice on transportation options, foreign representatives, and so on.

Note, however that it is not being argued that clustering or physical proximity is the only way of generating networking knowledge, particularly as communication becomes increasingly effective at greater distances due to rapid developments in ICT (Rallet and Torre 1998). For example, Boschma (2005) argues that while geographical proximity may facilitate interactive learning, other dimensions of proximity (such as cognitive, organisational, social, and institutional proximity) may be of more importance in reducing uncertainty and enhancing coordination, thus improving opportunities for interactive learning and innovation. Our argument is that in order for clusters to be effective in stimulating internationalisation, it is necessary that they facilitate interfirm knowledge exchange and development, which in turn requires a certain degree of social interaction.

2.2 The case of policy-driven clusters

Existing studies examining the impact of clusters on internationalisation have given only limited attention to the significance of the background of the cluster’s formation. Following the success of well-known industrial clusters such as Silicon Valley, policymakers in many countries have attempted to replicate these achievements by designing and creating clusters, often from scratch (Enright 1998; Feldman et al. 2005; Fromhold-Eisebith and Eisebith 2005). It is often held that clusters constitute a successful economic strategy as they lead to regional innovation

and industrial competitiveness due to the social capital generated by geographic proximity, and sectoral specialisation (Ab. Aziz and Norhashim 2008; Fromhold-Eisebith and Eisebith 2005; Karlsson 2008; Yang et al. 2009). In particular, policymakers in many developing countries view clusters as a vital source of FDI, technology spillovers, R&D, and employment, capable of producing economies of scale and scope, as well as generating local economic development, and providing a foundation for helping local firms compete in global markets (Brown and McNaughton 2003; Jussawalla 2003; Raines 2002; Su and Hung 2009).

However, some writers are critical of government-sponsored clusters, favouring clusters which develop principally through market forces (e.g. Porter 2000). Gordon and McCann (2005), for example, oppose cluster-based regional planning policies, pointing to the difficulties in implementing any single 'ideal' type of industrial cluster that would maximise innovation.

One potential difficulty policymakers may face in developing clusters from scratch is creating a dense social network community, through which tacit knowledge, which can potentially help internationalising firms, can flow within the region. Social and business networks and relationships are often embedded and take time to develop, requiring trust and frequent interaction (Anderson et al. 1994; Dahl and Pedersen 2004; Granovetter 1985). Xu and McNaughton (2006) have highlighted the importance of a long history of social connections in the spread of tacit knowledge through clusters. Hospers & Beugelsdijk (2002) and Ionescu (2005) add that social capital, which refers to the degree of trust in social relations, is closely related to culture, and can be built through networks and civic engagement, but can be difficult to create instantaneously. Thus, permanent co-location may enable tacit knowledge spillovers through social interaction, but it does not *guarantee* that it will happen (Beugelsdijk and Cornet 2002; Breschi and Lissoni 2001; Lissoni 2001).

Therefore, clusters which are built from scratch by governments may struggle to generate a vibrant social environment conducive to stimulating the flow of knowledge of international business operations between individuals and firms. Simply requesting that firms relocate to a new region may not instantaneously generate a sufficiently vibrant social framework within the cluster favourable to intense knowledge spillovers.

3. RESEARCH METHOD

Given that relatively little is understood about the nature of social interaction in a policy-driven cluster, and how this affects internationalisation, an inductive case study was considered the most suitable research method (Eisenhardt 1989; Ghauri and Gronhaug 2005; Yin 2009). The lack of empirical findings or any theory on the impact of policy-driven clusters on internationalisation made generating hypotheses and a survey questionnaire unfeasible. The effectiveness of qualitative research has been acknowledged by scholars throughout the social sciences (Miles and Huberman 1994), including researchers in international business (Marschan-Piekkari and Welch 2004; Wright 2004) and those investigating industrial clusters (Karlsson 2008), and this approach was deemed the most appropriate to investigating the problem at hand. This study adopts an embedded single-case study approach. The primary source of data were semi-structured interviews with senior executives from 10 SMEs and other non-firm actors within the MSC cluster, with additional data sources being direct observation and public documents such as brochures and MSC reports (e.g. the MSC

