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Introduction

Singapore's commitment to knowledge-based economy (KBE) development in the past decade has enabled it to make a rapid and successful transition to a newly industrialized economy. Having invested heavily in ICT, the Singapore government is now keen to use content and creativity to enter the next wave of development.

The film industry is chosen as a microcosm level of analysis to examine the creative economy as the latest phase in Singapore's current economic development, especially when technology and information are used to navigate and mediate its people, resources and capital.

The objective of this research is to examine the types of competencies that enable firms to stay competitive in the contemporary knowledge-based economy in the light of technological advancement made in the industry. Examining the types of resources, especially the intangible ones that enable the film industry to thrive, develops our understanding of the complexity of this industry at a time when digital technology is leading to a period of great change in it.

It also seeks to examine the extent to which digitalization contributes to the growth and expansion of the Singapore film and animation industry and whether the film and animation industry can leverage on digitalization to bring about competitive advantage. The analysis is based on surveys and interviews conducted on the local film and animation producers in the industry.

Singapore was chosen as the subject of the analysis for two reasons. First, a great deal of government attention is currently being directed to the film industry there. Film now represents an emerging industry in Singapore. From 1995 to 1999, an average of less than four local films was produced per year. Singapore aims to build a sustainable industry producing 10 to 15 films per annum in three to five years. This evokes comparisons with the 'golden age of cinema' in the 1950s and 1960s, when the combined average annual output for Malay films was about 18 features.

Second, the Singaporean government, responding to global developments, has recognised that creative industries, including the motion picture, television and digital media production industries are becoming powerful engines of economic growth. In recent years, efforts have been made to exploit the economic benefits of culture. Film is one of the contenders in the new era as Singapore seeks to rebrand its image from a conservative society to a 'new Asian creative hub' (ERC Report, September 2002, p.8).

This study shows how the film industry in Singapore is transforming. Singaporean film remains marginal in the global circuit of film production and distribution. Can it rise to become more recognised while delivering economic returns on creative investment?

Digitalization and the Global Film Industry

The growth of cultural consumption in the area of art, fashion, music, film and its related industries has become more visible (Zukin 1995: 1-2). In recent years, these cultural products sectors are estimated to account for more than 7% of the world's GDP and forecasted to grow on average, by 10% a year (UNCTAD, 2004).

The emerging importance of cultural industries is most evident in the Asia Pacific countries where the rise in production and consumption of Asian cultural products is evidenced in the emergence and size of the film and animation industries such as Bollywood, the HK and Korean film industries, Japanese manga and anime productions, the animation and digital media industry (Kong, 2005).

In recent years, these cultural products are seen as a worthwhile investment in public policy and strategies have been generated by governments to develop them as part of a national innovation strategy. Spearheading the list is the United Kingdom, followed by Canada, Australia, New Zealand, Taiwan, Korea, Hong Kong and Singapore.

The Singapore Film Industry

Singapore had a 'golden age of cinema' in the 50s and 60s especially in Malay films (Uhde & Udhe, 2000). The next twenty years saw the Singapore government focusing on economic development and the challenge of changing the country's status from a developing country to that of a newly industrialized one. As a result, filmmaking industry was at its lowest level in the 70s and 80s. An unprecedented growth in cinemas in the form of multiplexes (Uhde & Uhde, 2000) and the establishment of Picture House (a cinema that screens art house movies) to provide a mix of art house and commercial movies has made feasible the establishment of a domestic film production industry in the 1990s. The Government identified filmmaking as a service industry and a potential economic growth area.

In response to the rapidly growing film industry in Singapore, the Singapore Film Commission (SFC) and the Media Development Authority (MDA) were set up to develop Singapore into a vibrant global media city as well as a creative economy.

The MDA set aside S\$25 million for film development in Singapore to help the local film industry grow and is targeting about 15 to 20 locally produced films annually (Singapore Film Commission e-Bulletin, 2003).

MDA together with the Infocomm Development Authority of Singapore (IDA) are taking the lead to develop the film industry and to stake Singapore's position as an early-mover in the digital space. For instance, the establishment of Lucas Film Animation Singapore since 2004 is not only a great boost to the local digital animation sector but will help to raise Singapore's profile in this industry in the global arena. This will impact on the film industry in the long run. The studio in Singapore is Lucasfilm (USA)'s first outside of California and Singapore's first digital animation studio by an Oscar-award winning company. The studio is expected to hire up to 300 animators and will produce digital content for films, television and games for the global audience.

