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Global-local linkages, Spillovers and Cultural Clusters: Theoretical and Empirical insights from an exploratory study of Toronto's Film Cluster

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Keywords: creative industries, globalization, clusters, film industry, Toronto

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Abstract

This paper illustrates the importance of global-local linkages in cultural cluster-studies by discussing the impact of Hollywood's runway productions on the indigenous film cluster in Toronto, Canada. While global-local linkages are at the forefront of the current debate in cluster studies, the discussion has not yet permeated the research on cultural clusters. The paper identifies the limitations to the dominant models, inserts global-local linkages in the literature and applies it empirically. The inclusion of the global linkages in the analysis of the Toronto film cluster provides a new insight into the current development barriers faced by the indigenous film industry. The paper suggests how Hollywood's offshoring and outsourcing activities to Toronto can be transformed into positive spillovers for the indigenous film cluster.

1. Introduction

Recently global-local linkages have been elevated to the forefront of cluster studies. The ability to tap into, absorb and leverage global flows of traded and untraded knowledge and attract foreign direct investment (FDI) is seen as one of the most important determinants of the performance of a cluster. Yet, not all global interactions lead to the expected positive results. FDI's, for example, are not *a priori* assumed to lead to positive direct or indirect spillovers as their impact will depend, among other issues on the subsidiaries local embeddedness, the R&D-mandate, the decision-making structure of the TNC or, more generally, industry, institutional, temporal and firm specific characteristics. The focus on global-local linkages has partly been propelled by an increased awareness that traditional endogenous conceptualizations of clusters are inadequate. The localized nature of knowledge spillovers (Jaffe et al 1993, Audretsch and Feldman 1996) has been questioned (Breschi and Lissoni 2001; Malmberg and Power 2005, Iammarino and McCann 2006) pointing out to the need of rethinking global-local linkages and the assumptions of traditional cluster literature. The cluster literature has been criticized for assuming more than demonstrating the importance of local interactions ignoring, until very recently, the global linkages (Amin and Cohendet 2004, Giuliani et al, 2005, Chaminade and Vang 2006). The new streams of research emphasizing the importance of local-global interactions have made significant theoretical and empirical contributions to the cluster-field. Yet, the contributions have mainly been applied in studies on traditional manufacturing or technology-intensive industries (i.e. biotech ad software production) and have only had a limited spillover into studies of cultural industries (see Scott 2004, for an exception). Cultural industries consist of those sectors that serve consumer demands for amusement, ornamentation, social display, info-tainment and so forth (Caves 2000, Scott 1999, Vang and Nielsen 2006). They include theater production, newspapers, film, music, toys and games and similar industries (Caves 2000, Pratt 2004, Scott 2001, 1999). Hitherto most of the analysis's of cultural clusters have mainly applied

Marshallian or Jacobs' inspired frameworks to discuss endogenous sources of competitiveness. Attention has been given to the location requirements derived from the project-based nature of these industries like buzz and face-to-face interaction (Asheim et al, forthcoming, Grabher, 2002, Pratt, 2002) while not paying systematic attention to how the specificities of the global-local linkages shape the spillovers and thus competitiveness in cultural clusters with respect to both the specialized hub (i.e. subcontractor) and the development and upgrading of an indigenous cultural industry (i.e. ownership over products) has not yet received much attention.[1]

Extending the discussion on the local-global interactions to the creative industries is crucial on two grounds. First, cultural industries are increasingly important in economic terms in the OECD-countries , and their contribution to the economy has grown exponentially over the last years. Second, the organization of cultural industries, which is project-based, offers a new ground where to discuss global-local linkages and derived localized spillovers that differ from traditional long-term investments (FDI, M&A, long term outsourcing alliances). This paper is concerned with reducing this omission by **analyzing how the global-local linkages in a specific cultural industry (i.e. the film industry) in a particular cluster (i.e. Toronto) affect the clusters competitiveness.** In this paper, special attention is paid to spillovers from the majors (TNCs in creative industries) into the a) specialized (subcontractor) hub and b) the indigenous film cluster.

Alluding to the conclusions in the paper Toronto provides an especially interesting case for assessing the importance of global-local linkages and derived spillovers as well as for refining the conceptualization of cultural clusters in general. Especially, since despite having a long history for media production, world class technical infrastructure, a well-functioning network of suppliers, high human and social capital, an ability to attract foreign

[1] While both the specialized service hub and the indigenous industry are sources of income, the indigenous industry less prone to external fluctuations.

productions and a certain 'institutional thickness' in terms of public financing of indigenous film production it has mainly succeeded as specialized hub for so-called Hollywood runway productions. Toronto has not managed to develop – measured in market share –an indigenous *feature* film cluster. The global interactions have not translated into spillovers for the subcontractor hub nor for the indigenous industry. In other words despite having in place all ingredients normally prescribed by both the traditional cluster research and cultural clusters studies (Jacob's clustering effects) to compete internationally, Toronto's feature film cluster has not managed to 'upgrade' towards an indigenous film production beyond some niche markets[2]; not even a publicly financed film production. The paper provides some explanations to why this might be the case.

The paper is based on original data collected by one of the authors through in-site fieldwork in 2005 and follow-up communication with informants in 2006. Apart from publicly available statistics the study draws on 23 interviews representing all parts of the value chain – from US and Canadian directors and producers to technicians, policy-makers, commentators and industry experts[3].