Impact Survey, 2008). Researchers are repeatedly advised to use case studies when exploring relatively unknown subjects (Eisenhardt 1989; Gerring 2007; Ghauri 2004), and single-case studies are often considered to be appropriate in more exploratory studies which aim to lay the foundations for later, more comprehensive studies (Ghauri and Gronhaug 2005; Yin 2009)

3.1 Selection of firms

We opted to investigate the issue at hand in the context of the MSC cluster in Malaysia, and therefore, the first criterion for firm selection was that each firm was required to have MSC Malaysia Status¹. As the study was concerned with how social interaction within the cluster could enhance internationalisation, we wanted to interview firms for whom international business activities were central to firm strategy. All the firms in the study considered internationalisation to be important to their present and future business plans, and are all either already engaged in international business operations, or, in the case of Firm A (see Table 1), continue to strive to internationalise, but have thus far been unsuccessful. SMEs, defined by Knight (2000, p. 12) as ‘companies with 500 or fewer employees’, were selected as key decision-makers could be accessed more easily (Chetty 1996), but more importantly because, given their limited resources, they (SMEs) tend to be more reliant upon external resources, including clusters, than large firms (Altenburg and Jorg 1999; Christensen and Lindmark 1993; Visser 1999), and thus there is potentially a more significant cluster effect on SMEs. In selecting the firms for the study, it was important to also minimise the potential effects of other variables on internationalisation and to focus on the impact of the MSC. Thus, all firms in the study were fully Malaysian-owned (as foreign ownership may have a decisive effect on the firms’ international activities).

We began by interviewing key decision-makers within each firm (CEO/Director/etc.), from which we were able to identify key features of social interaction in the MSC, and its impact on internationalisation. In most cases, however, based on comments made by the initial informants, and in order to strengthen the study’s validity, further interviews were conducted, including with additional respondents from the firms. In total, 26 respondents from the 10 firms were interviewed either in person or by telephone (at least one respondent from each firm was interviewed in person), in some cases twice. Although it is desirable to interview, for example, three respondents at different hierarchical positions in each firm, this was not always possible due to the small size of some of the participating firms, and thus, to compensate, supplementary interviews were conducted with individuals closely connected to the MSC cluster (Carson et al. 2001). The additional respondents comprised: (1) a senior government representative for the MSC, and (2) a senior representative from the Technopreneurs Association of Malaysia (TeAM), a private organisation consisting of numerous ‘technopreneurs’, which works closely with companies in the MSC to further the interests of ‘technopreneurship’ in Malaysia.

Although all the firms have MSC Malaysia Status, only five of them have their headquarters in the purpose-built city of Cyberjaya. The other five firms operate primarily from elsewhere in the general Klang Valley area (which comprises Kuala

¹ MSC Malaysia Status refers to incentives and benefits enjoyed by ICT firms (both local and foreign) including financial and non-financial incentives, in recognition of the development or use of multimedia technologies to produce or enhance their products and services, and for process development (source: <http://www.msomalaysia.my/topic/12071141958827>).

Lumpur, its suburbs and adjoining cities and towns in the state of Selangor), but benefit from an ‘MSC address’ by having a ‘token’ presence, in the form of a small office in the MSC, a popular practice amongst MSC firms. Table 1 summarises the firms used in the study.

Insert Table 1 about here

3.2 Data collection

We conducted semi-structured interviews with open-ended questions with the respondents from the informant firms, which ranged in size from just 12 employees to 102. In addition, in-depth personal interviews were conducted with the senior representatives from the MSC and TeAM. Prior to interviews, each respondent was presented with a brief description of the research project, with key terms (e.g. “cluster”) being clearly defined. The questions focused primarily on the nature of the firms’ social interactions in the MSC cluster and whether and how these had helped to enhance their international competitiveness. The firm respondents were also asked more general questions in relation to their experience of operating in the MSC, and asked to highlight other factors that had any impact on international expansion. Questions varied minimally between firms whose headquarters were located inside the cluster and firms whose headquarters were located outside, although the latter were asked why they had chosen to remain outside the MSC, and whether they felt their international performance would improve if they relocated there.