Film production reached a steady pace of producing an average of five feature films a year in the early 2000s. However, this is not yet the critical mass required for the industry to grow (Millet, 2006).

Research Scope and Focus

The research aims to examine the types of resources, especially the intangible ones that enable the film industry to thrive. The study adopts a knowledge-based perspective and argues that tacit knowledge often forms the basis of dynamic capabilities.

This study seeks to contribute to a growing knowledge of the resurging yet fragmented film and animation industry in Singapore. Although there is much written about the historical development of films and cinema in Singapore (Uhde & Uhde, 2000; Millet, 2006), there is not much discussion and study given to the management and business side of such firms in Singapore.

An insight into the film industry will facilitate our understanding of the creative industries as an emergent, innovative part of the services sector of the economy and not just another business (Cunningham & Potts, 2007). It is about a process of organising creativity and managing creatively (Bilton, 2007). This is where institutional factors such as policies and legislation can impact on the business of creativity in the film industry.

While the subject matter did not require the use of a methodology that leads to generalisable and quantifiable outcomes, three main tools were used to produce

meaningful research outcomes from qualitative research, namely:

1. In-depth interviews with major film production houses as well government representatives
2. An online questionnaire (ANU Apollo) with a mix of closed and open-ended questions
3. Secondary data collection of published commentary and analysis linked to the production houses and film industry in Singapore. Sources include archival material, such as newspapers (online), press releases from government agencies and ministries, trade magazines, book publications, web sites of production houses and relevant agencies and institutions in Singapore.

The research adopted a qualitative multiple-case study approach (Yin, 2003) with cross- case comparisons involving 10 full feature film producers, 2 independent film producers and 12 producers involved in animation and special effects. To get a deeper and clearer understanding of this emerging industry in Singapore, interviews were also conducted with government agencies involved with media and film development, the Director of Singapore Film Commission, cinema distributor and operator, a short film distributor, a technology supplier, commercial media training institution, a government training institution, an independent arts centre and a government arts centre (see Appendix 1 for profiles of interviewees).

Literature Review

The changing technological environment means that firms have to constantly reinvent themselves in order to survive and prosper. To stay ahead of competition, firms have to strategically manage their resources and competencies (Zack, 1999), such as tacit knowledge and artist networks, which are at the heart of how creative industries work (Lampel, et al., 2005). The significant relationship between technology and competencies has been noted by Tushman and Anderson (1986, p. 442), who argue that ‘major technological shifts can be classified as competence destroying or competence enhancing because they either destroy or enhance the competence of existing firms in an industry’.

As the new economy becomes a services society where knowledge and information are the main focus of economic growth, the importance of intangible resources will come increasingly to the forefront (Canals, 2000). These intangible resources are mainly tacit in nature and are knowledge-based. They play a key role in the knowledge-based economy as they draw on innovation, creativity, flexibility and responsiveness, qualities indicative of the cultural and creative industries (O’Connor, 2006). Teece (2000) suggests that a firm’s superior performance depends on its ability to defend and use the intangible assets it creates (e.g., knowledge). Hitt et al. (1998, p. 14) argue that ‘intangible resources

are more likely than tangible resources to produce a competitive advantage.’

Like many other sectors in the creative industries, the corporate form of the film industry is characterised by a flexible, network-like structure and a contractual and transactional model of production (Storper & Christopherson, 1987). Such project-based work often involves complex, non-routine and collaborative efforts of diversely skilled individuals (DeFillippi & Arthur, 1998). The volatile, dynamic and risk-taking nature of the industries often results in intensive social networking activities among the skilled creative workers (Scott, 2004).

Various researchers have articulated the value of intensive social networking or multiple social networks. According to Bilton (2007), networks of organisations, groups and individuals have become the dominant form of production and the shift is towards social and organisational frameworks through which individuals are connected. Curtin (2003) concurs that the emergence of global media capitals such as Hong Kong and Chicago is influenced by a web of relations that exist at the local, regional and global levels. This is further substantiated in Kong’s work on the Hong Kong film industry. This suggests that multiple social networks and relationships help to facilitate the work of Hong Kong producers and directors (Kong, 2005).

