

OXFORD ECONOMICS

Economic contribution of the Dutch film and audio-visual industry

**Final Report
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OXFORD
ECONOMICS¹

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Executive Summary

Mixed fortunes for the sector

The number of admissions to cinemas in the Netherlands and gross box office has been rising since 2006. Admissions are up by a third and data for the first half of 2013 suggests growth will continue. Against this backdrop, Dutch film's share of the admissions market rose from just under 14% in 2007 to approximately 15.8% in 2012 and 17.4 % in the first quarter of 2013. In addition, box office returns and admissions to Dutch films have risen from 2007 to 2012. The number of films in production has also risen over the period.

A recent publication by Paul Rutten and Olaf Koops¹ highlighted the importance of creative industries to the Dutch economy. Within creative industries, 'media and entertainment' account for some 32% (89,000) of creative jobs. However given their higher than average levels of productivity it generated over 50% of the creative industries turnover (€16.7bn of €32.8bn). The fastest growing area was 'Film' which experienced average growth of 3.9% over the period 2000 to 2011, faster than the sub-sector and the overall average for creative industries.

Over the period 2009 to 2011 the media and entertainment sub-sector contracted by an annual average of 1.7% over the period losing 3,122 jobs. Within media and entertainment only 'film' and 'music' enjoyed growth (444 and 243 jobs respectively). All other activity contracted, for example the largest sub-sector 'radio and television' lost 1,035 jobs. However the gradual decline between 2007-2011 in Dutch film and audio visual media is not a common trend in the EU. The fall in state support as well as the absence of fiscal or economic measures attracting activity from across borders has created downward pressure on the economic activity of films engaged in the sector as well as through indirect and induced channels.

A significant contributor to the Dutch economy

The Dutch film and audio-visual sector provides some 32,300 direct jobs² for the national economy. In doing so it directly contributes €1.7bn of Gross Value Added (GVA) to the Dutch economy and provides some €730m in taxes. We estimate that it also supports a further 33,400 jobs in its supply chain and the wider economy through induced effects. These indirect and induced jobs are estimated to generate an additional €1.9bn in GVA and €820m in taxes.

Overall the sector creates or supports 65,700 jobs, €3.6bn of GVA and just less than €1.6bn in taxes. The Dutch film and audio-visual industry has an employment multiplier of 2.03³. This means that, for every person employed directly by the industry, a further 1.03 jobs are supported in the wider economy. In the same respect, the associated GVA multiplier is 2.08.

¹ Paul Rutten & Olaf Koops (2012). Creatieve Industrie in Cijfers. Boekman 93 (vol. 24). pp. 100-102.

² These jobs are included within the film production (9,030 jobs), TV production (2,780), post-production of film and TV (5,160), DVD sales and rental of film and TV (5,290), TV broadcasting (4,150), film exhibition (3,290), self-employed agents and activities of festivals and key funding bodies (2,230) and distribution of film and TV (410) subsectors.

³ The employment multiplier is calculated by dividing the total employment supported by the Dutch film and AV industry (65,700) by the direct employment (32,300)

Chart 1: Economic contribution of the Dutch film and audio-visual industry

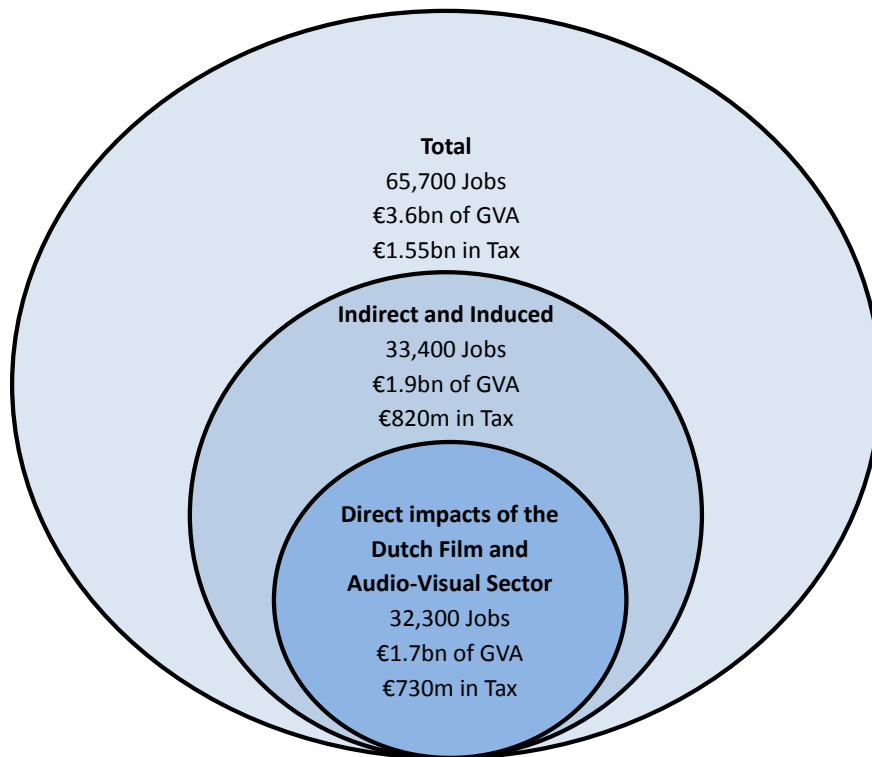
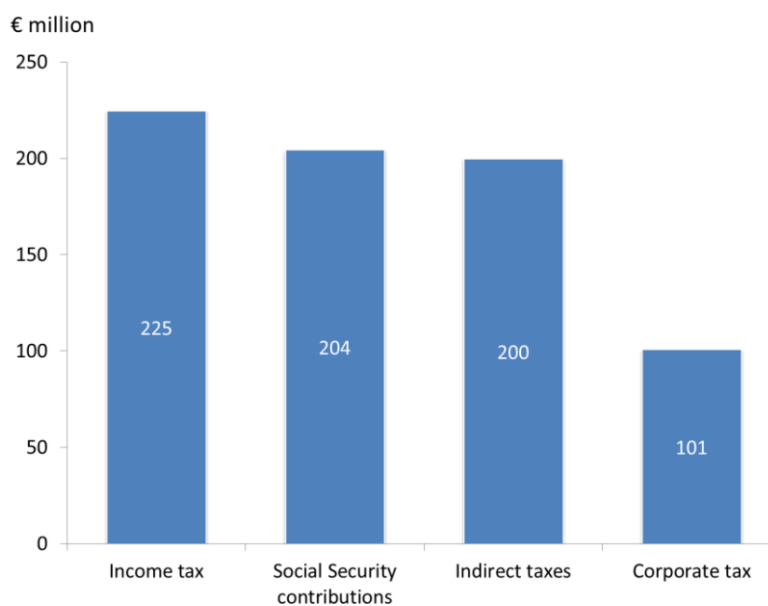