The reminder of the paper is structured around two large blocks. Firstly, the two dominant theoretical approaches to clusters (with special attention to cultural clusters) are introduced. Secondly, the Toronto film cluster is analyzed; special attention is paid to the global-local linkages and what prevents the indigenous industry from benefiting from potential spillovers. The paper is rounded of with some concluding remarks.

[2] It should be emphasized that Toronto has a number of auteur and art directors and high quality niche films.

[3] Annex 1 contains detailed information on the methodology

2. Clustering of (cultural) industries

The relevance of clustering for competitiveness, upgrading and innovation has received increasing attention over recent years among academics, consultants and policy makers (Lundvall, 1992, Porter, 1990, OECD, 1999, 2001). Firms located in clusters tend to perform better than isolated firms (Beaudry and Breschi, 2003). Two theoretical approaches might be used to explain the performance of clusters of cultural industries; the 'Classic' Marshallian-approach and the Jacobs-approach. The two approaches or frameworks are presented below not with the aim of providing a full presentation but with the aim of illustrating the core of the dominant frameworks. The frameworks will be contrasted later in the paper to the empirical reality of Toronto's film cluster.

2.1. Marshallian clustering

The success in the nineties of the so-called third Italy (Piore and Sabel, 1984; Beccatini, 1990), Baden Württemberg (Staber, 1996), Silicon Valley (Cohen and Fields 1998, Saxenian, 1994) and Hollywood (Scott 2004, Storper 1989) boosted the discussion on the role of clusters for growth and competitiveness (OECD 1999, OECD, 2001).

Initially, it was argued that clustering enhanced productivity by generating externalities in terms of providing cheap access to production factors (static externalities) and flexibility, as captured by Marshall's initial studies (1920) and later recaptured in studies of Italian districts (Beccatini, 1990, Piore and Sabel, 1984) and Hollywood (Storper and Christopherson, 1987; Storper 1999). Recently, focus has shifted somewhat towards emphasizing enhanced localized learning and innovations (dynamic externalities). In this vein, firms located in clusters are assumed to gain competitiveness from the external environment through their ability to 'plug into' localized knowledge spillovers, specialized labor markets and dedicated institutional support systems and

use these resources actively for maintaining an innovation-based competitive advantage. In Storper's vocabulary firms in clusters can benefit from localized traded and un-traded interdependencies (Storper, 1997). Clusters' physical proximity is considered to be crucial for facilitating the exchange of tacit and disembodied knowledge through face-to-face interaction. Physical proximity facilitates interactive learning reducing the noise as well as supporting the development of shared visions, culture and cognitive mindsets, which again is considered to ease the transfer of tacit and codified knowledge among firms.

The extent, scale and scope to which firms located in the cluster can interact (i.e. engage in interactive learning) with other local actors is considered a function of human capital and inclusive social capital (Chaminade and Vang, 2006, Vang and Chaminade, 2006). Human capital refers to the 'skills, education, health, and training of individuals' (Becker, 1998, p. 1). Human capital, especially reflected in the regional specialization of labor market, underpins the absorptive capacity of the clustered firms and, consequently, their ability to access, interpret, transform and commercialize localized intra-industry spillovers. The regional specialization is argued to manifest itself in specialized educational institutions, specialized vocational training and regulation matching the specific industrial requirements. Utilizing the specialized labour market requires that the firm is permanently located in the cluster. Accessing the knowledge externalities requires sector, institutional and firms' specific investments in in-house capabilities. Interactive learning requires cross-firm collaboration (i.e. traded interdependencies). This type of collaboration is riddled with market failures, hence cannot rely on arms-length contract-based transactions (Coase 1937, Arrow 1962a, b, Nelson 1959).[4] In this sence, social capital might facilitate transactions characterized by a high degree of uncertainty and lack of contractibility. Social capital refers to "institutions, relationships, and norms that shape the quality and

[4] Occasionally, cluster reputation (i.e. reputation effects efficient in a bounded geographical space) can facilitate arm-lengths transactions without enforceable contracts.

quantity of a society's social interactions. Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together" (World Bank 1998; 8)[5]. Unless there is a high degree of inclusive social capital cooperation, communication and thus interactive learning is thus considered to be limited in scale and scope (Andersson et al 2004; Lundvall, 2005; Nooteboom, 2000). The absence of social capital reduces the local firms' prospects of getting access to important knowledge, knowledge sharing and interactive learning and hence from the successful enactment of upgrading strategies. As social capital is often highly localized (Putman, 1993) so is interactive learning. It follows that the competitiveness of a cluster (in terms of innovation) is a function of the degree of formal interactive learning taking place within the cluster and that this is a function of the human capital and social capital.

Additionally to formal interactive learning, being physically present in a cluster is increasingly being associated with the ability to tap into buzz (i.e. untraded interdependencies) (Asheim et al., forthcoming, Barthelt et al., 2004, Storper and Venables, 2004) or noise (Grabher, 2002, Pratt, 2002). According to Storper and Venables (2004) buzz is:

> "… a highly efficient technology of communication; a means of overcoming coordination and incentive problems in uncertain environments; a key element of the socialisation that in turn allows people to be candidates for membership of 'in-groups' and to stay in such groups; and a direct source of psychological motivation. The combined effects of these features we term 'buzz'" (p. 364-365).

[5] Contrary to envisioned by standard economists economic interaction is not primarily a market-based exchange of (tangible) goods by anonymous agents regulated by a complete contract (in the context of efficient contract enforcement) but the exchange relies on incomplete contracts either due to the lack of possibilities for creating complete contracts, because of the disadvantages in terms of a low degree of flexibility built into complete contracts, or because of inefficient contract enforcement, depending on the mutual trust of the partners involved in the transaction. This is especially the case for innovative activities and/or activities drawing on tacit knowledge.