Data Analysis and Discussion

The following respondents representing a broad spectrum of producers in the industry, ranging from independent filmmakers to animation and full feature filmmakers, concurred that reputation, experience and creativity are essential in creating a good product—in this case, a good story for filmmaking:

The reputation of a person helps a lot in the sense that you already have a good product to show. Any new entrants to the industry would know that the first few years are about establishing your reputation by creating a good product. If you have the commitment to learn and give, it will drive you further. - FF3

Filmmaking is solely based on tacit knowledge in that because as a producer if you want to hire someone to be involved in that department and because it is so expensive, you cannot risk not hiring an experienced person. It is not one area of budget you want to save on. – IF1

Personally, I am with the old school of thought that believes that all hinges on the great story, the telling and the creativity of the talents—very human aspects. It is a kind of inexplicable magic. – AF3

From the data, intangible competencies such as creativity, judgement, experience and reputation represent the creative inputs that are seen as crucial in creating a good product in the film industry. The following sections highlight the nature and role of reputation, experience and creativity. Reference is also made of the advent of digital technologies in the film industry and whether such a development will affect the competencies of the production houses, thereby affecting their competitive edge.

Reputation

In the filmmaking industry, reputation is fundamental to the success of a film. Many respondents stated that reputation is an important resource for production houses in the film industry. One feature film producer said, ‘You are as good as your last work, your last film, and that is the benchmark people in the industry judge you by’. This person continued:

This industry revolves around people, and you are judged by your end products. You are as good as your last work, your last film. Definitely reputation and successes lead to clout effects like Stephen Spielberg and Coppola. Star power is therefore the appealing factor because one has the reputation. If you have a reputation, people would watch out for your products. – FFA2

Reputation is associated with having a good track record in terms of quality films produced. Many interviewees acknowledged that the reputation of a person helps a lot in the sense that they already have a good product to show. They added that it is not uncommon for new entrants to the industry to spend the first few years establishing their reputation by creating a good product:

The reputation of a person helps a lot in the sense that you already have a good product to show. Any new entrants to the industry would know that the first few years are about establishing your reputation by creating a good product. - AF6

Having a good reputation carries a lot of weight in attracting good people to the industry and, in many instances, securing funding for the production houses. Therefore, reputation is linked to a good product either in the form of a good script and/or a good director, producer or well-known actor:

We do live action and animation. If you have a known cast in live action shows, that is one way of promoting the show. For example, *Shrek*—you have Eddy Murphy as a donkey! Therefore, in live action shows, a good

actor does gives lots of weight, and that is what draws the audience and the finances. – AF2

The data suggests that reputation can be a major factor in gaining competitive advantage. It fortifies the firm's position in that competitors have difficulty matching the kind of fame and esteem created by a good reputation. Reputation is seen as a brand building exercise as well as a marketing tool. In many instances, the interviewees acknowledged that reputation is earned through one's good works and track records, which are difficult to imitate and substitute.

Experience

Experience is seen as knowledge gained through life observations. It is based on different perspectives and learning that are the result of collaboration with different industry partners. The respondents regard experience as a form of investment gained not through textbook knowledge but by paying one's dues with the passage of time and efforts put into the industry. This kind of competence, which is often tacit in nature and more readily transferred through knowledge-bearers—namely, people (Johnson & Lundvall, 2001) in the industry—cannot be easily codified or duplicated. It represents a specific type of knowledge competency within what Lundvall (2001) defines as the learning economy, which is a characteristic of work in modern societies.

In the Hollywood and Australian film industry, there is a term known as 'paying your dues', meaning putting in the time it takes to get better. In Singapore, many do not want to pay the due but want to get as far as possible in the shortest time possible. - Government Training Institution

The respondents also stressed that much of their content development was based on trial and error, gauging what worked and what did not work. Writing, filming and editing skills were continuously refined on the job. They depended on the innovative trait of interactive learning by doing, of learning how to create digital media content by creating it. The idea of learning is also associated with sharing information, which is highly lacking in the industry:

From branding to animation, a lot is based on on-the-job learning and learning from trial and error. – FF1

The data suggests that experience in the film industry is acquired and manifested in many ways—through tacit knowledge gained on the job, learning through trial and error and collaborations, commitment to a project, a track record and the portfolio of individuals. There is a clear link between experience, knowledge, learning and collaboration. Many producers indicated that collaboration is the way forward for the small industry and market in Singapore.

