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**Madonna and the Music Miracle**  
**The genesis and evolution of a globally competitive cluster<sup>1</sup>**

**Pontus Braunerhjelm**

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The Royal Institute of technology  
Centre of Excellence for Science and Innovation Studies  
<http://www.infra.kth.se/cesis>  
Corresponding author: [pontusb@infra.kth.se](mailto:pontusb@infra.kth.se)

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# Madonna and the Music Miracle

*The genesis and evolution of a globally competitive cluster*

Pontus Braunerhjelm, Royal Institute of Technology<sup>2</sup>

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## Abstract

The issue addressed in this paper concerns the emergence and dynamics of a regional cluster in the music industry. Whereas mainstream economic geography models explain agglomeration of existing economic activities, an evolutionary approach is necessary to understand the emergence of genuinely new clusters. Based on an empirical analysis of the major Swedish music cluster, it is shown how cognitive features, the institutional and organizational framework, as well as economic incentives, were interlinked in the process of cluster emergence. A multitude of forces thus coincided in time and space to support the emerging music cluster. A latent knowledge base, language skill and path-dependence all played a significant role. It is also shown how mobile and densely located agents, displaying a high degree of connectivity, together with external impulses through immigrants, contributed to the dynamics and re-vitalization of the Stockholm music cluster.

**JEL:** L2, D83, Z11

**Keywords:** genesis, evolution, dynamics, heterogeneity.

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<sup>2</sup> Professor at Royal Institute of Technology, Stockholm. All correspondence to Royal Institute of Technology, SE-100 44 Stockholm, Sweden. Phone: +46 8 790 9114, fax: +46 8 411 74 36, e-mail; pontusb@infra.kth.se

## 1. Introduction

*“I think that it is more prestigious for Ricky Martin to be allowed to work with Swedish song-writers than the other way round. A connection with Swedish song-writers is almost a necessity for an artist to have an international success.”*<sup>3</sup>

Why do superstars like Britney Spears, Ricky Martin, and Bon Jovi to an increasing extent choose Swedish composers and producers in an industry characterized by extremely fierce international competition? Bergen, Copenhagen, Dublin, London, Los Angeles, Manchester, New York, Paris and Seattle are some of the more prominent competitors to the Swedish – particularly Stockholm – music clusters. What triggered this evolution and which dynamic forces have been decisive in the creation of the Stockholm cluster?

Despite the impressive research presented on spatial issues in the last decade, we know surprisingly little about the forces initiating the creation of clusters.<sup>4</sup> Economic geography models originating in the international trade theory literature, view agglomeration as a function of linkages (pecuniary and non-pecuniary), trade costs and scale economies (Krugman 1991, Venables 1996, Fujita et al 1999, Braunerhjelm et al 2000). Still, the focus is rather on the re-location of already existing economic activities than the emergence of new clusters. New constellations of existing clusters appear as altered trade costs (e.g. due to an integration process) induce a re-shuffling of firms and factors of production, leading to a new pattern of spatial distribution of economic activities. Notwithstanding that these models constitute a true contribution to our understanding of the spatial dimensions of economic activities, empirical

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<sup>3</sup> Kai R. Lofthus, reporter in the international music magazine Billboard, interviewed by the Swedish newspaper Expressen, March 16, 2002.

<sup>4</sup> See Feldman and Francis (2002) for a brief survey and analysis of cluster formation.

observations also suggest that clusters emerge for quite different reasons, such as exogenous shocks attributed to technological breakthroughs, locational specific factors, historically random events, deregulation, market structure and down-sizing of the government, or the disinvestment of a dominating firm (David 1985, Scott and Storper 1986, Arthur et al. 1987, Arthur 1989, Krugman 1991, Feldman and Francis 2002, Scott 2003).

The development of the Stockholm music cluster serves well as an example of how local knowledge, to some extent concentrated but also latent and partly related to adjacent fields of knowledge, can develop into a major international competitor in a remarkably short period. To argue that the emergence of the Stockholm music cluster can be traced to changes in trade costs, or the presence of important linkages, makes little sense. Linkages are no doubt important for strengthening and expanding the cluster; however, it requires a minimum critical mass among which linkages can be established. As will be shown below, the emergence of the Stockholm cluster can be attributed a whole set of reinforcing factors.

Hence, the objective of this paper is to shed new insights on the forces prompting the emergence of clusters, and how those forces interact with the more well-known mechanisms - referred to above - working to enforce and sustain existing clusters. These processes will be illustrated through a careful examination of the Stockholm music cluster. The theoretical foundations is provided by the findings of the new economic geography literature referred to above, together with the strand of economics emphasizing the role of systems and connectivity in evolutionary processes (Porter 1990, Carlsson and Stankiewicz 1991, Nelson 1993). The novelty of this paper thus relates to the very early phase as economic activities begin to concentrate spatially, and the ensuing dynamics of the cluster as a critical mass has been attained.

Statistical evidence as regards the extent and the development of the Swedish music industry will be presented. However, to understand cluster formation and dynamics, conventional

statistic sources must be complemented by interviews since available data does not comply with the cluster concept. Special attention will be devoted the central elements of the creation of the Stockholm music cluster – the “igniting spark” – and the forces having propelled the development and specialization within the cluster over time.<sup>5</sup> The results derived from the analysis are likely to be applicable to other (particularly service) clusters, even though there are no doubt features specific to the music industry.

Initially, the theoretical framework and the method applied in the present study will be described (section two). Section three provides a summary of the extent of the Swedish music industry and the factors that have propelled its success in the last few decades. Sections four and five analyze the factors explaining the development of Stockholm towards an internationally competitive cluster in the music industry. Finally, the concluding section summarizes the main findings and discusses the policy implications.

## 2. Theoretical framework and method

Even though the definitions of the cluster concept to some extent differ across disciplines and authors, there seems to be agreement on certain fundamental cluster characteristics (Porter 1990, Enright 1996, Fujita et al 1999, Gordon and McCann 2000). Overall, clusters are defined as the production of similar or complementary goods and services in spatially well-defined areas (Braunerhjelm and Carlsson, 1999). Some internationally well-known examples are Hollywood (movie-production), Silicon Valley (ICT), London (finances) and Sophia Antipolis, France (biotechnology). In Sweden, which is at focus here, Kista and Karlskrona/Ronneby in information and communication technology products, Stockholm/Uppsala (Karolinska institutet, and Novum

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<sup>5</sup> See Feldman and Francis (2002).

for example) and the Öresund region (Medicon Valley) in biotechnology, constitute examples of clusters outside the music industry.