Interviews took place during three periods: June 2008, April-May, 2009, and November-December, 2009, and each lasted between 40 and 80 minutes, and were all tape recorded and transcribed. The interview guide was composed of two main sections. The first section comprised open-ended questions, which allowed respondents to express their general thoughts and experiences on the MSC and its impact on internationalisation, and to raise any novel issues not previously considered by the authors. The second section focused on more specific issues related to social interaction in the cluster. Respondents were asked about the nature of their social interaction with fellow cluster members, e.g. how often they met each other, where they would socialise, what type of knowledge and information they shared, etc. Those respondents who claimed that social interaction was limited in the cluster were asked why this was so, and asked to discuss the alternative means through which they were able to acquire knowledge related to internationalisation. The complementary interviews with the MSC and TeAM offered ‘outsider’ perspectives on social interaction in the MSC and how this affects internationalisation.

3.3 Data analysis

We began our analysis by examining each firm in light of the study’s main research question: *How does social interaction in policy-driven clusters affect firm internationalisation?* Given the lack of empirical findings and any well-defined theory, we approached the study without any hypotheses. However, since most research studies can be connected in some way to an existing, neighbouring field (Flick 2009), we were able to use the available literature connecting industrial clusters (in the broad, generic sense) and internationalisation as a guide for interview questions and data analysis. We used the Nvivo software to aid data management and analysis. We created a list of ‘nodes’ (categories) in Nvivo to represent themes which

emerged both from the related-literature review and data analysis, i.e. relevant comments, phrases, sentences, etc. from the interviews. This allowed us to group the responses, while simultaneously distinguishing each respondent by their relevant label, making it easier to focus on each particular theme in detail. From this, we were able to gain an in-depth understanding of the patterns of each firm's social interaction and knowledge acquisition in the cluster, and how this affected their international growth.

Next, we analysed across the firms, where, in line with Eisenhardt (1989), we selected categories based on the within-firm analysis, as well as those from related literature, identifying common themes and patterns and comparing data between each firm.

4. FINDINGS

In this section of the paper, we present an analysis and interpretation of whether and how firms in the MSC are able, through social interaction with fellow cluster members, to gain access to knowledge within the cluster that can support their internationalisation. We break down the findings into three main categories. First, we identify the key motives behind firms joining the MSC. Second, we highlight the lack of spontaneous, informal interaction within the cluster, which limits the flow of knowledge of international business operations through the region. Third, we point out certain measures that MSC policymakers are taking in order to stimulate the diffusion of internationalisation-related knowledge within the cluster.

4.1 Motives for joining the MSC

The main motivation behind all the informant firms applying for MSC Malaysia Status in the first place was to enjoy the 'MSC Bill of Guarantees', which, among other things, ensures MSC Status companies are excluded from paying income tax for up to ten years, and have unrestricted access to local and, more importantly, foreign knowledge workers, thus sidestepping strict immigration laws. None of the firms joined the MSC to extend their social networks in the hope of gaining knowledge which could enhance their international expansion. In each case, the primary motive was finance-based.

Respondents were then asked if they felt that relocating their headquarters to the MSC was (or would be) helpful to their internationalisation, with most replying that it has made (or would make) little difference. Firm F's vice president even felt that moving its head office to the cluster would be detrimental, owing to the high rental cost in Cyberjaya and its distance from Kuala Lumpur, with foreign clients preferring to base themselves in the capital city. Firm B was the only firm which felt that locating in the MSC has significantly helped their international expansion, primarily due to proximity to government agencies, with whom they are engaged in a number of international projects.