Creativity

Creativity, as seen through the eyes of the interviewees, can be viewed from many angles and manifested in different ways. One producer defined creativity as having the courage to follow one's instincts—something subjective, spontaneous and even arbitrary. It is deemed an essential ingredient for a good product—in this case, a good story or script—to emerge.

In a recent project organised by Moving Image of Substation, three independent filmmakers from Singapore and Malaysia were asked to take a train out somewhere and to make a film within three hours. The three Malaysian filmmakers utilised the time given and maximised the idea fully and came out with quite good stories. The three Singaporean filmmakers, however, did not maximise the ideas and came out with stories that do not require them to think out of the box. – Independent Arts Centre.

One producer cautioned against institutionalising creativity such that it would be an 'instant tree syndrome' that would be detrimental to the industry in the long run. It takes time to nurture and hone such competence.

The industry can only succeed if it is accorded the time to grow—about 10 to 15 years. It cannot be an instant tree syndrome. The fear is that if institutionalising creativity becomes an instant tree syndrome, then the tree would be cut off if it does not have any gains. It has to be a long-term thing. - FFA4

Although many interviewees see creativity as an individualised process, they acknowledged the role played by the firm and external stimuli such as the environment, Internet and mass media in encouraging creative ideas to flow. Data from the online questionnaire indicated that 65 per cent (23 out of 35) of the interviewees strongly suggested that creative ideas originated from within the firm through informal gatherings such as brainstorming and discussions and through environments that encouraged communication and creative ideas to flow. About 75 per cent (26 out of 35) also strongly supported the idea that creative ideas are sourced from outside the firm from different media such as newspapers, television, books and the Internet. A constant flux of learning takes place both within and outside the firm:

It is notable that one respondent sees creativity as a competitive element in the industry, now much more than before. Clients will seek out creative persons, who are usually the most mobile:

Creativity is a competitive thing. When I first started, it was very different. The industry was not so much creative as it was more technical. But I was always trying to outdo the other guys inside. I either work faster or do something cleverer and do something more interesting with the machine. There was always this internal competition because you want to be talked

of and be the one that the clients are fighting for. Generally the people who compete are the ones who ended up going on somewhere else. – FFA9

The data suggests that creativity can be nurtured and honed and often thrives in environments where there is freedom and space to unleash creative ideas. At the firm level, this competence can be influenced by external and internal structures. At the industry level, external stimuli, such as the environment, Internet and the mass media, can stimulate creative ideas.

Digital Technology and Film/Animation Industry

According to the producers in the industry, the main digital technology used in filmmaking is high definition (HD) and the MAYA graphic software is used in animation production. HD is a cost effective alternative to film that can deliver images of equal calibre and visual impact. When producers shoot on HD instead of 35mm film, the cost difference can be dramatic, with savings as much as 50 percent - on film stock, lab processing, and film prints, among other expenses.

The use of digital technology allows for more experimentation with films, which were never possible with the use of films. Digital technology has led to a democratization of films in the sense that more films are now accessible and there are more opportunities to make more films and more content.

Digitalization has led to a democratization of films in the sense that more films are now accessible and there are more opportunities to make more films and more content. – FF3

The empirical evidence provides a glimpse of how the key production firms in the film and animation industry develop and use capabilities and competencies, in particular how digital technology would impact on these capabilities and competencies. The data shows a consistent thread running through as to what form the core resources and competencies of this industry.

You can teach someone how to use the software but how to turn this software into something beautiful is dependent on your creativity. - FF 1

Digitalization can help open slits at the entrance to the film industry but talents and experience will be essential to keep one successful in the industry. - Cinema Operator

The interview study unveils that more and more common platforms will exist, each offering most if not all types of communication products. The most significant will be digital television and the Internet. Digital broadcasting and on-line services offer new opportunities for producers to serve consumers needs in diverse new ways; interactive, pay-per-view, etc. Digitalization will lead to new distribution possibilities, often at lower cost. Apart from the production side, digitization also affects the distribution and business side of the industry.

The bulk of the growth that would really change is the distribution side. For digital distribution, there is no need to make prints. The cinema would project from a hard disc, which costs a fraction of the print – around US\$200 and you can reuse it for unlimited times. – FFA2

Digital technology also affects the supply chain in the sense that now movies can be screened simultaneously worldwide on the opening night. – AFM4

Technological development will also affect the production and post-production process such that it will facilitate the production of low budget content with higher production values, opening new opportunities for creativity and commercial performance. For example, from production to post production, the processes are altered such that it allows for more enabling and experimentation and has led to the democratization of films as more works were produced and created with lesser constraints. Many of these processes and interactions have a profound influence on the direction and final form of creative content innovation.