This basic definition – proximity in physical (geographical) and product spaces – has ramifications in different directions where certain cluster characteristics are more or less emphasized. The strength of clusters supposedly depends on the frequency and extent of pecuniary linkages (to customers and suppliers) and non-pecuniary linkages (knowledge spillovers), whereas the locational stability of clusters depends on the size of the cluster, the mobility of factors of production and trade costs (defined as trade barriers and transports of output). Altered trade costs, either due to an integration of markets or technological progress (e.g. internet) influence agglomeration and the pattern of cluster formation across countries and regions.<sup>6</sup>

The dynamics of clusters is considered to depend on their maturity, the degree of knowledge intensity and the extent of the diffusion of knowledge.<sup>7</sup> Once more, vertical and horizontal links, a close interface between customers and suppliers, as well as simultaneous existences of competition and co-operation across firms and institutions are assumed to drive the dynamics of the clusters and their tendency to change (Clark et al 2000). The inflows and outflows of firms and agents, contributing to increased variety, seem to be a vital component in this respect (Saxenian 1999). Clusters can also be defined in terms of cognitive, institutional/organizational and economic dimensions, interacting in innovation or technological systems (Nelson 1993, Carlsson 2001), or on basis of the presence of a certain set of agents in the cluster (Porter 1990, 2000).

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<sup>6</sup> See Fujita et al (1999) or Fujita and Thisse (2002).

<sup>7</sup> See Feldman and Florida (1994), Martin and Ottaviano (1999, 2002) and Fujita and Thisse (2002).

As regards the Swedish music cluster, Hallencreutz et al (2002) – who have analyzed the Swedish music industry based on Porter’s approach – find that it can be classified into the following five categories:<sup>8</sup>

- 1) *Specialized services* – artists, lyric writers, musicians, producers, composers, etc.
- 2) *Production* – music production, music performances, copyrights, etc.
- 3) *Related activities and supportive institutions* – musical studies, record companies, recording studios, technicians, printers, agents, managers, etc.
- 4) *Equipment, machines and related services* – producers and suppliers of studio equipment, instruments, video producers, etc.
- 5) *Customers* – the final consumers of music.

In the following, the above classification is adopted but connected to cognitive, institutional/organizational and economic characteristics. Category 4 (*Equipment, machines and related services*) is disregarded in the present study, since the aim is primarily to show how competence, impulses and specialization (cognitive dimension) have been created and evolved in the cluster, how the contacts between agents and the network (institutional/organizational dimension) are organized and knowledge is transmitted, and what the links to the market look like (economic dimension).

Using this as our starting point, a considerable number of semi-structured in-depth interviews have been carried out with three different groups of agents. All interviews have been made with individuals on a managerial level and they have all been carried out in the period June

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<sup>8</sup> See also Hallencreutz (2002).

to August 2002.<sup>9</sup> The selection of respondents is based on the author's own knowledge, previous studies, as well as agents who have turned out to be central for the Swedish music cluster as the interviews have proceeded. This resulted in a large number of names, firms and institutions. The interviewees were taken from the largest and most important agents in each segment. This means that the sample is a subjective rather than a random choice, but it is likely that the selection is representative for the segments we have chosen to study in the Stockholm music cluster. The following institutions and firms have been interviewed:

- 1) *Educational institutions* – Principal Gunilla von Bahr at the Royal College of Music, Stockholm (KMH), Deputy Rectors Marie Linde and Gunnar Andersson, in charge of musical studies at Södra Latins Musikgymnasium (public high school), Principal Johanna Österling at Rytmus Musikgymnasium (private high school)<sup>10</sup> and the head of the cultural schools (primary and secondary level), Hans Skoglund at Stockholms Stads Kulturskola.
- 2) *Composers/producers and music houses*<sup>11</sup> – Andreas Grill, Christian Sandqvist, Andreas Claeson, Peter Hallström, Martin von Schmalensee, Mattias Håkansson, Ben Malén and Pelle Lidell.<sup>12</sup>

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<sup>9</sup> In the last few years, interviews have increasingly come to be considered as an important complement to statistical/econometric methods in empirical studies. See, for example, *The NBER project on industrial technology and productivity* ([www.nber.org](http://www.nber.org)), Borenstein and Farrell (1998) and Scherer's (1986) earlier criticism of the skepticism of economists to using interviews as a complementary method. Altogether 20 interviews were undertaken for the current study.

<sup>10</sup> Södra Latins Musikgymnasium and Rytmus Musikgymnasium are senior high schools in Stockholm, specializing in musical studies.

<sup>11</sup> The difference between record companies and music houses is that the former own the rights to the recordings while the latter own the rights to the works. This means that record companies sell and market transmitters of sound (CD, vinyl, DVD, etc.), while music houses own and administer the original works/copyrights and license these to record companies, film companies, advertising agencies etc. Music houses also take care of the originators' copyrights for existing works that are sold on transmitters, when the work is recorded live, is broadcasted on TV, played on the radio, filmed, when music is sold or when texts are printed, etc.

3) *Record companies* – President Niklas Nyman at Music Network (MNW), Vice President Eric Hasselqvist at Stockholm Records and President Per Sundin at Sony Music Nordic.

The size of the firms interviewed varies from individual proprietor enterprises which are predominant among composers/producers, to the 20, 50 and 58 employees at the record companies interviewed. Only one company is listed on the Swedish stock exchange (MNW). Overall, firms within these segments of the music cluster are thus small.

### **3. The Swedish music industry – structure and international position**

The Swedish “music miracle” has been observed in several reports in the last few years, but little is known about its precursors and the extent of its claimed success in an international comparison. There are numerous difficulties in international comparisons of the music industry. Often individuals have a part time engagement in music activities, incomes may be registered in other countries and definitions varies across countries. We will present statistics from several sources that amount to at least circumstantial evidence of a Swedish success in the music industry.

As a first measure of international success, consider Billboard’s ranking of top records. According to a record’s ranking and time on Billboard’s weekly listing of the 100 most popular songs, a record is given a certain number of points. Figure 1 illustrates the ranking of Swedish music groups 1974 to 1995. Before 1974, there were no Swedish groups, but since the Swedish pop-group ABBA won the European Song Contest in 1973, there has been a positive trend.

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<sup>12</sup> Pelle Lidell represents about 40 Swedish composers/producers through the music house Murlyn Songs AB. Ben Malén (previously under the stage name Ben Marlene) represents about 50 Swedish composers/producers at the music house Tom Bone Music.

## Figure 1

Another indicator is the high revenue of Swedish music houses in relative terms, compared to other countries (Table 1). The per capita revenue is much higher in Sweden than in, for instance, more well-known music nations like the UK and the U.S.