4.2 Lack of spontaneous, informal, face-to-face interaction in cluster

As noted earlier, previous studies have suggested that internationalising firms may gain from operating in clusters owing to the spatially-confined diffusion of tacit forms of knowledge, primarily through regular, spontaneous, and informal interaction with other cluster members. However, the participants in this study revealed that such

interaction may not occur instantaneously in policy-driven clusters, owing to several factors.

First, despite Cyberjaya's growing reputation as a regional ICT hub, it has yet to establish itself as a *residential* centre, with many workers still residing in and around Kuala Lumpur. This limits interaction opportunities to just office hours, with the respondent from TeAM describing Cyberjaya as a "nine-to-five city", with little activity taking place before 9am and after 5pm each day owing to the fact that few people actually live there. This view was echoed by one of Firm C's respondents:

Not a lot of people live here [Cyberjaya], apart from students at the University...In Silicon Valley, you find more people live close [to the cluster]. This place is actually 35km from my home, and I would say for most people, it's 15-20km. So, for socialisation, you want to socialise close to your home, right? So, I would say that geographic isolation makes it difficult for socialising.

Although it may pride itself on its glossy infrastructure and grand buildings, it has yet to develop its own 'culture'. One of Firm I's respondents alluded to Cyberjaya's "premature environment" as an obstacle to social gatherings. This is clearly a result of the relative youth of the city/cluster, at least compared to nearby towns and cities such as Kuala Lumpur. Nevertheless, it further emphasises the difficulties policymakers encounter when attempting to develop a cluster from scratch. Given time, Cyberjaya may emerge as a more popular residential area, but as things stand, its lack of 'character' is failing to attract people to set up home in the area, which minimises time for workers in the area to interact and possibly exchange knowledge about international activities with one another.

Secondly, several respondents were critical of Cyberjaya's lack of social amenities, which further restricts chances for spontaneous networking to take place. For example, Firm C's COO revealed that:

It lacks a core heart; it lacks a sense of being a city. To me, it's [just] a collection of offices at the moment...You go to the pub here, and it's empty...We have a canteen here [in the office] because there are very few good places outside. In the evening it becomes very quiet very quickly.

A 'collection of offices' may stimulate *some* interaction amongst cluster members, but it is not a like-for-like substitute for the hustle and bustle of life in more traditional urban centres, with their own gradually-established 'identities'. One respondent described the difficulties in organising informal meetings in the area because of the lack of coffee bars, which, she added, were popular meeting venues for businesspeople in Malaysia. Although these may appear to be rather trivial observations, the importance of restaurants, cafes, bars, and other social amenities to generating informal interaction and knowledge exchange between people cannot be underestimated (Imagawa 2005; Lundequist and Power 2002), as testified by Firm C's head of sales and marketing:

There's no Starbucks or Coffee Bean coffee houses in Cyberjaya. So, it's lacking, I think, quality areas, where those sorts of people [entrepreneurs] would share information.

Without adequate venues to gather and socialise, people are staying inside their own office buildings during lunch and other breaks, instead of mingling with each other, and possibly sharing knowledge which can enhance internationalisation. Thus, not only is social networking largely confined to office hours, but even within those hours, the setting in the cluster is not conducive to socialising amongst the community.

The respondent from TeAM concurred, adding that the authorities have recognised the absence of intense social interaction in the MSC, and are taking steps to resolve the issue:

I think MDEC ² have realised that this [social interaction] is a missing component. That's why they have organised a lot of activity, to try to get the people out of their offices, out of their buildings. I know the landlord of the SME Technopreneur Centre. They have regular monthly get-togethers of all the tenants, in that building, to try and encourage dialogue, and [encourage] people to interact.

This acknowledgement by policymakers, and the steps they are taking to rectify the problem, may stimulate workers in the area to socialise with each other more frequently, and potentially result in the diffusion of knowledge helpful to internationalisation. However, at the time of writing, the amount of social interaction within the MSC is insufficient, as far as creating a vibrant industrial cluster, in which such knowledge of international business activities is routinely shared, is concerned.