While the literature is less explicit on the importance of human and social capital for harvesting benefits from local buzz it seems to be implicitly assumed that access to buzz requires group membership (social capital) and abilities to cultivate it (human capital) (Storper and Venables, 2004).

The success of a cluster is also considered to be dependent on other elements such as the institutional framework and the technological regimes (i.e. the combination of appropriability conditions, degree of localized cumulativeness and probability of new innovations) (Asheim and Gertler, 2005, Asheim and Coenen, 2005, Cooke and Morgan, 1998, Teece 2000) as two key issues shaping the form and intensity of interactions among firms but also between firms and knowledge providers, the financial system or the users. With regard to the financial system, more specialized streams of research have emphasized the importance of the financial system (Silicon Valley's venture capital system, for example) for facilitating interactive learning directly (financing activities) as well as indirectly (centure capital matching different agents with complementary competencies).

The Marshall-based cluster literature has spurred an impressive amount of empirical research embracing both econometrical and qualitative research. Initially, the cluster thesis found a strong support in econometrical studies. Audretsch and Feldman (1996), for example, 'show that the propensity of innovative activities to cluster is more pronounced than one would expect on the basis of clustering patterns of economic activities alone' (Caniëls and Romijn 2005). Jaffe et al. (1993) applied patent citation-analysis and demonstrated the localized nature of knowledge spillovers. Malmberg and Power (2005) has contributed further to this. In a review of 100 papers they do not find much empirical support for the dominant cluster hypothesizes. The traditional cluster-literature is based on generalizations across different sectors, institutional settings, position in the value chain and maturity of the industries in question (Iammarino and McCann 2006, Chaminade and Vang 2006, Basant 2002) and often ignores the specificities of global-local

linkages. Hence, a new stream of cluster research conceptualizes clusters as open systems (Chaminade and Vang, 2006, Giuliani et al, 2005, Pietrobelli and Rabellotti, 2006, Vang and Asheim, 2006) that partly rely on knowledge, competencies and capital originating outside the cluster. Hitherto, the analysis of global-local linkages and its impact on the performance of the cluster have been mainly focusing on FDIs and Mergers and Acquisitions (M&A), that is, more or less permanent linkages. Although this literature has not come up with conclusive evidence concerning direct and indirect spillovers (Zanfei 2000, 2004, Narula and Marin 2005) it suggests that the type of industry, the institutional and industrial structure of the cluster as well as the absorptive capacity of the cluster determines the degree, scale and scope of direct and indirect spillovers (Asheim and Vang 2006, Bernard 2007, Chaminade and Vang 2006, Coe et al, 2004, Zanfei 2004). TNCs focused studies point to the importance of firms' strategies (Bernard 2007,Cantwell and Iammarino 2005); the degree of decentralized decision power allocated to the subsidiaries (Zanfei 2000, Cantwell and Mudambi 2005,), the R&D-mandate (competence augmenting versus exploiting) (Cantwell and Piscitello 2006) and their embeddeness in the clusters (Andersson et al 2004). This literature, while theoretically sophisticated, has mainly been based on patent data and technology-intensive industries. Considering the importance of the sector specificities outlined above it is questionable if the findings can be generalized to cover cultural industries, where the nature of the global linkages is fundamentally different as they are based on temporary forms of collaboration such as projects; not on enduring FDIs

2.2. Jacobs clustering: Urban Agglomeration Explanations

Most of the studies on clustering of cultural industries have been written within a Jacobs clustering approach (albeit including Marshallian or transaction cost elements in the discussion too). The Jacobs clustering (1969) approach is concerned with explaining agglomerating or clustering of

the cultural industries in large – or rather the largest - metropolitan areas. Scott's (2001), for example, attempts to provide ' … a theoretical outline of how and why cities like these [Paris, New York, L.A, Tokyo, Paris and Milan] come to operate as major poles of the cultural economy' (p.13). Hence, the analytical focus is mainly on *why* creative industries such as film and advertising tend to cluster in large metropolitan areas[6]. The reasons for clustering are thus to be found in *diversified* labor markets (as opposed to specialized), openness and tolerance and recently a more efficient buzz (Amin 1999; Asheim et al, forthcoming; Storper and Venables 2004). It is argued that the access to unique, valuable and diverse knowledge is the source of competitive advantage for firms and regions in cultural industries as well as the possibility for fast re-combinations of the diverse types of knowledge. The need for fast re-combinations is different for cultural industries than for 'traditional' industries. Cultural industries are project-based (i.e. one-off projects) where most projects are distinctively different from the previous ones and hence their competitiveness relies on their capacity to create in a short period of time a new project team with different competencies. And this is only possible in locations with high degree of diversity. Thus, the Jacobs clustering approach stresses the diversity of the human capital located in a region for the emergence of cultural clusters and it argues that such diversity is to be found mainly in metropolitan areas. It follows that cultural clusters are prone to emerge in cities where there is a high proportion of tolerance and openness, like in the case of Toronto, as it will be discussed later. This literature has not yet paid much attention to globalization (i.e. global-local linkages) focusing their attention on local dynamics.[7]

[6] Grabher for example only analyses the Soho-based firms; not advertising firms outside Soho. Scott (2002, 2004) looks mainly on Hollywood's and Paris's film production. In fashion Scott zooms in on Los Angeles while Rantisi zooms in on New York. In the multi-media industries Pratt (2002) pays attention to 'the Silicon Gulch' in San Francisco.