## Table 1

A more detailed picture of the Swedish music cluster, and how it relates to other regions and countries of similar size, is presented in Table 2. The two U.S. regions included refer to the Cleveland and Seattle metropolitan statistical areas in the U.S., which complement the comparison with four European countries of about similar size (even though all of them are smaller) as Sweden. Cleveland and Seattle are well known musical centers in the U.S., however for quite different reasons: whereas Cleveland host one of the leading symphony orchestras in the U.S., Seattle is the place from which the “grunge” style of modern music originates. The other Nordic countries have about the same musical culture and tradition as Sweden, rooted in folksongs, choires and classical music. Some of them have also been quite successful in launching new pop-groups, particularly Norway.

The only non-Nordic country included in the comparison - Ireland – is perhaps most similar to Sweden; a strong music culture, a cultural tradition of story telling and poetry, and more recently some extremely successful pop- and rock artists (van Morrison, U2, Bon Jovi,

Sinead O'Connor, and others). The aim of this study is not to undertake a detailed comparison of these countries with respect to the music industry, rather to “benchmark” the Swedish music industry against these countries. Even though statistical difficulties are ample, it helps in assessing the size and composition of the Swedish cluster before we start to analyze the causes of its emergence. The comparison is primarily based on the numbers of firms, but the bottom row in Table 2 includes employment data. There are several missing values at the industry level, particularly for Ireland, but the aggregate figures should be reasonably complete.

The Swedish music industry consists of about 15.000 enterprises (1999), employing about 15,000 people (Table 2). Most firms are small, approximately 83 per cent are self-employed (i.e., have no employees), and only seven firms have more than 200 employees. The majority of firms can be found in two industries: Performing artists, producers of artistic and literary work (sic 92310), and publishers of sound recordings (sic 22140). These two branches account for 78 per cent of the firms in the Swedish music industry. A closer examination, however, shows that roughly 1,500 firms can be defined as belonging to the core of the Swedish music industry, employing about 10,000 people.<sup>13</sup>

## Table 2

As compared to the other countries and regions, Sweden – together with Finland – turns out as having a comparatively large numbers of firms in the music industries. The apparent dominance of Sweden is most notable when it comes to performing artists and publishers

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<sup>13</sup> For a more detailed description of the Swedish music industry, see Hallencreutz (2002) and Hallencreutz et al (2004).

(composers) of music. In relative terms the share of firms and employees in the music industry is quite modest in all countries. Still, judging from official statistical sources, Sweden has by far the largest percentage share of firms in the music industry, close to three percent. Remaining countries/regions all display a share below one percent.

Employment data reveal a somewhat different pattern. From these data Ireland turns out to have the relatively largest music industry (.60 percent of employment), closely followed by Norway, Sweden and Seattle in the U.S. (all around a percentage share of .40). These data could be expected to be more reliable than data on the number of firms. Yet, also these figures may be questioned, mainly because individuals active in the music industry often also hold another job and it is unclear how this is classified.<sup>14</sup> Taken together – absolute numbers, shares of firms, and shares of employees – the picture that emerges from Table 2 suggests that Sweden has a relatively large music industry, albeit there is no unambiguous evidence of a comparative Swedish dominance in the music industry. If, as indicated above, a more realistic measure of the number of firms in the Swedish music industry is 1500, then the share of firms in the music industry declines to 0.20. Obviously there are measurement problems in country-wise comparisons.

The size of the music industry can also be put in perspective to other industries within a country. For instance, the Swedish biotechnological industry is estimated to employ between 10,000 and 20,000 people in about 300 firms (Allansdottir et al 2002). Hence, employment wise it is about the same size as the Swedish music industry.

In an international comparison, Sweden has been claimed to be the third largest exporter (per capita) of music in the world, only surpassed by the U.S. and UK (Forss 1999). This observation in itself motivates a study of what factors have made it possible for Sweden to reach

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<sup>14</sup> Note the difference between number of firms and employees in the Finnish case. This underlines the data problems and calls for a cautious interpretation.

this position. In 2002 Swedish music exports (including services, royalties and goods) amounted to 750 million Euro, which can be compared to a traditional Swedish industry such as iron ore (exports 420 million Euro) or medical instruments (exports 740 million Euro). There has been a steady increase of approximately 15 percent annually in 1990 to 2000. However, export growth fell to about five percent in 2000 and 2001. For the most recent period (2002 and 2003), export data is more difficult to assess due to the reclassification of items that may give an impression of continued increase in exports. In reality, export seems to have fallen in the last few years.<sup>15</sup>

The structure of exports earnings has also changed. The major part of the music industry's export revenue can still be attributed goods but an increasing share is related to services and royalties. In 1997 the music industry's share of exports of services and royalties was 33 percent which increased to 41 in 2001. An illustration of this is provided in Figure 2, where the royalty revenues from abroad for the period 1996 to 2001 are shown to be steadily increasing.

Figure 2

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<sup>15</sup> Dvd:s which mainly involves films.

Most people agree on the fact that the international Swedish success in the music industry started with the internationally extremely successful pop-group ABBA, in turn followed by Roxette, Ace of Base, The Cardigans, etc.<sup>16</sup> A new generation of music groups now seems to be on its way to the international market, for example The Hives, Division of Laura Lee, Soundtrack of Our Lives and Sahara Hotnights.<sup>17</sup>

At the same time, ABBA's initial success, which constituted a springboard for a number of other groups, has been followed by a shift in the specialization of the Swedish music industry. Swedish music groups and artists still enjoy a certain success, but the focus has, to a larger extent, shifted to Swedish composers and producers. Among these, the studio collective Cheiron and Murlyn Music Group stand out in particular.<sup>18</sup> These agents have composed and produced music for international artists such as Britney Spears, The Backstreet Boys, N'Sync, Jennifer Lopez, Céline Dion, Ricky Martin, and Bon Jovi, to mention a few.

In the following sections, we will attempt to identify the underlying factors that have contributed to develop Stockholm into a leading international music cluster, despite fierce world-wide competition.

#### 4. Why Stockholm?

Broken down into regions, the specialization often varies between clusters, even if similarities and interdependencies also prevail across clusters belonging to the same general type of production. In certain Swedish regions, the emphasis is on musical performance and the formation of music groups, while in other regions, the strength of the music cluster is found in

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<sup>16</sup> The presence of "superstars" has been shown to be decisive for other, more research intensive industries, such as biotechnology (Zucker and Darby 1996).

<sup>17</sup> For instance, Sahara Hotnights was ranked among the top ten best released records in 2002 by Washington Post.