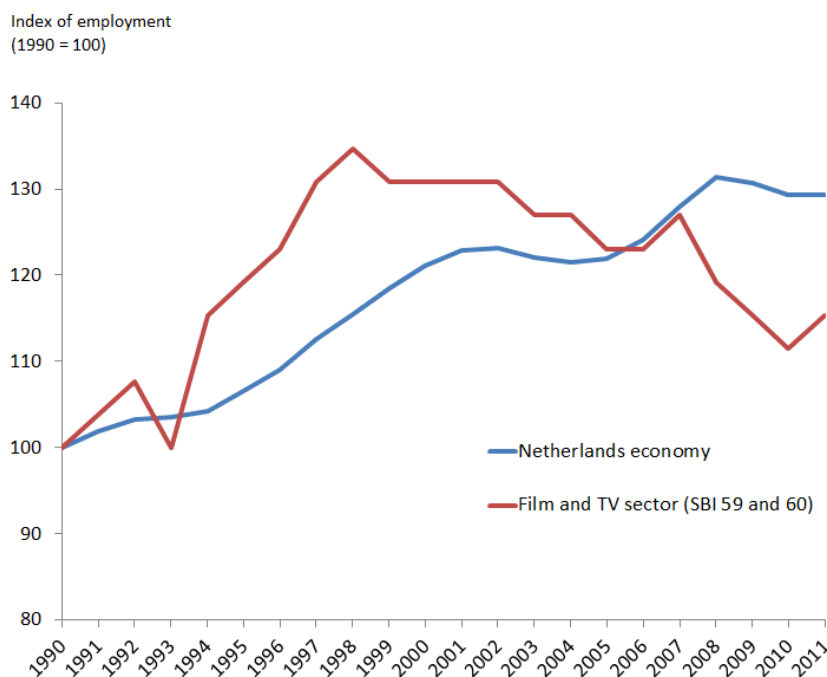
Chart 2 illustrates the breakdown of the direct tax revenue of the Dutch film and audio-visual industry in 2011. In total, it is estimated that the industry generated approximately €730 million in revenues for the Netherlands economy, to help support essential public services. This is equivalent to 0.27% of total revenue collect by the Dutch government in 2011, a similar ratio to the GVA contribution of the industry.

Chart 2: Direct tax revenue generated by the film and TV industry in 2011



Despite the rising demand at the cinemas, employment in the sector has fallen since its peak in the late 1990s and the Global financial crisis has sped the decline in jobs since 2007, with audio-visual sector employment declining by 9.1% in this time. However growth in film demand and the growth of Dutch films' share of the market could have led to the increase in employment in 2011.

Chart 3: Employment growth since 1990



Source: CBS, Oxford Economics

The gradual decline in employment in the Dutch Film and audio-visual sector is not a common trend in the rest of the EU. Indeed all measures of the European average show positive growth in employment (in sectors 59 and 60⁴) since 2008. The EU 15⁵ has grown by double digit rates of growth (11.5%) despite total economy employment contracting by -2.5% over the same period.

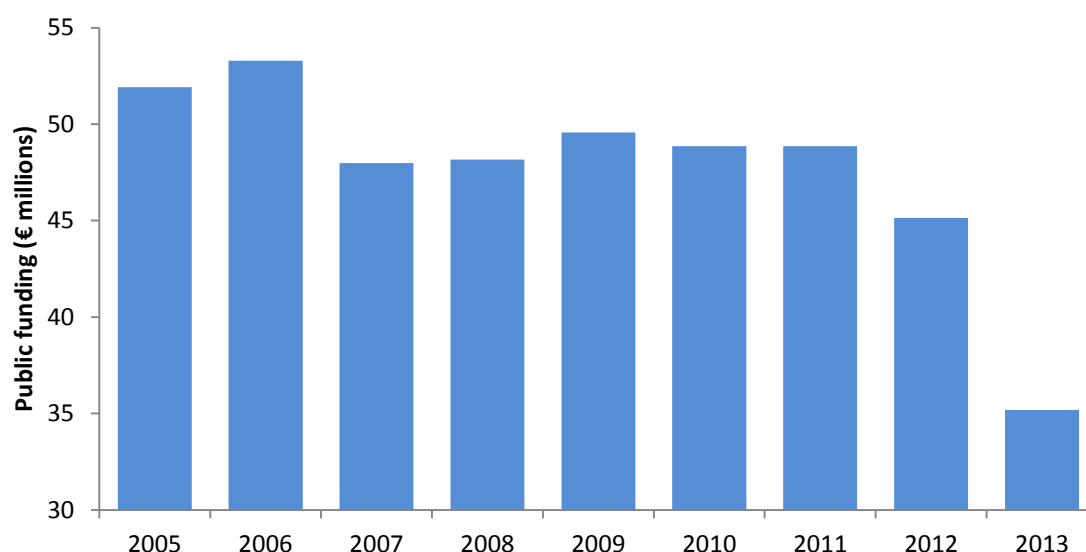
Public funding cuts are a challenge

Public funding, i.e. the use of state or federal finance that has been accumulated through the collection of taxes, accounts for a significant share of total film funding, although this has fallen from 85% in 2009 to 68% in 2012. The Netherlands Film Fund estimates that public funding will fall by 29% to €35.1 million in 2013, compared to €49.5m in 2009. This will add further downward pressure to a sector that has been in decline for the last 15 years.