Finally, the layout of Cyberjaya appears to limit opportunities for face-to-face interaction between local and foreign firms. One respondent insisted that buildings in the area are too far apart from each other which, given Malaysia's hot climate, means that people are more likely to stay in their own 'sections' of the city. Moreover, some parts of Cyberjaya appear to have been designed in such a way that SMEs are grouped together in one building or area, rather than located amongst foreign firms. Firm E, for example, is based in the 'SME Technopreneur Centre', and its vice president explained that he and his colleagues only really socialise with people working in other domestic SMEs because there are no foreign firms in the vicinity. Although this kind of layout may stimulate interaction between firms with similar resources, it limits opportunities for social relationships to develop between local and *foreign* firms, thus restricting the chance for the former to potentially acquire important knowledge from the latter with respect to competing in international markets.

Only one firm's (Firm B) international activities have been enhanced by their social networks in the cluster. The firm's CEO noted that following frequent informal interaction with an Indonesian firm next door, they have begun working together closely on a project for the Indonesian market.

² Multimedia Development Corporation, the quasi-state institution set up to oversee the implementation of the MSC Malaysia

4.3 Access to internationalisation knowledge through social interaction outside cluster

Given that most of the firms were not acquiring information about international activities through social contacts in the cluster, the respondents were asked how they gained the relevant knowledge. Interestingly, a number of respondents from the firms who had not (yet) relocated their headquarters to Cyberjaya revealed that they regularly socialised *outside* the cluster (mainly in Greater Kuala Lumpur), and that these social networks were a vital source of international business knowledge. For example, Firm I's COO regularly plays golf in a club in Kuala Lumpur with people working in multinationals such as IBM, HP, and Oracle; and he claims that this form of social interaction has been an important source of information about opportunities in Indonesia. The CEO of Firm G and the Managing Director of Firm H both suggested that face-to-face interaction was common in their local areas, just outside Kuala Lumpur, and that they have gained international market intelligence and information on available overseas projects, and have been referred and recommended to international contacts by their friends, clients, and peers in the area. Similarly, the respondents from Firm F explained how a particular suburb³ of Kuala Lumpur is a networking hub, with coffee bars, restaurants, cafes, etc. catering to expatriates and middle-class locals alike. With an office located in the very heart of this suburb, they are very much immersed in the social scene, and have acquired important knowledge about international business from interacting with individuals from foreign firms, in particular, who often flock to the area from the city centre during their lunch hour and other breaks.

4.4 Government response to absence of 'organic' social interaction and internationalisation-knowledge exchange in cluster

Although regular and spontaneous interaction between cluster members is clearly lacking, MSC authorities have made considerable efforts to stimulate social interaction and the exchange of knowledge of international activities within the cluster by organising regular networking events. Several respondents in this study referred to various community-based social events organised by MSC authorities, including the 'Cyberjaya Games', soccer leagues, and tree-planting to promote environmental awareness.

Respondents also spoke positively about how the MSC frequently puts together trade shows, conferences, workshops, and other events in order for MSC firms to gain knowledge about international business operations. International speakers and representatives of foreign firms located both inside and outside the cluster often attend and pass on helpful knowledge about doing business internationally. Firm B's CEO, for example, noted how she had met an important contact from Egypt through a recent MSC conference. She championed these MSC-sponsored networking opportunities, highlighting their potential for providing international business opportunities:

...they [the MSC] organise networking events for us to meet local as well as international companies based in Cyberjaya. So, we have a lot of opportunities to

³ In order to protect the firm's identity, it is not possible to name the suburb.

network, to display our products, to talk about our products and services.

Moreover, Firm A's CTO noted one recent workshop where participants received important information about packaging and meeting various standards in the US and Europe, while Firm G's business development manager spoke about the benefits of recently participating in an MSC workshop in which attendees received advice and information on entering China.