<sup>18</sup> The Cheiron collective was dissolved in August 2000 and the members preferred to continue on an individual basis. Its founding father, Dennis Pop, was instrumental in developing this line of the Swedish music industry.

other segments. The Stockholm region – on which we have chosen to focus our analysis – seems to be the predominant Swedish music cluster.<sup>19</sup> The majority of internationally successful composers and producers in the last few years, are based in Stockholm. In order to explain why Stockholm has become so strong on the international music market, we must, however, start by studying the more general conditions for music production in Sweden.

*A broad basis of knowledge– schooling, language and technological know-how*

Some basic conditions for the formation of a strong Swedish music industry emerge from the interview material. First, most respondents agree on the municipal school of music being an important explanatory factor of the relatively high music competence in Sweden. The municipal school of music offered pupils the opportunity to get in touch with music without cost or time-consuming transports. Moreover, musical instruments were supplied free of charge, which meant that all pupils could devote themselves to music, irrespective of their financial situation.

The municipal school of music created a “receiver competence”. The implications were a relatively high knowledge of music among the Swedish audience, but also good conditions for a large inflow of new agents (musicians, producers, composers, etc.) into the Swedish music market – the opportunity space was widened. Hence, a good basis for broad, general basis of knowledge in music was built up which, according to the interviewees, is necessary to create an internationally competitive music industry. In essence, a kind of “competent suppliers and demanding clients relation” was created in the Swedish music industry.

The municipal school of music has now become a broader “Culture school”. The difference as compared to the previous system is that there is now a fee for the education (varying between municipalities) and also that it is not necessarily located in the children’s own schools.

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<sup>19</sup> See Hallencreuts, et al (2004)

This means that the children's musical studies now depend more on the financial situation of the family and also the pupil's active choice. In other words, the students' access to music training has deteriorated. Moreover, music training is now competing with other creative activities since the "Culture school" also teaches dancing, theater, art, etc.

An active choice (i.e., fees) does not necessarily imply a negative effect on the Swedish music industry. On the contrary, it might mean that particularly motivated and interested pupils are attracted to the schools of music.<sup>20</sup> However, several respondents claim that they do see the effects of this policy, above all through a lower musical competence among applicants for specialized and higher musical studies.

Two additional explanations considered to be particular for Sweden should be added to a broad musical knowledge basis. First, the respondents stress that the generally good level of knowledge of English in Sweden constitutes an important partial explanation to the Swedish success on the international music market. The combination of the English language being taught at school already at an early stage, television programs and films that are not subtitled and the fact that Sweden is a small country easily subject to international influences, is considered to be the underlying cause of Swedes' skills in the English language. English is, in turn, an important "input" in an industry internationally dominated by the U.S. and UK.

Second, Swedes are considered to have a great interest in technology and possess considerable technological skills. The music industry has, in many ways, undergone a technological revolution, both as concerns recording techniques and also in general through the swift development of information and communication technology (ICT). The combination of technical knowledge and falling prices on technology (throughout the 1990s) means that

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<sup>20</sup> According to the "Culture School", the costs have not increased, nor has the availability decreased. This is, however, contradicted by both the respondents and earlier studies (Forss 1999).

accessibility has increased; almost everyone can record their own CD at home without any major financial sacrifice.<sup>21</sup>

Technical competence also imply that the musical quality can be further emphasized, and that more advanced and refined recording technologies can be used in the music production. Naturally, this is an advantage when the final product reaches the consumer. Hence, according to the respondents, there is a connection between high technical knowledge and musical success.

The drawback of the development of ICT is pirate copying and free downloading. The problem often emphasized in knowledge-intensive production (as stressed in the “new economy” literature) obviously exists in the music cluster. That is, the costs for developing and marketing a new product is substantial, while the marginal cost for copying the new product is virtually zero (Alexander 2002).<sup>22</sup> The typical example is a CD. Swedish record companies work actively against pirate copying together within the trade association IFPI (The International Federation of the Phonographic Industry) as well as through a dialogue with both Swedish and European legislators. The old copyright system was based on regulations of the copying of pictures. This system was not considered to be fully applicable to music and a new legislation was introduced in Sweden in 2002 and 2003.<sup>23</sup>

### **Culture, “path dependence” and the market**

A generic component – “path dependence” – is often mentioned in the development of clusters. Silicon Valley builds on an electronic knowledge which goes back to the 1930s, and also other industries origin can be traced a long way back (Klepper 2004).

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<sup>21</sup> Note the similarities to Ireland; The Irish experienced a technical revolution, spearheaded by the information and communication sectors, and of course already have the English language.

<sup>22</sup> See Hui and Png (2003) and Varian (2000).

<sup>23</sup> The protection for originators is now regulated through the recent law on *Elektronisk handel (Electronic Trade)* (Government Bill 01/02:150) and through the EU framework directive *On the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society* (2001/29/EG).

As concerns the effect of the Swedish national cultural heritage on Swedish music, the answers point in somewhat different directions. Some consider the Swedish connection to folk music and the general European connection to classical music to have strongly contributed to the ability to write catching tunes. In contrast, some consider the culture to be weak, since Sweden is a small country easily influenced by international trends, implying that artistic inspiration mainly stems from west Europe. That is, the interviews suggests that Sweden lacks a cultural identity of its own. This might, on the other hand, mean that trends are easily picked up and copied, but that the ability to create unique products is weaker. Overall, the interviews show that Sweden is strong in mainstream production, but that – with a new exceptions – does not participate in the leading edge development of music.

Even if there is some variation in the opinions about the cultural heritage, there is substantial agreement on the positive influence of immigration on the music life. Previous studies on creative environments and clusters have also emphasized the importance of multiethnic environments (Saxenian 1999, Florida 2002). In this light, the Swedish liberal view on immigration can be considered to be positive and beneficial to the development of the Swedish music cluster.

Furthermore, it emerges from the interviews that Sweden is considered a “pop country” rather than a “rock country”. This is most likely partly due to the fact that Europe has traditionally received its musical inspiration from classical music, while the U.S. has been more influenced by jazz and blues, and partly due to the absence of live stages. In the U.S., bands can be on a “never ending” tour for several years in order to create an audience.<sup>24</sup> In Sweden, there

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<sup>24</sup> As music production become less profitable, there has been a tendency for an increase in price of live concerts tickets. Kreuger (2002) claims that the price has doubled between 1995 and 2001. A similar tendency can be observed in Sweden, judging from income data from concert organizers, which is estimated to have increased throughout the period 1996 to 2002 (Forss 2003).

are only a few performances, which means that the resources are concentrated to composition and professional productions, rather than artistry. The studio thus becomes the creative forum for the artist. The somewhat less polished rock music is instead often compensated by more frequent and spectacular performances.<sup>25</sup>

A general view among the respondents is also that the size of the Swedish music market is so limited that exports become a necessity. Launching an artist is a very costly venture. Projects only targeting the Swedish market are difficult to motivate financially. Thus, it is necessary to also target other markets, which means exports and the adaptation of music to markets with a different cultural basis. The firm Stockholm Records is a good example; their central business idea is to export Swedish music. About 20–25 per cent of the employees in the firm only work with other countries and 90 per cent of the firm's sales take place outside the Swedish borders.