⁴ These sectors are defined as “SBI 59: Motion picture, video and television programme production, sound recording and music publishing activities” and “SBI 60: Programming and broadcasting activities”.

⁵ The EU15 comprised the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

Chart 4: Public funding of film production, 2005 to 2013



Source: Netherlands Film Fund

Note: A full breakdown of Dutch public funding is provided in Annex C

Public funding cuts will not only impact the activities of firms directly engaged in the sector, but will be accentuated through the wider economy through the indirect and induced channels. Recall that the Dutch film and audio-visual industry has an employment multiplier of 2.03⁶. These multiplier impacts in the Film and audio-visual sector are especially pertinent when considering the potential impact of future cuts in public funding.

A positive relationship between state support, film policies and growth

Our analysis points to a strong positive relationship between the level of state support and the health of the film and audio-visual sector, being indirectly supported through fiscal or economic measures or through direct support. Generally speaking the higher the amount of support per capita the faster the sector has tended to grow in job terms. Similarly, the added benefit of a tax or financial incentive has the ability to attract capital, people and talent from across borders; stimulating employment growth. This in turn has a negative impact upon areas which do not offer such incentives, as talent and skills are lost across borders to those who offer more attractive financial and employment opportunities. In addition the stronger the support the larger the sector tends to be relative to total economy employment.

Analysis of export performance reinforces these findings. At €52.65 per capita, Luxembourg's state support for films is significantly higher than the Netherlands, which has an estimated spend of €2.26 per capita in 2012 and just €1.43 per capita in 2013. Luxembourg's growth in the value of its audio-visual exports stands out against the mixed performance of other European economies.

⁶ The employment multiplier is calculated by dividing the total employment supported by the Dutch film and AV industry (65,700) by the direct employment (32,300)

Furthermore, previous studies and existing evidence provides further support that public incentives to invest in film can generate economic growth whilst being tax neutral or indeed tax positive.

Recommendations

Given the evidence we would recommend that Dutch Government consider the implementation of fiscal and economic financial incentive to invest in audio-visual activity. There are many different examples in the EU and further afield. It is outside of the scope of this report to consider the likely impact of various incentives. Consequently we would recommend a further study to determine which would be most appropriate for the Netherlands.

Oxford Economics recognise the detrimental impact that piracy has had on the Dutch film and television industry – which affects all stages of production, distribution and exhibition. As such, Oxford Economics recommend that the Netherlands re-examine the current infringement theft laws, regulation and policy. Although we believe that new levees and charges are being added to the sale of audio-visual and technological goods, as downloading copied content is not currently considered to be illegal, further action should be taken to combat the monetary losses associated with the trade of pirated goods.

Given the reliance on public sector funding we would also recommend that Government and the Netherlands Film Fund work together to provide a long term vision for the sector. This should set out an overarching mission statement (e.g. to grow jobs and output) and have a number of targets such as a return to the 1998 peak employment level by a given year. This would require growth of 16.7% from its 2011 level. Within this work consideration should also be given to committing to an annual funding stream over the next 5 years. This may reduce uncertainty in the sector and provide enough confidence for existing companies to invest.

1 Introduction and background

1.1 Background, study scope and objectives

In September 2012, Oxford Economics was appointed by The Netherlands Film Fund, the Dutch Exhibitors Association (NVB), the Dutch Film Distributors' Association (NVF) and Film Producers Netherlands (FPN) to undertake a study into the economic contribution of the Dutch film and audio-visual industry. In doing so we have used all of the available published data to inform the study, we sense checked our results by undertaking an extension consultation exercise with the sector and through an online survey of people in the sector. Besides the partners mentioned, also the Dutch ministry for Education, Science and Culture supported this Study.

1.2 Definition of the Dutch film industry

When calculating the economic impact of the Dutch film and audio-visual industry, it was important to establish a precise sector definition, to ensure that the full impact of the industry was encapsulated within the research. The specific economic impacts we have focused on in this study are those which arise in the Netherlands from the activities of companies and/or individuals employed in:

- Different stages of film and audio-visual production in the Netherlands (including pre- and post-production);
- Distribution of foreign and Dutch-made films and audio-visual products and services; and,
- Exhibition of foreign and Dutch-made films.