[7] With the exception of Florida who emphasizes the negative correlation between immigration barriers and competitiveness (he does so with an explicit reference to Hollywood and their loss of competitiveness post 11. September).

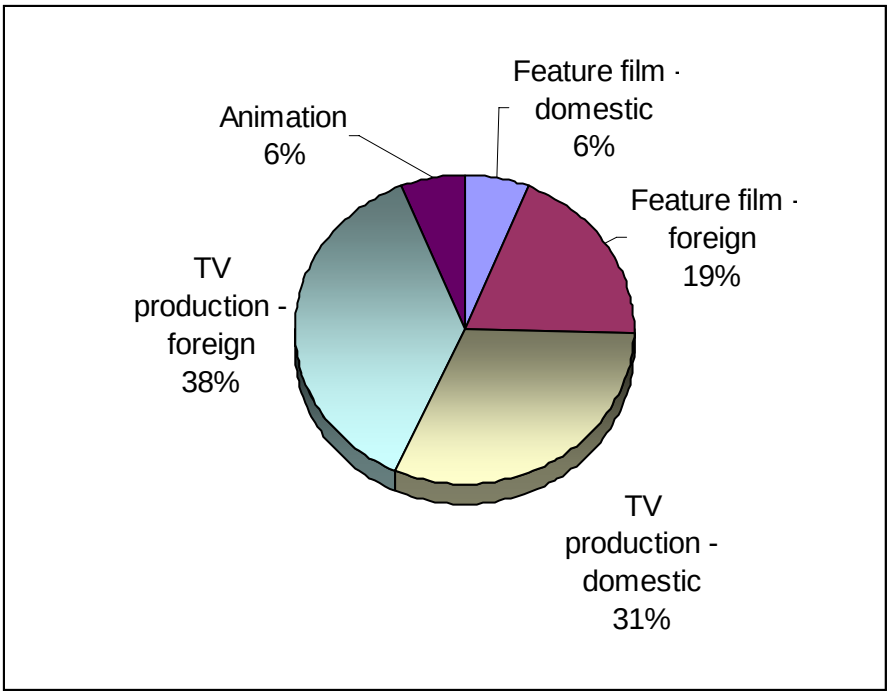
3. The Toronto film cluster

3.1 Stylized facts

Canada has a long tradition for film production that can be traced back to 1913, when the first feature film was shot in Evangeline while the first international production 'Hitchcock's Confess' was made in Canada in 1952. The National Film Board has been active in coordinating or supporting film production since its foundation in 1939. Since the end of the Second World War the Canadian Broadcasting Corporation has been producing television drama, comedy, music and variety, news, sports and documentaries for a national audience. Toronto, Ontario, is the leading cluster for film and media production in English speaking Canada. In 2002 the value of Ontario film production was almost 1 billion Canadian dollars (Ontario Media Development Corporation (OMDC, 2006).[8] Of this 58 percent is financed by foreign productions and 48 percent by domestic productions (including television production). Domestic productions are often publicly supported by, for example, Telefilm Canada, The National Film Board or Ontario's Media Development Corporation. Telefilm Canada is the largest public source of finance, providing financing in excess of 49%, up to 64% of the eligible Canadian production costs (Telefilm Canada,2006). Ontario/Toronto is active in most media-segments, as Figure 1 shows: 6 percent of the production of the value is generated by domestic feature film production, 19 percent by foreign (mainly from Hollywood), 31 percent from domestic television production, 37 percent from foreign television production and the reminder 6 percent from animation (see figure 1).

Figure 1. Film industry production of Ontario. 2002.

[8] Data are available on http://www.omdc.on.ca/English/Calendar-year-2002-and-2001-Ontario-Production-Activity-by-Format-in-Production-Value-.html. Downloaded 21st October 2006. Directly comparative data are not available for Hollywood but the US box office for 2005 was US $8.99 billion which gives an indication of the differences in value between the two productions.



Source: Adapted from Ontario Media Development Corporation (2004)

Typically, 13 to 22 domestic and foreign feature films are made annually in Toronto being the budget per Hollywood films more than 10 times larger than for a Canadian.[9] Toronto also hosts – and has always hosted – the majority of the most important broadcasters. The internationally awarded film directors - David Cronenberg, Atom Egoyan, Deepa Mehta) – are based in Toronto (though Croenberg is mainly affiliated at Hollywood). Toronto also has an established name in niche film productions (e.g. gay films) and is the host to one of the leading international film festivals (Toronto International Film Festival).

In contrast to other film clusters there are no noteworthy Canadian majors but mainly small producers and an undercurrent of suppliers (Coe 2000, 2001). According to official statistics the majority of production companies are micro enterprises (1-4 employees) or small and medium enterprises (SME) (5-19 employees). The total number of people employed in the cluster

[9] More than ten times reflects that almost the entire budget is kept in Toronto of the domestic film while only a certain percentage of the Hollywood films end in Toronto.

in film production amount to around 25.000 people; the vast majority is however working as suppliers of technical and logistical services. A little less than half are freelancers.

The last decade has witnessed an explosion of outsourcing and offshoring of production from Hollywood (Coe 2000, 2001) to Toronto[10]. Hollywood is the major agent when it comes to feature films in Toronto and Toronto is now considered as one of the major 'runaway' production sites for Hollywood. The rapid growth of the cluster has generated expectations of positive localized spillovers from the 'global' producers into a successful indigenous film cluster. However, this has not yet happened (see home market share above). A closer look at the dynamics of the cluster and the relationship between Hollywood and Toronto (i.e. global-local linkages) might help to explain why this is so and how policymaker's can support the transition providing a foundation for linking foreign and indigenous film production.