## 5. Stockholm – concentration and dynamics

As discussed above, a broad musical knowledge – together with a considerable knowledge of languages and technological skills – constitute the core competencies in the Swedish music industry. In addition, a combination of the musical cultural heritage, multiethnic impulses, and a limited domestic market, has spurred internationalization. With this breeding-ground, Stockholm appears to have evolved as the dominating cluster for the segments of the Swedish music industry we have studied. According to the respondents, Stockholm is the only real alternative for agents wanting to succeed in the Swedish music industry.

### *Proximity and linkages*

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<sup>25</sup> This is also claimed to be the case for Ireland (Clancy and Twomey, 1997).

First of all, the so-called *major* record companies – Sony Corporation (Japan), Bertelsmann AC (Germany), Time-Warner Inc. (U.S.), The Seagram Company Ltd. (Canada) and the EMI Group Plc. (Britain) – are all represented in Stockholm. These companies hold about 80 per cent of the world market and about the same part of the Swedish market. Their representatives in Stockholm are thus particularly important, since they constitute important links to both the Swedish and the international market.

Second, the Stockholm dominance in the music industry is related to the strong dependence on a close co-operation with the media. Most Swedish and international newspapers are represented in Stockholm, and the proximity to TV and radio is also important. The music television channels Z-TV and MTV are based in Stockholm, as well as the major, many of them nation-wide, radio stations. Music videos are also important for launching artists and the central video producers/companies are located in Stockholm.

In fact, Stockholm displays several essential characteristics for the emergence of a cluster. It is sufficiently small for a high degree of connectivity, “everybody knows everybody”, which earlier studies have also shown to be a requirement for successful, more culturally oriented, clusters (Hirsch 1972, Negus 1993, Scott 1999). At the same time, it is sufficiently large to gather the agents of importance for the existence and the development of the cluster. This means that important cluster agents know that they are likely to be working together on several occasions and they know the relevant agents within the cluster. Since the network is geographically limited and does not contain too large a number of agents, rumors spread quickly and *reputational capital* (Scherer 1986) is important in this industry.

One reason why “everybody knows everybody” is that the respective agents often hold many and various roles and positions within the cluster. For example, according to the interviewees, it is common for an individual to teach part time at a musical senior high school

and/or at an academy of music, and then also be a professional musician. Furthermore, it is not unusual for someone to work at a record company in daytime and compose/produce music in his own studio in his spare time. There are no clear borders between the formal and the informal, between the private and the public/professional or between friend, colleague and competitor. This helps create an open atmosphere, where proximity fosters great trust between agents. Despite stiff competition between firms, they thus help and inform each other about ongoing projects. These are typical characteristics of dynamic clusters – competition and co-operation are said to be the driving forces of development (Saxenian 1994).

Most of the important educational institutions are also found in Stockholm and there is a tendency for these to profile themselves by focusing on different niches. The two principal musical senior high schools, Södra Latin and Rytmus, have consciously created a certain profile. Södra Latin has mainly focused its musical program on jazz and classical music, even if there is also pop and rock. Rytmus has created its profile by mainly devoting itself to modern music, rock, soul, etc. The Royal College of Music, Stockholm (KMH) has a tradition in classical music, but has also opened up to other trends such as jazz, Afro-American, etc., even if the pop and rock culture is generally weak at KMH.

### **Cluster dynamics and diffusion of knowledge**

As compared to, for example, the U.S. and the UK, the music cluster in Stockholm is said to be characterized by openness and lack of prestige. International agents are often surprised that agents are so easily accessible. Getting in touch with a celebrity composer/producer is no

problem.<sup>26</sup> In the U.S. or UK, it is virtually impossible to have personal contact with such “superstars”.

Another example of lack of prestige is the informal situation claimed to exist in studio work. Stockholm is not characterized by such clear-cut hierarchies as the U.S., where the work is often carried out in very large studios, each agent having a specific place in the production. In Stockholm, the situation is very informal, the individual with the best knowledge for certain tasks gets to do that particular job (a spontaneous best practice organization), even if she is not formally trained for that task or even connected to the project. There is, for example, nothing to prevent a musician from helping out with the production or a studio technician from making a musical contribution when there is a recording. International agents are often surprised when they experience the informal atmosphere in the Stockholm 12 square meters studios, where world-wide hits are created.<sup>27</sup>

As has been mentioned, the diffusion of knowledge partly takes place through individual movements between different parts of the cluster. There is always an intensive interaction between composers/producers and record companies, there is a strong interdependency between these two groups of agents. Knowledge of what takes place in the Stockholm music industry does, for example, spread to educational institutions through teachers also working as professional musicians. Teachers also move between educational institutes and commercial activities. At the educational institutions, knowledge is, naturally, transmitted through the interaction between teacher and pupil, but also from pupil to pupil.<sup>28</sup> Learning is partly characterized by tacitness, and transmitted through the interaction among individuals. Teaching

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<sup>26</sup> An example is Max Martin (Martin Sandberg), one of the most successful Swedish agents. He has composed/produced music for artists such as Britney Spears and Backstreet Boys.

<sup>27</sup> At the same time, Stockholm is naturally not exempt from intrigues, rivalry and conflicts among agents. This is, however, considered to be less widespread than in many other places.

<sup>28</sup> See, for example, Maskell et al (1998) and Maskell and Malmberg (1999) for a description of local mechanisms for the diffusion of knowledge.

and the creation of knowledge are thus developed at a local level, even though the impulses might be international.

In the last decade, the Stockholm cluster has also created an increasing number of contact areas with the international music industry. Obviously, it is very difficult to point to the exact contribution of the respective agent in the cluster, but it seems as if the music houses have been particularly successful. It is mainly music houses that have conveyed Swedish music to the international market, and most international contact areas seem to be found here. One respondent goes so far as to claim that music houses constitute the Swedish “music miracle”.

An example of the impact of music houses is the so-called “co-writing” activities. Music houses match their own composers/producers with corresponding agents in other countries. These form “song-writing teams” with the task of composing and producing music for various artists. Another task for music houses is to “pitch” songs for international artists. The international artists’ record companies send out a query to some hundred music houses (naturally, the number varies depending on the artist, the record company, etc.) for material for an artist’s new CD. The music houses immediately put a number of composers/producers to this task. The results are then sent to the artist’s record company which – together with the artist – finally decides what songs will be included on the CD.