However, when determining an appropriate industry definition to be evaluated, there were a number of key considerations, which are further expanded upon in section 3.1 of this report:

- The statistics agency only publishing economic data for the SBI classification codes 59⁷ and 60⁸ combined.
- The combination of SBI codes 59 and 60 do not accurately reconcile with the true activities of the film and AV industry in the Netherlands as defined by this report. As such, an estimate based solely on national statistics will lead to an incorrect estimate of the size of the industry.⁹
- Oxford Economics had to derive a new approach to estimate the economic impact of the sector at a more detailed level. As such, the following key sub-sectors have been employed for the purpose of this study (figure 1.1). The diagram also displays the SBI codes that were used to calculate the impact of the film and audio-visual sector. These chosen sectors for analysis were based on national accounts data as published by the CBS with the exception of the activities of self-employed agents

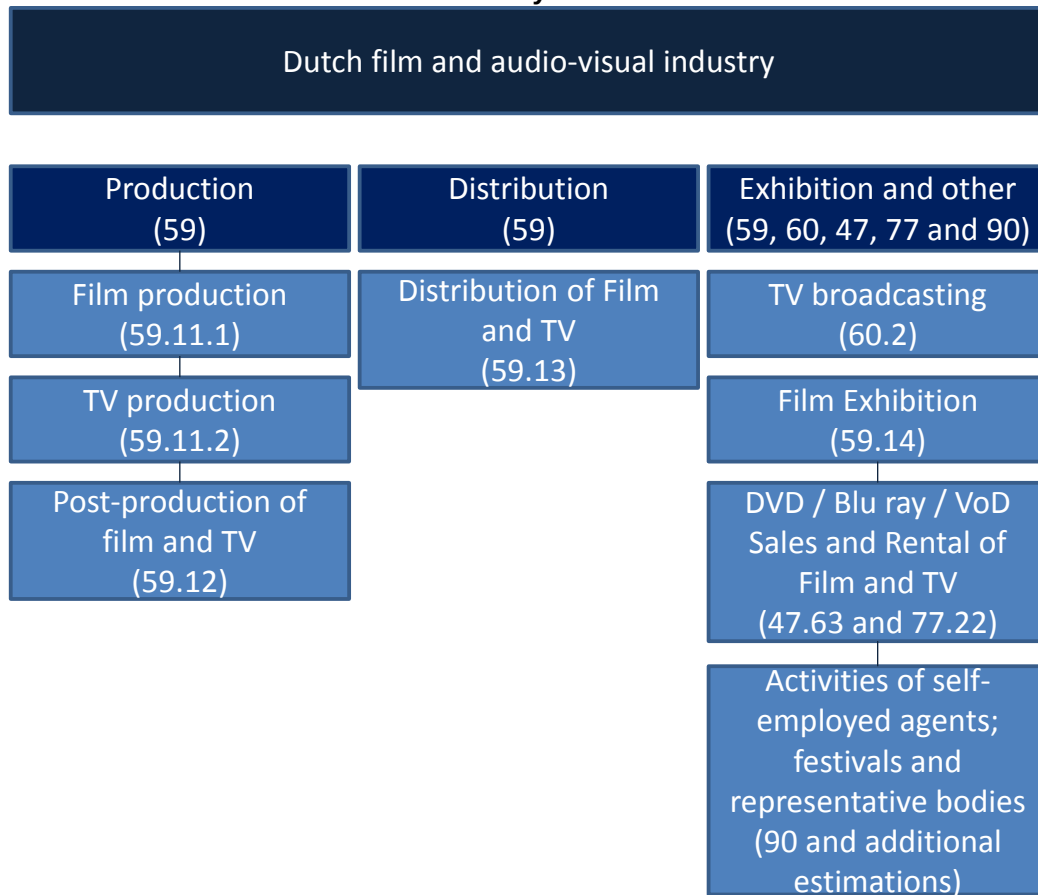
⁷ SBI 59: Motion picture, video and television programme production, sound recording and music publishing activities.

⁸ SBI 60: Programming and broadcasting activities.

⁹ The definition used for the purposes of this report does not include sound recording or music publishing activities (SBI code 59.2) or the programming or broadcasting of radio (SBI code 60.1). However, beyond SBI 59-60, selected sections of 47, 77 and 90 are used in order to full capture the impact of the DVD rental and sales market as well as the activities of festivals and funding bodies. Further detail regarding SBI classification codes 59 and 60 is provided in section 3.1 of this report.

which was based upon an Oxford Economics business survey in order to fully encapsulate the sector and to include those individuals not captured within official statistics.

Figure 1.1: Sub-sectors of the Dutch film and audio-visual industry as included in Oxford Economics Analysis