Occasionally, the authorities introduce firms in the cluster to potential foreign investors personally. Foreign delegates are invited to view the facilities in the area, and local firms are 'showcased' during the tour, as Firm C's COO explained:

The government...and MDEC often showcase companies here [Cyberjaya], so I think there is more likelihood that we are going to...be part of a tour. For example, the Iranian Minister of telecommunications came through, like, 6 months ago, and we had a delegation. If we were based in another part of Malaysia, that would not have happened.

Therefore, with the aid of the policymakers, MSC firms are still able to 'mingle' with other firms and organisations, and to acquire knowledge and information which can enhance their international growth.

5. DISCUSSION AND PROPOSITIONS

First and foremost, our findings highlight a number of inherent difficulties policymakers face when building a cluster from scratch, especially in terms of generating a vibrant social environment conducive to facilitating tacit-knowledge spillovers, which can enhance firm internationalisation. When seeking to replicate the achievements of well-known clusters such as Silicon Valley, policymakers must remember that one of the underlying strengths of these regions lies in the frequency and nature of informal and spontaneous face-to-face interaction amongst entrepreneurs (Saxenian 1994). Our case study indicates that, contrary to what Gertler (1995) has suggested, just 'being there' does not necessarily provide firms with unlimited access to tacit forms of knowledge. In other words, flows of knowledge about international business operations within social networks of firms and individuals will not always occur automatically as a result of policymakers simply building a cluster from scratch.

Whether the emergence of strong social ties between cluster members can be achieved over a more substantial period of time is unclear. In an 'organic' cluster, social and business relationships are likely to co-evolve; close business interdependence and relationships create social capital between network members, which may in turn reinforce collaborative business interaction and knowledge-sharing. With more frequent interaction, greater levels of trust can develop between firms and individuals (Dahl and Pedersen 2004), thus potentially resulting in the exchange of more valuable knowledge conducive to enhancing internationalisation. However, the progress of a policy-driven cluster may be hampered by a vicious circle where the absence of social interaction constrains business development, which in turn limits the

incentive and scope for social interaction. Unfortunately, the long-term success of policy-driven clusters is beyond the scope of this paper, and will require a more longitudinal approach. We have merely revealed that bringing firms and other economic actors in one industry into a particular area (i.e. a cluster) does not automatically or instantly generate intense networking and interaction effects, and is therefore not a guaranteed mechanism for ensuring the exchange of knowledge conducive to internationalisation, in the short run at least. Thus, the popular assumption in the literature that clustering necessarily leads to knowledge exchange through social interaction and networking, leading to the enhancement of internationalisation (Brown and Bell 2001; Sopas 2001; Zucchella et al. 2007), needs to be reconsidered, particularly in the context of policy-driven clusters. Thus, we put forward the following proposition:

Proposition 1

Policy-driven clusters will fail in stimulating internationalisation if the level of spontaneous social interaction and knowledge-sharing in the cluster remains low.

Second, our findings reveal that firms seeking to join policy-driven clusters may have the ‘wrong’ intentions. The various financial benefits offered to MSC Status firms, particularly tax relief, seem to constitute the main incentive for joining the cluster. Firms are not relocating to the cluster in the hope of penetrating social networks, thereby potentially enhancing their international growth. If policymakers are determined to recreate successful clusters, then not only do they need to provide the adequate infrastructure and framework to encourage casual interaction amongst actors in the cluster, but they should also encourage firms to join clusters for reasons other than (or at least as well as) financial gains. The benefits of clustering, particularly interaction amongst cluster members, should be foremost in the minds of firm decision-makers seeking to join clusters, and policymakers should actively promote this benefit both to firms inside the cluster, and also to those keen on joining the cluster. This challenges the popular assumption in the literature that learning through interaction and networks is the key motive behind firms’ desires to locate in clusters (Breschi and Malerba 2007; Sorenson 2007). In the case of policy-driven clusters, the motivation for joining the cluster may be different, and this can have a significant effect on the cluster’s efforts to generate regular interaction between cluster members, thus limiting its potential impact on internationalisation:

Proposition 2

If the dominant motive for cluster membership and location is to qualify for tax exemption and other privileges offered by the government, the cluster is unlikely to provide sufficient stimulation for internationalisation.