This trend towards more international contacts has also contributed to a more professional Swedish music industry. This is mirrored by the “fragmentation”, or vertical specialization, that has been a conspicuous feature of the changing organization of the industry in the last 10 to 15 years. Services which were earlier found within one large firm have resulted in spin-offs and outsourcing, which more generally reflects how the international music industry has been

restructured (Hesmondhalgh 1996, Scott 1999).<sup>29</sup> But there has also been a change in the sense that more people with an academic degree are now hired by record companies and more attention is also paid to marketing. In the past, many records were released by the record companies more or less on speculation. The business was more characterized by intuition and chance. Today, this is combined with extensive marketing knowledge before a record is released.<sup>30</sup>

The interviewees also indicate that composers/producers have become better at combining artistic integrity and entrepreneurship. When the contradiction between these can be bridged, the result is often particularly successful. It seems that several agents have succeeded in this, while at the same time creating a niche for a certain style of music.<sup>31</sup>

#### *Degree of competition*

Above we mentioned the dichotomy competition/co-operation as a function of the informal character of the cluster. Firms are exposed to competition at both the international and the national level. Competition is fierce when composing/producing music for an international well-known artist. It is of no importance whether this is done in Sweden or in the UK, in France or U.S.; there is competition with each agent on the international market.

As regards production, the majority of the respondents claim geographical distance to be of no major importance. The same musical production can be carried out in parallel in two places in the world or more, by sending the music as sound files on the Internet. In other words, even if learning is local and concentrated to clusters, once the production phase has been entered, it can

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<sup>29</sup> Note that there is an interesting parallel to other industries, e.g. the pharmaceutical industry where “big pharma” (the large companies) co-exist and complement smaller – often “drug discovery” – firms.

<sup>30</sup> Another sign is the increased use of artist and repertoire (A&R) staff by record companies, responsible for the image, activities and career development of the artist. A&R is claimed to correspond to R&D in other industries (Clancy and Twomey, 1997).

<sup>31</sup> In particular, this seems to be the case with Maratone, The Location and A-Side (ex-members of Cheiron) as well as composers and producers connected to, for example, the music houses Murlyn Songs AB and Tom Bone Music.

be decentralized and spread to other regions. At the local level, competition varies between being intensive around new contacts and productions to turning into co-operation when an agent has appeared as a winner in a major project.

Other parts of the music industry work under different conditions. Music for advertisements is usually targeted at a specific market in a region, city or country. It is common practice for the advertising agency to contact a local composer/producer for the music to be used in the advertising film. In particular, this is due to the fact that different markets appreciate different kinds of music, depending on the underlying culture. Competition is thus mainly local.

Competition has also opened a window of opportunity for less established Swedish composers/producers at the national level. The major Swedish composers choose to sell their productions where they can maximize their revenue, i.e. on the international market, which has created a tendency to a “lack of songs” for Swedish artists. There is thus room for less established Swedish song-writers to enter and possibly establish a position on the Swedish market.

To summarize this section, we have identified the presence of pecuniary linkages related to suppliers (backward linkages) and customers (forward linkages), as well as non-pecuniary linkages (knowledge spillovers), which have played a vital role in strengthening and expanding the Stockholm music cluster. This is also what is predicted by economic models of clusters and agglomeration. Compared to for instance Ireland, the support structure seems considerably stronger in the Swedish case (Clancy and Twomey, 1997). Moreover, the story outlined above confirms the old saying of “success breeding success”, attracting entrance of new agents to the cluster.

The Swedish “superstars” serve as role models for a new and younger generation of entrants on the Swedish music market. The respondents testify to having been very inspired themselves by the international success of Swedish artists and composers/producers in the last

few years. This success has also made it easier for Swedish record companies to sell Swedish artists abroad. Both record companies and composers/producers confirm that the success has created an increased international interest in Swedish music. Self-confidence characterizes the music industry, and will most likely further increase the success by the blossoming up of previously less established agents. This also supports a generic development, path-dependence, often characterizing dynamic clusters.

#### 6. Future prospects for regional music clusters

The “new economy” proponents in the 1990s no doubt exaggerated the extent to which the breakthroughs in the information- and communication technologies (ICT) could be expected to reshape the ways economies works. Still, certain sectors and industries are likely to be more influenced by the ICT progress than other industries. In particular, information- or “weightless” goods, i.e. goods where Internet provides a new channel to market and sell goods (and even partly produce goods), belongs to these industries (Quah 1999, Varian 2000). Music goes a long way in fulfilling these requirements. As a consequence, repercussions could be expected that relate to market structure, industrial organization and location.

Information good – such as music – are characterized by asymmetries implying that the buyer cannot tell whether a good corresponds to expectations (preferences) before the good is consumed. If the consumer has access to the good without paying for it, this may considerably reduce revenues for music selling firms. First, because free access in general reduces the willingness to pay for a good even though preferences for owning a record has been reported high (Frostly-Henningson and Jacobson, 2003). Second, the potential customer may after listening to the record decide that it did not live up to expectations and therefore abstain from buying the

record. Irrespective of the welfare gain for the individual – which of course is significant – this will cause problem for the music industry in terms of declining demand and low willingness to pay.

Even though some claim that piracy and free downloading of music may have a beneficial effect on total demand through “information” externalities, empirical evidence point in a different direction (Hui and Png, 2003). Furthermore, in a recent study involving a total of 1150 student at a Swedish and a U.S. university, it was found that the overwhelming majority of students downloaded music regularly.<sup>32</sup> About 25 percent of the students had more than 1000 music files on their computers. More interesting is that only four percent of the Swedish students and seven percent of the U.S. students reported that their purchase of music had increased as a consequence of downloading. Moreover, even though 50 and 60 percent of the students in Sweden and the U.S., respectively, claimed that they were prepared to pay for downloading, but only at prices considerably lower than current market prices. For newly released music, the revealed prices were in the range of .30 to .80 US\$, while older music (six months and older) was valued between .15 to .30 US\$.<sup>33</sup> Compared to prices in stores – normally in the range 10 to 20 US\$ - the concerns of the record selling business is easily understood.<sup>34</sup>

The potential threat that the record companies foresee have also been realized in terms of staggering demand, shrinking sales and lower profits even though recent reports from the companies indicate a leveling out during the first six months of 2001. As a response to

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<sup>32</sup> Gallaway and Kinnear (2001) and Helmer (2003).