[10] In a ten year period (from 1994 –2004) the value of foreign production increased from Canadian$ 142 millions to 486 millions. This includes television series and docudramas. Clean numbers are not available for the entire period. Based on the OMCD 2004 data, one can estimate that 70 percentage of the value comes from feature films while only 38 percentage came from feature films in 2002.

3.2. Performance of the film cluster: the Marshallian and Jacobs explanations

According to Marshallian and Jacobs literature, the degree of specialized or diversified suppliers/labor, the quality of human and social capital – and tolerance/openness - are seen as factors constraining or enhancing the development of (cultural) clusters. Toronto's film cluster is strong on all these measures.

Although the level of c*reative competencies* are notoriously difficult to measure Toronto's is assumed to have a generally high level. There film schools are internationally recognized and some directors do get a high recognition measured in terms of awards (Egoyan, for example) while others are strong players in niche markets (e.g.. Gay films). Hence, there is nothing that indicates a low competence level in comparison to other more well-functioning clusters (Montreal's or Denmark, for example). Yet, the level of Hollywood has not been reached. As one of the interviewed directors indicated:

> "I think that there is an enormous amount of creative people working in this industry if you keep in mind how small (in numbers) English Canada is. Comparisons to other countries and their success is only fair if they compare to the demographics of Canada."

Technical competencies are mainly relevant when it comes production and especially to post-production. Canada is increasingly acquiring advanced technical competences but according to the firms providing post-production services, the absolute cutting-edge technical development continues to take place in Hollywood where large film budgets push the technological frontier ahead. The quality of the technical competencies is also recognized by the US directors/producers as our own interviews confirm.

The importance of social capital and buzzing is acknowledged both by the creative people and the people working within humdrum activities. Creative – or culture - workers emphasize the importance of buzzing/social capital for the creative phases of film production (i.e. sharing ideas, developing them together etc.). In addition to sharing and exchanging ideas the directors emphasized the importance of social capital for information exchange on opportunities, and so forth. As one firector points out:

> "I think Toronto is a bit less collegial than when I began in the late eighties, but still a pretty healthy and supportive place to work — lots of dialogue, collaboration, etc. It's different person by person, but certainly there seems to be far more dialogue/interchange than other comparable cities — Montreal for instance seems much more competitive and protectionist, even though (or perhaps because) they have comparably more resources".

People employed in humdrum activities also emphasized the importance of inclusive social capital (especially weak ties) which were important for getting information on commercial activities/opportunities, available staff and also underpinned the circulation of reputation information which is crucial in these activities. However, learning from social capital-based networks was not greatly stressed. Finally, most technicians involved in post-production do not pay attention to social capital and buzzing which might reflect that either there is only a limited buzz going on in general or that this part of the industry was currently undergoing a process of radical restructuring towards vertical integration, increased unemployment (in sound, for example) and thus was not in a 'collaborative phase' of its development.

Thus so far we have identified that Toronto scores high on all measures identified by both the Marshallian cluster literature and the literature focusing on cultural clusters. Nevertheless Toronto's indigenous film production does not perform well. Measured in (2000-2005) in percentage of box-office on

the home-market English-speaking films captures only approximately 2,5%. Despite having all Marshallian and Jacobs elements in place, the indigenous industry does not seem to be able to harvest the benefits of clustering alluded to in the literature.

3.3. Global-local linkages: Toronto film cluster and relationship with Hollywood

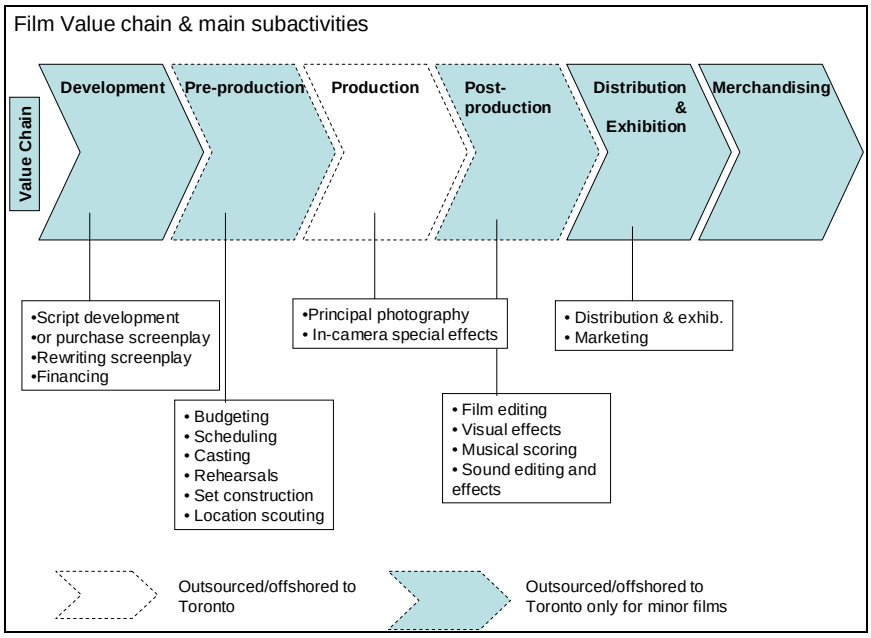
In contrast to traditional FDI's both outsourcing and offshoring takes place in the form of one-off projects (Scott 2004). That is, only one project is undertaken in Toronto and dissolved afterwards. Typically, a film project shoot in Toronto combines offshoring and outsourcing. Offshoring occurs when Hollywood brings those 'above the line' to Toronto. This includes the directors, lead actors, lead technicians, and similar. Outsourcing refers to those below the line; typically camera- and soundmen, non-star actors, and those taking care of humdrum activities. In other words one can say that the core of the creative process is kept 'in-house' but routine activities are outsourced to Canadians.