Third, policymakers may act on any shortage of spontaneous interaction, leading to the sharing of knowledge related to international activities between cluster members, by encouraging regular community get-togethers, e.g. organising sporting tournaments. Our findings show that the lack of spontaneous, informal interaction between members of a policy-driven cluster may be compensated (or possibly even remedied – although this is beyond the present paper’s scope) by regular ‘planned’ events, such as trade fairs, conferences, workshops, and so on, organised by the

policymakers, in which firms can acquire knowledge which can enhance internationalisation. Thus, although the “buzz” associated with spatial concentration and regular face-to-face contact (Storper and Venables 2004) may be absent, at least to begin with, the flow of tacit knowledge through a particular region can still take place through these organised events. This is consistent with the views of other authors (Amin and Cohendet 2004; Power and Jansson 2008; Bathelt and Schuldt 2008; Maskell et al. 2006; Torre 2008), who argue that ‘temporary’ or ‘cyclical’ clusters such as trade fairs and conferences are a sufficient substitute for the buzz of a permanent cluster, and may even exceed it. Firms in the MSC have obtained important knowledge and information related to international markets through participating in the various MSC-sponsored events.

Nevertheless, it is reasonable to expect that ‘temporary clusters’ should act as complements to, rather than substitutes for, spontaneous social interaction within clusters, due to the self-sustaining and more persistent impacts of the latter. It is important to distinguish between individual networking *events* and ongoing network relationships. It is the latter that are more useful to innovation and the building up of ownership advantages within firms. Networking events, while clearly useful, are relatively footloose and short-term, and do not typically lead to a cumulative process of knowledge acquisition. Frequent networking events can certainly play a role in facilitating knowledge spillovers, but their impact is limited precisely because they are one-off (albeit recurrent) events. Unless policy-driven clusters can ensure the propensity of firms and individuals to regularly, informally, and spontaneously interact with one another in the cluster, they will find it difficult to achieve a profile to rival that of Silicon Valley. In light of the above discussion we put forward the following proposition:

Proposition 3

Support by policymakers, including facilitating network contacts, will have a significantly beneficial impact on internationalisation only if it stimulates spontaneous interaction and networking amongst cluster members.

6. CONCLUDING REMARKS

Following calls for more research relating concepts from economic geography and regional economics to those in international business (McCann and Mudambi 2005), we have addressed an area of literature which has received limited attention from scholars: namely, the nature of face-to-face interaction in policy-driven industrial clusters, and its effect on firm internationalisation. In doing so, we have made a number of important contributions to the literature.

First of all, we have highlighted that developing industrial clusters from scratch, may be challenging for governments. Specifically, our case study suggests that the usual government incentive (based on taxation exemption and related privileges for cluster (re)location) are not necessarily an effective lever in stimulating knowledge-sharing through regular, spontaneous, face-to-face interaction between cluster members, which may help to improve firm internationalisation. While some studies suggest that accessing tacit knowledge flows within clusters through social interaction can potentially enhance firm internationalisation, our findings warn that this may not occur automatically, because cluster participation is in effect only

superficial (does not entail significant investment in location specific assets) and hence social interaction does not always prevail in policy-driven clusters. Thus our paper suggests that there is a danger that, by offering various financial incentives to entice firms to join a policy-driven cluster, firms may overlook the benefits of cluster membership in terms of joining a localised social network, in which knowledge that may be helpful for internationalisation is shared. The success of clusters like Silicon Valley is often attributed to social relationships within the region, which lay the foundation for trust, and ultimately knowledge flows, between actors, and it is cluster externalities such as these that should be foremost in the minds of entrepreneurs seeking to join clusters, rather than receiving tax breaks and the like.