Digital technology provides new opportunities for growth and expansion in the film industry. In terms of execution - the shooting, post-production and delivery platforms have definitely made it easier in terms of workflows and creativity. Digital content brings with it a whole new experience and workflows. What it has done it to enable more works to be produced and created with lesser constraints. – FFA6

Although many of the producers acknowledged the positive impact of digital technology on the film industry, they recognised that good content creation is still the key to the success of making a good film in the industry. This has to do with the key issues about adding value through learnt skills and processes – including editing and script development, marketing, promoting and the business side of things.

Many of the producers see digital technology only as an enabler as it is the crafts of individuals that will make a good film. Therefore content of the script is always important and ultimately it depends on how the final product is integrated together. This finding concurred with the study conducted by Preston and Cawley (2004) on three Irish digital media companies, which similarly highlighted that content innovation, was not based primarily on standard scientific or technical knowledge. Much was dependent on human creativity and media-related skills (such as authoring and design, editorial) and tacit forms of knowledge (such as inspiration, knowledge, expertise and skills), which do not fit into an easily quantifiable frame (Preston and Cawley, 2004, p.11). Their studies also reveal that developing core competencies in the media industry was an on-going learning process based a lot on trial and error and dependent on the innovative trait of

interactive learning by doing, of learning how to create digital media content by creating it (Preston and Cawley, 2004, p.11).

Contributions of this Research

The findings seem to suggest that there is not enough understanding given to the creative process, which forms part of the social system. There is a lack of understanding that creativity is both a complex social process and an individual activity (Csikszentmihalyi, 1996). There is a greater need to focus on the wider cultural and aesthetic development of the city-state such that the whole complex system of institutions, agencies, markets and public are involved in the ecology of creativity.

Social capital development would become an important strategic factor for consideration in an industry characterised by complex organisations, large-scale informational flows and the challenge of the digital virtual world (such as the Internet) and other technological platforms. This is where social and cultural mindsets have to embrace individual creativity, diversity and community-led initiatives. This implies more consultation, research and thinking about the relationships between culture and innovation. It requires more emphasis on the arts and humanities as the drivers of cultural industries.

This study makes an important contribution to applied and theoretical research as it seeks to demonstrate how the film landscape in Singapore is shaped by multidimensional factors that will affect the way production houses are evaluated and improved over time. So far, few studies have examined the dynamism and complexity of the film business in Singapore, especially in the area of intangible competencies (reputation, experience and creativity), digital technology and the interaction of institutions, agencies, markets and the public.

From the firm perspective, a knowledge-based view of competencies is a useful paradigm for analysing firm performance. This research focuses on the role and nature of three knowledge-based competencies, such as reputation, experience and creativity. Its findings enrich the study of intangible competencies, which are a source of firm wealth and competitive advantage. It also provides a descriptive understanding of the context and setting of firm behaviour in the Singaporean industry. This allows for the generation of propositions that can be investigated in film industries elsewhere which are undergoing similar changes forged by high definition digital technologies.

This study also produces a series of practical recommendations that may be useful for policymakers and industry practitioners in managing the film and animation

industry in Singapore. For example, it finds that there is a need for greater autonomy in the creative field, where industry practitioners are given time and space to develop their ideas, knowledge and creativity. For policymakers, this argument may require a complete change of focus, where economic competitiveness is served by a liberal cultural policy rather than the conventional policy of building infrastructure, subsidising business research and development and supporting local spin-offs. The creative economy of Singapore has to be examined through a broad multidisciplinary perspective rather than a reductionist, engineering-based or systems approach.

The recent emergence of the Asian media capitals and the displacement of Hollywood as the dominant globalising force of the film industry mean that monitoring the strategies of the Asian film industry and other creative industries over time is critical.

Overall, this study provides a springboard for further in-depth studies into the unique characteristics of different sectors of the creative industries. These studies could be done in tandem with an international competitiveness analysis to show how Singapore compares with cities such as Bombay and Hong Kong. This would identify niche areas in the creative industries where Singapore could maximise returns from its developmental efforts.

Limitations

This study has presented findings in the areas of creativity, culture and polity in the Singaporean film landscape. In particular, it has examined intangible competencies, digital technology and government policies that impact on production houses in Singapore. While the scope of the study did not allow an examination of collaborations or social network relations, such topics could be examined in future research.