Despite the strong linkages with Hollywood firms, there are only limited knowledge spillovers from the interaction. Hollywood does not outsource or offshore high priority film projects (i.e. those with highest technical spillover potentials) to Toronto (or other Canadian cities[11]). The film productions that are outsourced and offshored are typically so-called second or third tier films (and movies of the week as well as television series, and other similar activities which is not included in this study). Typically these films feature 'old' stars (Kim Bassinger, Michael Douglas, for example[12]) but not those on the top of the so-called A-list, and are in the hands of directors that are not on the A-list either. Even for this type of films, a great part of the activities of the value chain is kept in Hollywood. Figure 2 shows the value chain of the

[11] Exception is obviously when there is a need for a particular scene taking place in natural surrounding which cannot be reproduced in Hollywood.
[12] The A-list concept is widely used in the industry, own interviews.

film industry, highlighting the activities that are outsourced or offshored to Canada.

Figure 2. Film value chain for runaway-productions



Given that the available capital is concentrated in Hollywood *pre-production* is likely to be kept there, even for 2nd and 3rd tier films (with the exception of some simple casting and finding locations, for which the director will usually fly to Canada).[13] Parts of the *production* – shooting - are then done in Toronto, while studio shooting occurs on large scale in Hollywood for these films too. Postproduction is limitedly outsourced to Canada, although it is increasingly so due to digitalization. How much is outsourced/offshored is contingent on the individual films scripts and location requirements. For example, a western film mainly taking place in Texas cannot outsource much of the shooting to Toronto as compared to a film supposedly taking place in a larger American city. Toronto does not have the large studios for hosting large adventure films either (although public government bodies are planning

[13] Locations are also available on the web, so the directors do not have to fly to Toronto.

to construct them).[14] It has been only recently that *post-production* has been outsourced to Toronto firms. The amount of firms being able to provide almost-cutting edge post-production in Toronto is however still highly limited. Two main reasons are behind this change. First, post-production is increasingly becoming provided by vertically integrated firms in Toronto – actually mainly one - which reduces the transaction costs for the Hollywood firms.[15] Second, digitalization of post-production has significantly reduced the production time which has made it attractive to outsource it to Toronto. Before digitalization the now outsourced post-production typically took around three weeks and included a significant amount of non-productive time for the director. The directors would for example suggest certain color changes and it would take 2-3 days to make them and he could not work on the film during these days. Using digital technologies the changes can be implemented immediately and the total post-production time can be reduced to around a week. This makes it more attractive for Hollywood to outsource these activities.

Toronto has world-class competencies in humdrum activities (i.e. logistics) and technical competencies. The main reason behind the well-functioning supply structure of the technician and humdrum activities is a well-regulated labor market that allows for the flexibility needed by film producers, cost advantages compared to Hollywood, high quality of human capital, mainly state based education and developed inclusive social capital.[16] However, the absolute most 'cutting edge' technological development and use is mainly undertaken in Hollywood. This development is driven by the films with the largest budget which tend to maintain their entire production in or around Hollywood, partly due to the access to the best competencies but also

[14] In Toronto there is a debate on whether there should be investments in these studios as studio work is increasingly becoming replaced by animation, where Toronto firms have a core competency.
[15] This firm is owned by a British TNC. The firms increasingly use a freelance model internally.
[16] In comparison to for example Vancouver the main difference is the size of the city; Vancouver is simply so small that there are limits to how many films that can be shoot there (a street starts to be recognized by the audience, for example) and Toronto has a size advantage here.

because this gives the producers the possibility to maintain a close control with their most important investments (i.e. centralization of decision powers). [17]

According to the TNC-cluster literature, global-local linkages are most likely to generate positive spillovers when cost reduction is not the main motive behind outsourcing/offshoring. However, in the case of the Toronto specialized service cluster the main reason to offshore and outsource Hollywood productions to Toronto is cost-cutting. Basically, most interviews indicated that the production costs for the production phase can be reduced by 20 percent and cost reductions were the main reason for offshoring and outsourcing to Toronto.[18] Hollywood films do not approach Toronto firms because of any specialized competences that are hard to find in LA, but because of their lower production costs; hence, investments in 'subsidiary' competence building are zero. In Cantwell vocabulary competency augmenting subsidiaries do not exist.

Also the one-off based nature of the project does not create incentives for this type of investments. Centralized decision-making structures (i.e. concentration in Hollywood) in combination with one-off projects also implies that activities that could have been undertaken in Canada is not outsourced or offshored and that the producer and director maintain a limited knowledge about actual possibilities in Toronto; this requires large investments in building local knowledge.