Second, we have shown that policymakers may make up somewhat for the lack of spontaneous knowledge flows in policy-driven clusters by regularly organising informal and formal events, such as workshops and exhibitions. These types of events may help firms gain additional knowledge about internationalisation, thus compensating in some way for any lack of knowledge-sharing through spontaneous social interaction.

Our findings thus have clear implications for policymakers and managers. Policymakers keen to develop industrial clusters from scratch need to be aware of the critical role of social interaction in cluster development and effectiveness. While certain amenities such as coffee bars may seem a low priority, the old adage that ‘the devil is in the details’ is very much applicable here. Spontaneous social interaction is unlikely to be commonplace in areas that lack these basic amenities, and therefore, in order for knowledge of internationalisation to flow through social networks within these types of clusters, these facilities need to be put in place. While policymakers may organise numerous events such as conferences and workshops in order to help cluster firms gain internationalisation knowledge, these should ideally *complement* the diffusion of knowledge through social interaction, rather than *compensate* for its absence. Moreover, in order to entice firms to join the cluster, policymakers should emphasise the potential benefits cluster membership can have in terms of acquiring knowledge that can enhance internationalisation, rather than (or at least in addition to) using financial incentives as bait.

Managers should consider the potential of cluster membership for expanding their knowledge base, including knowledge related to internationalisation, and not just see policy-driven clusters as a means to enjoy tax breaks. In order to maximise the potential of network opportunities within clusters, managers will need to understand and manage their personal relations, as this can be a vital source of internationalisation knowledge (Sopas 2001).

The findings from this study should be considered in light of its limitations. The study focused solely on the experience of firms in one cluster, the MSC, in one time period, thus minimising its generalisability to other contexts. To assess the long term success of policy-driven clusters in generating social interaction that enhances firm internationalisation, a longitudinal study would be desirable. Moreover, the method used in the study (qualitative, single-case study) has its inherent weaknesses, such as difficulty in generalising across the population and possible bias in interpreting interview transcriptions. In addition, we did not focus on one particular avenue for internationalisation, such as exports, foreign direct investment or international joint ventures. Further insights on the impact of policy-driven clusters on internationalisation can be generated from investigating specific internationalisation modes. Researchers seeking to work on the present paper’s findings may also wish to

adopt alternative, quantitative methods, e.g. questionnaire surveys, in order to extend the present findings.

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| Firm | No. of FTEs | Headquarter location | International scope ⁴ | International intensity ⁵ | Respondents |
|--------|-------------|------------------------------------|----------------------------------|--------------------------------------|--|
| Firm A | 30 | Cyberjaya | 0 | 0 | • Director [*] ; CTO; Manager of Operations |
| Firm B | 45 | Cyberjaya | 3 | 10 | • CEO; Chairman; General Manager; COO; Business Development Executive |
| Firm C | 102 | Cyberjaya | 11 | 46 | • COO [*] ; Vice President for Commercial Operations/Head of Sales & Marketing |
| Firm D | 13 | Cyberjaya | 10 | 60 | • International Sales and Marketing Manager |
| Firm E | 12 | Cyberjaya | 40 | 10 | • Vice President/CFO [*] |
| Firm F | 60 | Greater Kuala Lumpur ^{**} | 5 | 10 | • CEO; Vice President [*] ; Business Development Manager; Vice President for Medical Sciences |
| Firm G | 30 | Petaling Jaya | 3 | 10 | • CEO [*] ; Business Development Manager |
| Firm H | 12 | Greater Kuala Lumpur ^{**} | 3 | 20 | • Managing Director [*] ; Finance Manager; Business Development Manager |
| Firm I | 30 | Kuala Lumpur | 1 | 1 | • COO [*] ; Senior Manager; Business Development Executive |
| Firm J | 20 | Kuala Lumpur | 3 | 95 | • CEO/Owner [*] ; Project Executive |

Table 1: The firms used in the study

⁴ Number of countries from which firm generates revenue

⁵ Percentage of sales derived from international markets (Fernhaber et al., 2008)

^{*} Respondent interviewed twice

^{**} Specific location not given in order to protect firm's identity