<sup>33</sup> Preferences seem to be in line with the price iTunes (Apple) – which has about 70 percent of the market - charge for downloading music, i.e. .99 US\$. Competition is however increasing; Loudeye (works with Microsoft), MusicMatch, Napster and Real Networks are other actors. Still, even though iTunes is limited in geographical scope, only 14 millions songs were downloaded in a year as compared with free access website Kaaza from which 700 millions songs were downloaded. Total on-line sales is estimated to one percent of the market, but expected to increase to 20-25 percent in four to five years (Financial Times, October 16, 2003).

<sup>34</sup> Music industry is estimated to have lost about 3.4 billion US\$ due to illegal copying in 2002. The major record producing companies are therefore involved in restructuring, vertical integration, introducing online sales through various means, etc. (Financial Times, June 6, 2003).

downloading, a number of legal procedures have been initiated, so far with mixed success. In addition, a restructuring of the market can be discerned. The major record companies aim at integrating, or form alliances with, downloading operators. Simultaneously steps towards increased collaboration and mergers have been taken. So far Sony and Bertelsman have agreed on a joint venture (Sony BMG Music Entertainment), while EMI has expressed interest in acquiring or forming some kind of strategic alliance with Warner music. Thus, there are obvious tendencies towards an even stronger concentration among the record companies; the “major five” – which have dominated the market since the 1920s – are now reduced to a “major four” and may soon shrink to a “major three”. What that implies for the market, or the independent record companies, is at present hard to assess. The increased concentration does not necessarily imply tougher entry barriers, or higher prices, since Internet tend to mitigate such tendencies. Prices on CDs have declined about 20 percent since 2000.<sup>35</sup> Rather these moves are made to secure sufficient scale in the operations of the record companies. These mergers discussions occur simultaneously as firms try to cut costs by shedding labor and new firms enter the market, offering differentiated distribution means and new types of customer contracts. There seems to be a search for a new, or at least altered, business model somewhat similar to what happened to the film industry when the videotape recorder was launched.

## 7. Conclusions

Stockholm has established itself as an internationally leading cluster for composing and producing music in a relatively short period of time. Despite the recent emergence of the cluster, the success of today builds on an accumulation of knowledge which can be traced several decades

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<sup>35</sup> According to Financial Times, October 16, 2003.

back. There is a strong music tradition comprising folk music, choir-singing but also more popular music in Sweden, which has, to some extent, been reinforced by the activities in the municipal school of music.<sup>36</sup>

Yet, other mechanisms have been instrumental in visualizing those opportunities to the economic agents – the entrepreneurs – that have led to a commercial exploitation in this line of business. Still, rather than pinpointing one or two specific factors, the results suggest that a number of different factors – where some have developed over a long period of time – interacted in time and space to create the Stockholm music cluster. The most prominent among these were a broad basis of knowledge, including interdependency with related technologies, language skills, international exposure and role models.

Once a critical mass had been attained, well-known centripetal forces were set in motion to strengthen and expand the Stockholm music cluster. Key actors in music clusters started to co-locate in Stockholm. The five major international record companies are all represented in Stockholm and constitute important channels to both the Swedish and the international music market. Also international and nation-wide media firms have gathered in Stockholm. Close contacts with these are a necessary, though not sufficient, condition for success in the music industry. Moreover, the most important video producers/video production companies have representatives in Stockholm.

The music cluster in Stockholm thus shows many typical characteristics of dynamic clusters: the ability for renewal, a large inflow of new agents, market experiments, and strong linkages between demanding customers and advanced producers of music. Together with strong international and national competition, paired with co-operation, as well as close and informal contacts, this has served to shape the cognitive dimension of the cluster. The music industry (as

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<sup>36</sup> For example, about 175,000 adult education music circles are formed each year.

well as other kinds of cultural business) seems to be good at integrating and using the competence and resources of immigrants, which creates new impulses and serves as a driving force for the development within the cluster. The findings also correspond to previous conclusions as regards the embeddedness of industrial production into a social and institutional context, trust being one important component (Lee and Willis 1997, Autio and Yli-Renko 1998, Barnes and Gertler 1999).

But there is also a distinct economic dimension to it. ABBA's success since the 1970s seems to constitute a kind of "*igniting spark*" in this process, followed by "superstars" as Roxette, Ace of Base and Cardigans.<sup>37</sup> This created a basis for the emergence of the Swedish music cluster, artistically as well as economically. The possibility to transfer ownership and income to corporations registered outside Sweden has contributed to strong private economic incentives to invest in – and enter – the music industry. Considering that the 25 top producer and composer companies in Sweden made a profit of more than 60 percent in relation turnover, there are obvious economic incentives to enter into the music industry.<sup>38</sup> Rewards of some magnitude are necessary for the exploitation of future opportunities and continued successful entrepreneurship in the music industry.<sup>39</sup> But that refers more generally to economic policies conducted within a country and should not warrant any specific incentives for the music industry.

In terms of the institutional and organizational dimension, firms and individuals began to co-locate as a critical mass could be observed and due to the localized nature of knowledge and learning. Thus, the Stockholm music cluster entered a phase of endogenous agglomeration and growth. At the same time, specialization increased, which was followed by a vertical

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<sup>37</sup> Mr Stig Andersson played a vital role for Abba's commercial success. Later on he initiated the well known Polar prize, also referred as the "Nobel" prize in music.

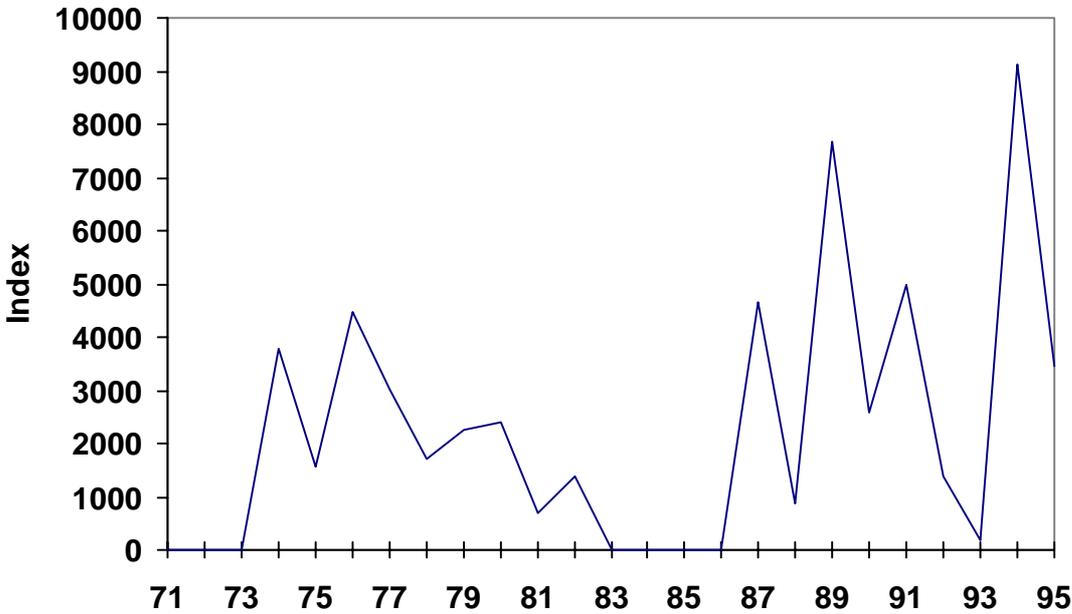
<sup>38</sup> *Veckans Affärer* (2003). The distribution is quite skewed within the group of 25 companies. One firm accounts for 26 per cent of turnover and 39 per cent of profits.