If the spillovers from the Hollywood majors to the specialized service hub have been limited, their impact over the indigenous cluster is even more

[17] This was also confirmed with interviews with B. Broden from The Toronto Film & Television Office. Of Hollywood top-10 blockbusters in 2005: Harry Potter and the Goblet of Fire, Star Wars: Episode III - Revenge of the Sith, Chronicles of Narnia: The Lion, the Witch and the Wardrobe, War of the Worlds, King Kong, Madagascar, Charlie and the Chocolate Factory, Mr. & Mrs. Smith, Batman Begins and Hitch, none were made in Toronto.

[18] The savings come mainly from the lower wages in Canada. Production costs have grown considerably in Hollywood and several majors face difficulties 'making money'. It is especially the star actors and directors that benefit in financial terms from the increase in production costs. This puts a stronger pressure on reducing other costs this making more attractive to outsource and offshore to cheaper locations.

restricted. Post-production does have a potential spillover into Toronto's indigenous film production (i.e. access to high tech equipment) but this is not utilized much[19]. The spillovers are also limited by the fact that outsourced and offshored activities are those in which Toronto is already strong (i.e. shooting). Additionally, due to budget differences it is difficult to transfer potential spillovers (i.e. production knowledge). Despite, for example, being able to use a particular new technique the Canadian director is often not likely to be able to use it in practice as it is to expensive. This reveals that spillovers display industry specificities (in terms of the character of activities being outsourced, the duration of the global interaction, etc and also is affected by the technological development (i.e. digitalization) and specific firm strategies (i.e. vertical integration in post-production in Toronto)[20]. The question is how to facilitate the spillovers into the local industry supporting the development of an indigenous industry.

3.4. Breaking the vicious circle. Possibilities of developing a strong indigenous film production cluster

While further research is needed, our analysis of the Toronto film industry suggests that a precondition for creating positive spillovers from the TNCs investment (i.e. change the character of the global-local interaction) is a developed strategy for the indigenous industry. This implies that a clear strategy focusing on the creation of complementary competencies and assets with respect to those located in Hollywood are required for creating incentives for Hollywood's majors to redevelop their business model. Hitherto, the interaction between Hollywood majors and Toronto film firms

[19] However, anecdotes in the interviews suggested that New York film productions with a higher budget than the indigenous Canadian films increasingly used and benefited from the post-production facilities available at Ontario.

[20] The TNC-cluster literature is unsettled on the impact on nationality of the subsidiary managers (i.e. local vs non-local) on their dedication to the cluster development. Yet, it is argued, that dedication to the development of the host cluster is positively affected if the manager is local. The directors of the Hollywood films are not locals and since they are involved in one-projects the probability of them getting involved with the development of the ingenious film cluster is also so minor.

has been based on the provision of low cost high quality services. Basically, Hollywood firms were not interested in investing in capacity building in Toronto as there are no unique competences in Toronto that make Toronto a unique offshore or outsource location (i.e. strategic cluster partner)

Apart from aiming at producing non-Hollywood films (suppose to be Canadian films) Toronto film cluster does not have a developed strategy targeting markets in which they would not compete with Hollywood. Considering that they are mainly producing low cost productions[21], he strategies followed by other successful 'low cost' film clusters as the Danish one could be a useful reference point. Denmark tends to produce films with similar limited budgets as their Canadian 'counterparts' but the Danes developed a particular strategy – labeled the Dogma – which turned necessity (=low budgets) into a source of competitive advantage. The Dogma movement established specific rules that have to be followed by all Dogma filmmakers (hand-held camera, only shooting on location without props and sets being brought in, the sound must never be produced apart from the images or vice versa, optical work and filters are forbidden, etc.). The Danish filmmakers now have around 25 percent of their home market (that is 22.5 percentage points more that is the Case in Canada) whilst their starting share was rather low. The Danish example does not suggest that an identical strategy should be pursued by the Canadian film makers but rather highlights that strategic visions and derived consequences are more important than the actual size of budgets[22]. A clear strategy will provide the Canadian firms with a sense of direction in terms of the acquisition of specific, unique (non-Hollywood) film competences by the indigenous firms. In other words instead of the normal focus on competence-building, it is suggested that the upgrading is constrained not by *competence level* but by the current *use of the competencies* (i.e. strategizing). This, in turn, could, for example, lead to establishment of permanent subsidiaries with a competence-augmenting

[21] The average Hollywood major studio film cost US$55 million to produce with an extra $27 million to advertise and market, a total cost of over $80 million per film (www.mpaa.com).
[22] It is not clear if visions can be initiated top-down; this was not the case in Denmark.

mandate, thus modify the importance of the project-nature of the industry. This could facilitate more enduring relations between Canadian and Hollywood filmmakers which might contribute to lift in the competence-level and derived possibilities for redesigning the strategy (i.e. *new use* of *improved* competencies). Hence, spur a virtuous circle.

Yet, a change in the strategy also needs to encompass the demand-side constraints. One major weakness for English-speaking films (i.e. Toronto films) is to be found in the demand side. Unless demand side issues are included in the strategy the strategy is not likely to yield the expected results. Even if the indigenous firms and institutions are capable of changing their strategy and develop and implement a coherent vision, they will face a serious problem of distribution as the majority of screens are controlled by the majors. Thus unless there is an articulated strong demand for a particular Canadian (or foreign film) they are not likely to distribute or air the film. They do not have financial incentives to do this, as the costs of showing Canadian films are relatively higher than for Hollywood films due to Hollywood's international pricing system.[23] Furthermore, buying the rights for distribution in America is beyond the budget possibilities of Canadian films.