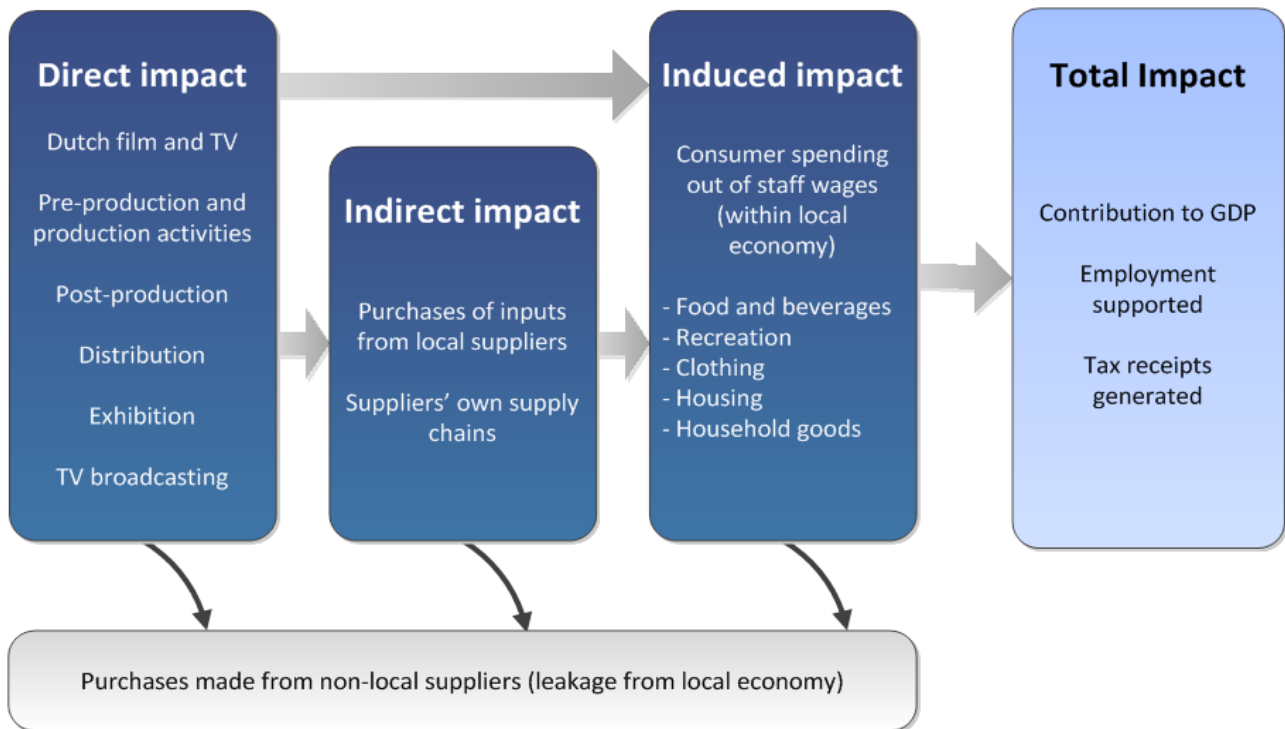


Source: Oxford Economics

1.3 The channels of economic impact

In order to estimate the contribution of the film and audio-visual industry to the Dutch economy, this report undertakes a standard economic impact assessment. As such, it examines three channels through which the industry contributes to the economy (figure 1.2):

Figure 1.2: The channels of economic impact



- The first channel of impact is the **direct effect**. The direct effect is defined as the employment and economic activity generated by the industry itself. This covers the activity in all the stages of production of film and audio-visual located in the Netherlands (encapsulating pre-production, production and post-production activities), together with the distribution and exhibition of film and audio-visual, as well as the actions of the main TV Broadcasters.
- The second channel of impact is known as the **indirect effect**. This effect captures the employment and economic activity supported in the domestic supply chain of the film and audio-visual industry. As part of their day to day activities, companies engaged in the film and audio-visual industry will purchase goods and services from Dutch-based suppliers as part of their general procurement activities. In turn, these first round suppliers will engage other Dutch firms in order to satisfy their own daily operations. The indirect effect captures the employment and activity generated through the supply chain and includes, for example, activity supported by the manufacture of production equipment in the Netherlands sold but mostly rented to production companies, the manufacture of goods sold at cinemas, the spending of film crews on hotels and accommodation, business expenditure on TV, radio and other advertising, and a wide variety of activity in the business services sector.
- The final channel of impact, known as the **induced effect**, captures the economic activity created by those individuals supported through both the direct and indirect channels of impact spending their wages on consumer goods and services in the wider economy. The induced impact is likely to be concentrated in retail and leisure outlets close to where the individuals live, as well as in the real estate sector through rental income, but they will also ripple through the domestic supply chains of the businesses selling these goods.

Calculation of these quantifiable impacts is on a gross basis. They therefore make no allowance for what the people and the other resources deployed by the industry and its suppliers would have contributed to the economy if the industry did not exist.

For each channel, the economic impact can be separately quantified in terms of three key metrics:

- **The gross value-added (GVA) contribution to the Dutch economy¹⁰.** The standard method for calculating the contribution of an industry to GVA is to measure its so called 'value added'. It is probably easiest understood as the value of an industry's output (goods or services) less the value of inputs used in the production of those outputs (excluding wages and salaries). An equivalent measure of GVA is the sum of pre-tax profits and employee costs generated by the industry. Using either approach, the sum of GVA across all industries in the economy will approximate the overall contribution to the Dutch economy¹¹.
- **Employment.** Measured in terms of headcount in order to provide meaningful comparisons with employment data collected by the national statistics agency.
- **Tax revenue.** The revenue generated for the Dutch government as a result of the activity supported by the industry. This incorporates employee income taxes, corporation taxes, social security contributions and a range of indirect taxes paid by individuals, including VAT paid on general purchases.

1.4 Report structure

This report, prepared by Oxford Economics, is a comprehensive assessment of the economic impact of the Dutch film and television industry as has been defined in section 1.2. The rest of this report is structured as follows:

- **Chapter 2: Recent trends** discusses the latest available data with aim of giving the reader an understanding of recent trends and the general health of the sector;
- **Chapter 3: Direct economic impact of Dutch film and audio-visual** focuses on the direct impacts of the core Dutch film and audio-visual industry (particularly employment and GVA);
- **Chapter 4: Multiplier analysis** discusses the multiplier impacts of the Dutch film and audio-visual industry;
- **Chapter 5: Competitor analysis** provides a discussion of recent employment and export performance in competitor countries. Where possible we look at the level of state support and assess if there is a relationship between support and the health of the sector; and
- **Chapter 6: Conclusions and recommendations** summarises our key findings and offer a few recommendations for the future.

¹⁰ GVA is the main summary indicator of economic activity. References to whether a country's economy is growing or when it is in recession are made using GVA. All references to GVA in this report are to GVA at 'basic prices'.

¹¹ It is only true to an approximation that GVA is equal to the sum of profit and wages, or that the sum of GVA across firms equals GDP. The difference in each case, however, is small enough for us to proceed as if the equalities do in fact hold. GVA differs from GDP in the price used to value goods and services. GVA is measured at producer prices that reflect the price at the 'factory gate' together with cost of distribution. GDP is measured at market prices that reflect the price paid by the consumer. The two prices differ by the taxes less subsidies levied on the goods or services.

2 Recent trends

This section outlines the recent trends in the Dutch Film industry.