The interviews with respondents in key firms in the Singaporean film and animation industry provided sufficient confidence in the data collected. However, it would have been ideal to capture the ideas of those in production houses on the fringe of the industry in order to evaluate how their responses to the various issues and challenges compared with those of their counterparts in mainstream firms.

The increasing digitisation of business relations is a possible area for further research. The appearance of new players (especially independent filmmakers who can afford the use of digital tools) who are able to produce more films suited for special audiences also raises a number of important research issues relating to the strategic development of business plans and portfolios for the industry. This might

involve the development of differentiation strategies and customer-driven marketing strategies in order to compete for ‘eyeballs’¹ in the industry.

The sectoral nature of the sample and the local setting limit the generalisability of the results obtained in the study. The distinctive nature of the Singaporean production houses means that certain strategies or factors examined may be more or less significant in the film industry in other countries. The local setting may limit the generalisability of the findings in a global sense.

¹ This is a term used by industry people to denote the people who go to the cinema to watch a film.

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Appendix 1: List of Production Houses and Profiles of Interviewees

Organisation/ Type	Year started/ No. of employees	Role of Interviewee
Firm 1 Feature Film & Animation (FFA1)	1988 > 150	Producer
Firm 2 Feature Film (FF1)	1998 20	Managing Director
Firm 3 Animation Film (AF1)	1995 30-40 in Singapore 150 in China	Executive Director
Firm 4 Feature Film (FF2)	2000 10-12	Creative Director
Firm 5 Feature Film (FF3)	2002 20-35 (project basis)	Managing Director
Firm 6 Animation Film (AF2)	2001 20	Managing and Creative Director
Firm 7 Feature Film & Animation (FFA2)	2004 2 in Singapore 2 in New Zealand 4 in China 4 in Canada	Director
Firm 8 Feature Film (FF4)	2002 Free lance ranging from 45	Producer
Firm 9 Animation Film (AF3)	2005 2 local staff 3 expatriate staff	Managing Director
Firm 10 Feature Film & Animation (FFA3) (Australian based)	2004 43	General Manager
Firm 11	2000	Director

Feature Film & Animation (FFA4)	7 permanent up to 10 - freelancers	
Firm 12 Feature Film & Animation (FFA5)	2006 2 permanent 3 freelancers	Managing Director/Producer
Firm 13 Animation Film (AF4)	1999 4 permanent 40 casual on project basis	Managing Director
Firm 14 Feature Film & Animation (FFA6)	2005 8	Managing Director
Firm 15 Animation Film (AF5)	2004 10	Managing Director
Firm 16 Feature Film & Animation (FFA7)	1997 50	General Manager and Member of Singapore Film Commission
Firm 17 Animation Film (AF6)	2004 7 in Singapore 10 in Thailand	Creative Director
Firm 18 Feature Film & Animation (FFA8)	1996 15	Creative Director
Firm 19 Animation Film (AF7)	1999 3-4 permanent 25 contract animators	Business Development & Operations Manager
Firm 20 Feature Film (FF5)	1998 7	Production Manager
Firm 21 Feature Film & Animation (FFA9) (Australian based)	2004 20	Director of Creative Services
Firm 22 Animation Film (AF8) (American based)	Sales office since 1995/1996 Development Studio from Dec 2005	Director (Operations/ Localisation)

	>30 staff from all over the world including Korea, Japan, Taiwan, Singapore, Holland, Mauritius, Philippines and Canada	
Firm 23 Animation Film (AF9)	1997 5	Director
Firm 24 Supplier of Technology	2000 20	Director of Sales and Marketing
Independent Film (IF 1)	2002 > 50 (Project basis)	Producer and Director
Independent Film (IF 2)		Independent Film Maker
Government Institution 1 Government Institution 2	2003	Assistant Director Director
Government Institution 3	1961	Senior Officer
Government Training Institution	1989	Course Manager/Lecturer School of Film and Media Studies
Commercial Training Institution	2003	Managing Director and President of the Independent Television Production Companies (AIPRO)
Independent Arts Centre 1	1990	Artistic Co-Director
Government Cultural Institution	1887	Assistant Manager for Programming
Cinema Exhibitor and Distributor	1992	Managing Director
Independent International Short Film Distributor 1	2002 4	Manager