Thus if Toronto's films are to be successful there is a need to introduce changes in the distribution system. Policymakers in other countries have attempted this. South Korea, for example, has had success with screen quotas for Korean films. Yet, this it not likely to be an attractive solution in a market-based society as the Canadian. Alternatively, increased support for distribution and marketing is an alternative and less direct mean that can be used.[24] Support for the spread of digital equipment in combination with financial support for distribution and marketing could lead to 'shows on

[23] These reflections challenge another core assumption underlying the cluster-literature, namely that innovations and performance are positively correlated. This seems less likely to be the case in creative industries and the film industry. Yet relevant measures are needed to sustain this econometrically.

[24] Scott has suggested likewise for the case of the French film industry

demand' which could lead to a larger demand for Canadian films (if the quality increases).

4. Conclusion

The currently dominant streams of literature within cluster studies have provided valuable insights for understanding the clustering of cultural industries, specially thise paying attention to sectoral and institutional specificities as well as firm specific elements and the importance of global-local linkages. Nevertheless the exploratory study of Toronto's film cluster illustrates that existing frameworks provide only partial explanations It should also be acknowledged that Mashallian clusters (including Scott's transaction cost version) provide a useful framework for analyzing and explaining the development of the humdrum-dimension of Toronto's film cluster (i.e. the emergence as a specialized service hub). Nevertheless these types of endogenous models fail to adequately explain the conditions underpinning global-local linkages supporting positive direct and indirect spillovers and thus the conditions allowing an indigenous film cluster to benefit from the globalization of film production.

Strictly following endogenous models, one would erroneously predict a well-functioning indigenous film cluster as all Marshallian elements are in place; this is far from the case. Hence, one can conclude that there is a need for adding 'variables' to the framework, not the least concerning the global-local interaction. Our analysis as we will return to below suggests that one of the main problems of the cluster analysis is that it fails to link cluster-strategy with the effects of global-local linkages and accommodate the specificities of the demand-side. Yet, albeit exploratory in nature the study also suggests that translating insights from the TNC-oriented literature has proven important to develop measure for transforming global-local interactions into positive spillovers for the indigenous film cluster. This might also help transcending some of the limitations concerning global-local interaction

stemming from the project-based nature of the industry (hence allude to paying slightly less attention to the project-based nature than it is done in the cultural cluster-literature). The problems with the demand side have less to do with access to (lead) users or challenges stemming from transmission of tacit and disembodies complex knowledge, as the traditional literature suggests, than with the control over demand construction and distribution. This suggests that a deeper discussion on the role of the demand in the emergence and development of cultural clusters is needed. The demand side part of our analysis is to be viewed more as an invitation to pay more attention to this dimension in future studies than as a formal analysis. Nevertheless it provides a needed corrective in the context of rethinking global-local linkages.

The Jacobs's inspired studies provide a sophisticated framework for posing questions on and analyzing the role of cities in solving challenges derived from the so-called one-shot projects. However, this line of research has hitherto been dominated by 'endogenous' models. From this perspective one would also expect a burgeoning indigenous film cluster in Toronto. The analysis of the film cluster in Toronto suggests that this it is not the case. The impact of technological development (i.e. digitalization) also proves to be crucial however mainly with respect to creation of Toronto as a specialized hub. Digitalization however in the context of the film industry might in the slighter longer run hold implications for the indigenous industry too. Firstly, entry and production costs can be significantly lower for firms with a particular niche strategy. Hence, digitalization changes the degrees of freedom in strategizing available for film clusters. Secondly, digitalization might influence the majors' control over the distribution channels (pay-on-demand of the Web, for example). Thus while successful control over the demand-side is likely to be a precondition for a successful cluster strategy (the possibilities of creating different types of global-local linkages like decentralized decision making power, establishment of permanent subsidiaries), technological development might work in favor of the

indigenous producers. They might be less victims of the lack of control over demand. Yet, this remains to be seen. The study on the film cluster in Toronto is engaged directly in dialog with the two types of cluster-literature. We do not propose that the findings can be generalized automatically to other creative industries or other film clusters. Yet, we believe that the study can serve an inspiration for other studies of creative clusters in identifying similar aspects or add new variables; especially called for are econometrically-based comparative studies as they hardly exists.

Annex 1- Methodology

The paper is based on original data collected by one of the authors through in-site fieldwork in 2005 and follow-up communication with informants in 2006. Apart from publicly available statistics the study draws on 23 interviews representing all parts of the value chain – from US and Canadian directors and producers to technicians, policy-makers, commentators and industry experts.

In total four Canadian directors were interviewed. They were selected as they represent different types of Canadian film productions (mainstream, niche (i.e. gay, and art film). In addition the US producer J. Schaum was interviewed via email. He was chosen since is a leading producer (Ang Lee's producer) that has been actively working in Canada and is also professor in film studies. Five policymakers were included, representing the different relevant organizations in the cluster which were involved in financial support or film policymaking (Telefilm Canada, Ontario Media Corporation and the Ministry of Culture in Toronto). Five service providers were interviewed, representing different types of humdrum activities. One post production firms was interviewed; this is the largest and most important post production firm in Toronto. One legal adviser for a firm involved in property rights in connection with film production in Toronto was interviewed, as he is considered the leading expert in the field and has authored numerous scientific and popular publications. Additionally, three industry experts were interviewed (these included leading film critics, film researchers etc). Finally, professors representing two film schools were included.[25] The conducted interviews focused on their specific field of expertise or experience (mainly concerning the filmmakers). Triangulation of results with different data sources, including publications and statistical sources was used to validate the findings.

[25] Communication with other specific organizations was also included but not resulting in much relevant new data.

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