<sup>39</sup> The failure rate is much higher in the music industry than in most other industries (Negus 1992).

disintegration in the music industry. Many agents (educational institutions, composers/song-writers and record companies) seem to have developed different niches in one way or another. The initial ability of the Stockholm music cluster to produce new and successful music groups have shifted towards more technology intensive and competence demanding segments (production and composing).

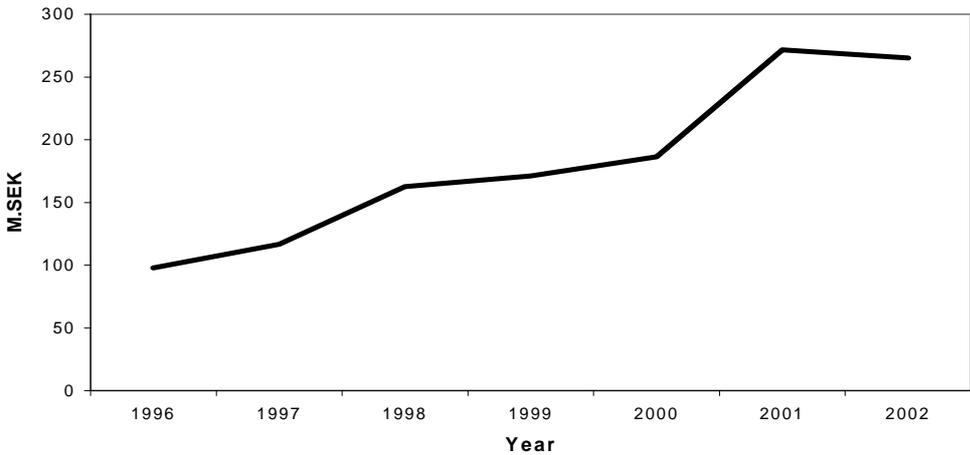
Still, there are also a few factors threatening the future role of the Stockholm music cluster. First of all, the strong international exposure of the industry makes it possible for successful and established agents to relatively easily reallocate their activities to other countries if the Swedish conditions were to deteriorate. The inter-country/region comparison revealed that there are competing location sites for agents in the Swedish music industry. In particular, this applies to “superstars” that are important for the long-term survival of the cluster. They remain in Sweden partly because they have the possibility to redirect their income and taxes to other countries. This should also be seen in the light of the positive inter-industry externalities that may stem from cultural clusters and positively influence location of other industries (Durkan, 1994). Second, the future supply of knowledge seems uncertain. The exact extent of this problem cannot be determined on basis of the material, but the majority of respondents have expressed some fear that competence is being weakened.

**Figure 1. The Swedish music miracle. Ranking of Swedish pop-groups at Billboards Top Pop Singles list 1971–95**



Source: Billboard Top Pop Singles 1955–96 (Forss, 1999).

**Figure 2. Swedish music-royalty revenues from abroad, 1996–2002, Million SEK**



Source: Stim 1997–2002.

**Table 1. Global revenue for music houses, by country, 1994**

<b>Country</b>	<b>Revenue music houses (million US\$)</b>	<b>Revenue per capita</b>
USA	1 206	4.6
Japan	896	7.2
Germany	851	10.4
France	625	10.6
UK	489	8.5
Sweden	97	11.1
Rest of the World	1 605	–
<b>Total</b>	<b>5 769</b>	

Source: UNESCO 1998, STIM annual report 1994, OECD.

**Table 2. Total number of firms in the music cluster distributed on different industries and regions/countries, and total employment in the music cluster**

Nace	Industry	U.S.1 (2001)	U.S.2 (2001)	Dk (1999)	Fin (1999)	Nor (1999)	Swe (1999)	Ire (2001)
<b>Music creation</b>								
92310	Performing artists (music)	31	67	219	1 041	301	9 884	n.a.
<b>Publishers</b>								
22140	Publishers Music	4	5	244	313	57	1171	20
22150	Other sound publishers	n.a.	-	417	-	127	647	
22310	Reproduction of sound recording	19	37	39	47	16	57	34
24650	Prepared unrecorded media	n.a.	-	7	5	3	42	10
<b>Distribution</b>								
51433	Wholesale (CD, tapes)	135	246	107	49	45	207	n.a.
52453	Stores for records, videotapes	97	105	158	-	251	507	n.a.
52454	Stores music, instruments	44	9	196	256	89	412	n.a.
92320	Theatres, concert halls	22	54	416	151	148	800	n.a.
<b>Musical instrument manufacturing</b>								
36300	Music instruments	13	11	115	56	7	155	7
	Other	n.a.	n.a.	n.a.	225	132	719	n.a.
Total no. of firms, music cluster		365	616	1 918	2 143	1 177	14 610	291
% of total firms		.48	.60	.83	.97	.49	2.83	.20
Total employment, music cluster		4 502	5 948	5 429	3 108	9 125	15 264	8 101
% of total employment		.33	.38	.32	.16	.44	.42	.60

Source: Carlsson (2004), Census of Industrial Production (2001), Hallencruetz et al. (2002), Music board of Ireland (2002), OECD (2004), Statistics Sweden and own calculations.

Note: U.S.1 stands for Cleveland metropolitan area, U.S.2 for the Seattle metropolitan area, while DK represents Denmark, Fin refers to Finland, Nor to Norway, Swe to Sweden, and, finally, Ire represents Ireland.

For Ireland the numbers of firms in industry 22310 also includes 22320 and 22330, whereas 24650 also includes data for industries 24640 and 24700. Moreover, total employment figure and the share of employment in the music industry refer to year 2000.

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