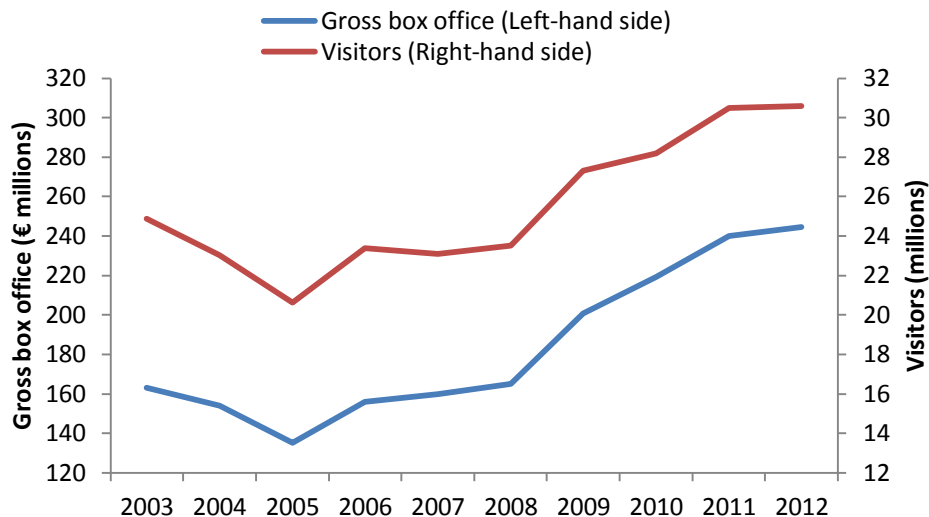
Box 2.1: Key messages

- Both box office and admissions have grown since 2006. Latest data for the first half of 2013 suggests future growth;
- Visitor admissions to Dutch made films were some 55% higher in 2012 than in 2007, whereas box office takings were 68% higher;
- Video sales and rental have fallen overtime. However they could be replaced over time by growth in VOD / PPV;
- Within creative industries, 'media and entertainment' account for some 32% (89,000) of jobs, and generate over 50% of the creative industries turnover (€16.7m of €32.8m). The fastest growing area was 'Film' which experienced average growth of 3.9% over the period 2000 to 2011, faster than the sub-sector and the overall average for creative industries;
- From 2007 to 2012 the number of feature films in production grew by 48% while the total production budget jumped by 34%. Trends in 2012 suggest the average production budget has fallen; and
- Public funding is the largest source of financing in Netherlands. It peaked at €53.3m in 2006 before falling to just under €48m in 2007. From 2007 to 2011 public funding levels remained relatively static. Then public funding was cut by 7.6% in 2012 and it is projected to fall by a further 22.1% in 2013 to €35.1m.

2.1 Demand for Dutch Film has been growing

The number of visitors to Dutch cinemas has risen consistently since the onset of the global financial crisis and resulting recession. Chart 2.1 plots the number of cinema admissions and box office takings over the period 2003 to 2012. This recent growth is a continuation of an upward trend for box office takings and visitor numbers to cinemas that started in 2006.

Chart 2.1: Cinema screens and admissions, 2003 to 2012

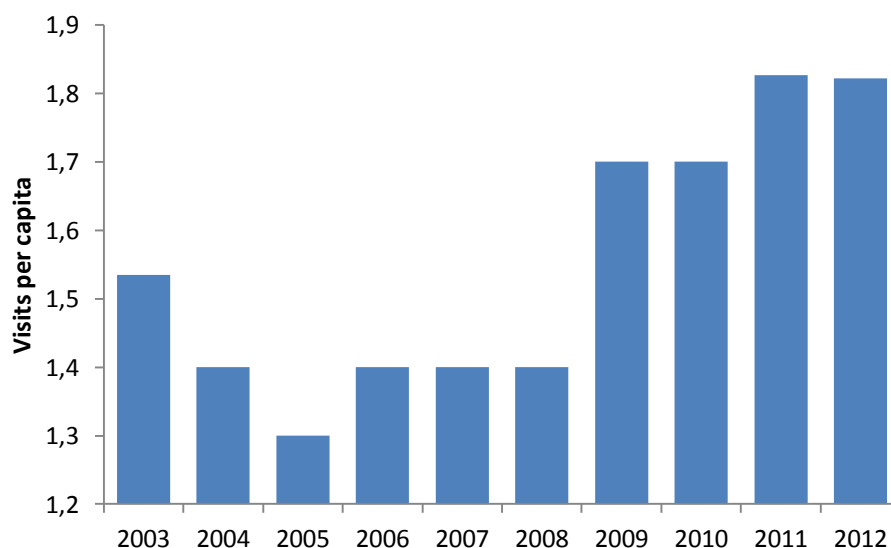


Source: NVB

The sector has experienced growth in demand of 33% (as measured by admissions) since 2005. In addition the latest data provided by the Dutch Exhibitors Association (NVB) shows that cinema admissions are up from 14.1m in the first half of 2012 to over 14.5m in the first half of 2013. Likewise, box office figures were higher in the first half of 2013 (€116,233) than they were in the same period of 2012, 2011 and 2010 which totalled €111,180, €113,910 and €99,871 respectively.

There is an obvious positive correlation between box office performance and visits per capita. Chart 2.2 shows that visits per capita follow the broad trends in Chart 2.1. The number of visits per capita has peaked at approximately 1.8 in both 2011 and 2012.

Chart 2.2: Visits per capita, 2003 to 2012



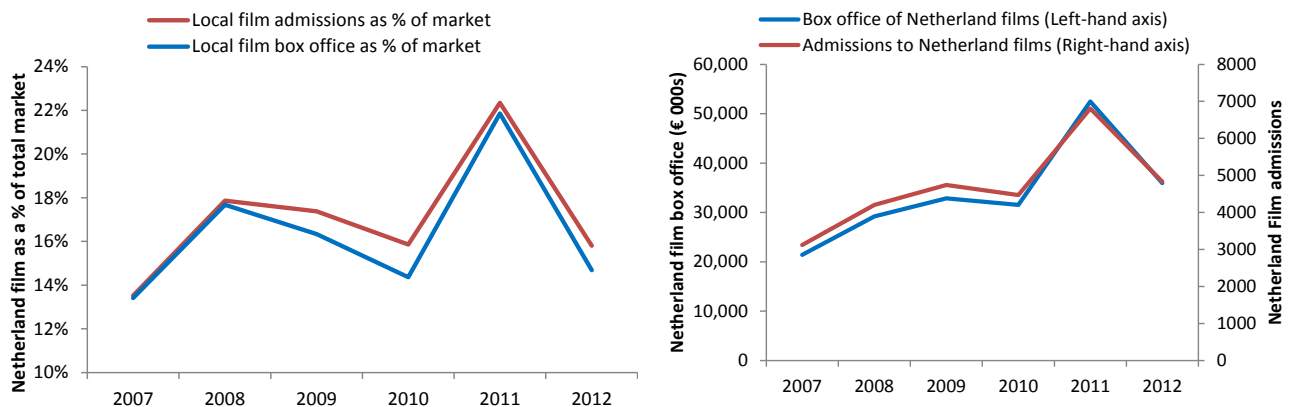
Source: Netherlands Film Fund (Film Facts & Figures)

As the general performance of the sector has increased so too has the performance of domestic films. Visitor admissions to domestic films were some 55% higher in 2012 than in 2007, while box office takings for

domestic films were 68% higher. Consequently there is a rising demand for Dutch and foreign made film in the Netherlands.

The market share of Dutch films has fluctuated over time. In 2007 just under 14% of both film admissions and box office takings in the Netherlands were for domestically made films. Chart 2.3 plots the Netherlands Film share of the total market in admissions and box office takings and separately the value of admissions and box office. In terms of share of the market, both peaked in 2011 (due in large part to the exceptional performance of “Vipers Nest”) but have since fallen back to just above 2010 levels.

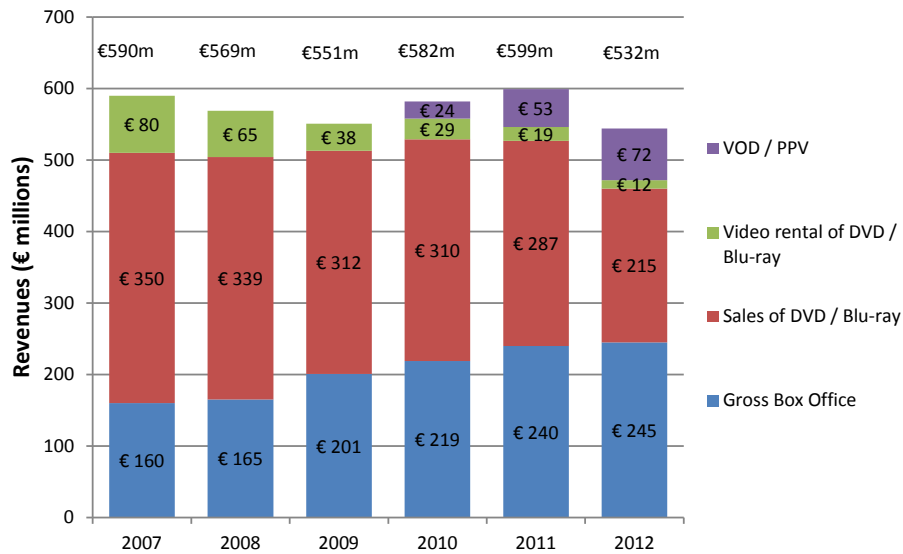
Chart 2.3: Netherland film performance, 2007 to 2012



Source: Netherlands Film Fund (Film Facts & Figures)

Cinema revenue is only one measure of demand. Chart 2.4 below plots the value of cinema, DVD / blu-ray and Video on demand (VOD) / pay per view (PPV). Rental and sales of DVD / Blu-ray have been falling consistently over the period shown, while VOD and PPV have grown significantly from 2010. It is estimated that the value of VOD / PPV grew by 121% in 2011 and 36% in 2012. This is likely to be a key growth sector for the industry and a source of demand that the Dutch film and audio-visual sector should target going forward. In order to become a key growth sector, the industry should be supported by government policies, particularly to combat online exploitation.

Chart 2.4 Total gross box office revenues and value of DVD and Blu-ray sales and rentals, 2007 to 2012



Source: Netherlands Film Fund

Note: the value of VOD / PPV was not available pre-2010

Piracy is a unique problem for the sector. Unlocking the economic potential of VoD for the Dutch film and television industry will also be assisted by the development of effective methods to tackle copyright theft and infringement. The ease of accessing, copying and / or distributing the output of the sector has increased over time and as such puts downward pressure on the revenues of the sector. For example, across Europe by 2015 it is estimated that the cumulative effects of piracy could be as much as €240 billion and 1.2 million jobs¹².

The charts shown in this section cover a very unique period of time. The financial crisis and resulting global recession has been replaced by a generally uncertain economic environment. This 'new normal' economic landscape is characterised by subdued levels of consumer and government spending, along with low levels of business investment:

- Many large corporates have very healthy cash reserves. However the economic uncertainty has encouraged them to defer investment decisions.
- Higher levels of unemployment, scarce job creation and a debt 'hang-over' push consumer spending levels down.
- Pre-financing of films became more difficult
- High levels of public debt and low levels of tax revenue have resulted in more austere budgets by the public sector.

These factors have implications for funding of Dutch films (discussed later in this section) and demand for them.

¹² Source: TERA Consultants, Building a Digital Economy: The Importance of Saving Jobs in the EU's Creative Industries, report for the International Chamber of Commerce, March 2010.

2.2 The sector is a major component of the wider creative sector in the Netherlands

Against this economic backdrop, there is a recognition that not only can creative industries contribute to quality of life, it offers sizable economic opportunities. These economic benefits include jobs, wages, GVA, skills acquisition, volunteering (helping to reengage people with the labour market), tourism and attractiveness as a place to invest or produce. Creative industries have therefore become acknowledged for their economic potential in national and local policy across most developed economies.

A recent publication by Paul Rutten and Olaf Koops¹³ highlighted the importance of creative industries to the Dutch economy. They estimated that 3.5% of all jobs in the Netherlands (280,450) were in the sector in 2011. In addition, they note that over the period 2000 to 2011 employment in the sector grew by 3% per year, compared to only 0.9% in the wider economy. Consequently the sector has received growing attention.

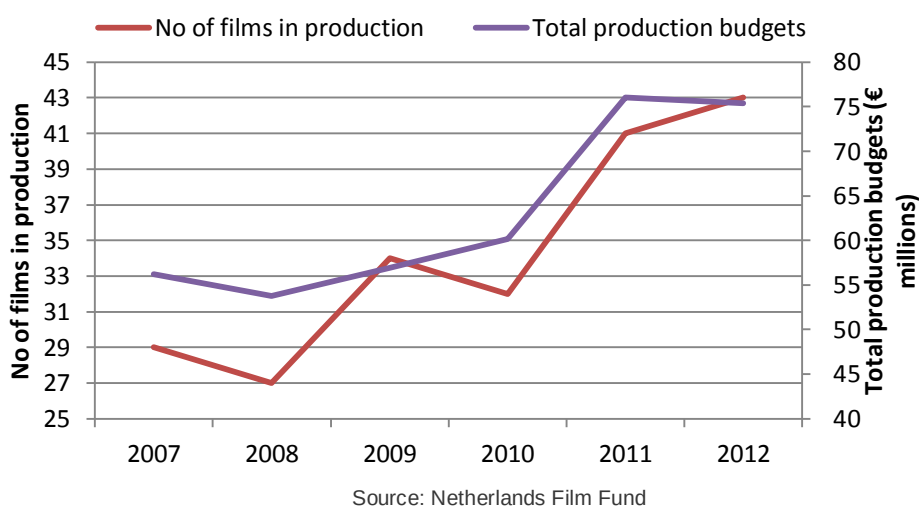
Within creative industries, 'media and entertainment' account for some 32% (89,000) of jobs. However given their higher than average levels of productivity it generated over 50% of the creative industries turnover (€16.7bn of €32.8bn). The fastest growing area was 'Film' which experienced average growth of 3.9% over the period 2000 to 2011, faster than the sub-sector and the overall average for creative industries.

Over the period 2009 to 2011 the speed of employment growth in creative industries has slowed to an annual average of 1.9%. This compares to a general contraction of 0.2% per annum in the wider economy. Unfortunately the media and entertainment sub-sector contracted by an annual average of 1.7% over the period losing 3,122 jobs. Within media and entertainment only 'film' and 'music' enjoyed growth (444 and 243 jobs respectively). All other activity contracted (e.g. radio and television lost 1,035 jobs).

2.3 Dutch made films has been increasing

This fall in Netherland film admissions and box office results in 2012 masks the considerable increase in the number of Dutch films being made and their collective budgets over the period. From 2007 to 2012 the number of feature films in production grew by 48% to 43 films while the total production budget jumped by 34% to €75.4m. Trends in 2012 suggest the average production budget has fallen.

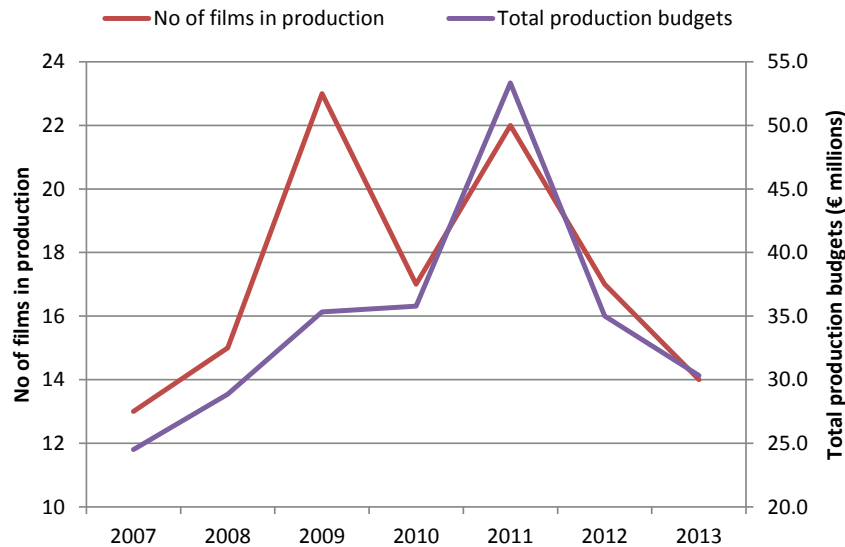
Chart 2.5: No. of feature films in production and budgets, 2007 to 2012



¹³ Paul Rutten & Olaf Koops (2012). Creatieve Industrie in Cijfers. Boekman 93 (vol. 24). pp. 100-102.

The latest available information suggests that the number of Dutch films in production will fall again in 2013. Data on the first half of 2013 showed that only 14 films were in production compared to 17 in the first half of 2012, and 22 in the first half of 2011. Chart 2.6 plots the number of films in production and the total production budgets from 2007 to the first half of 2013.

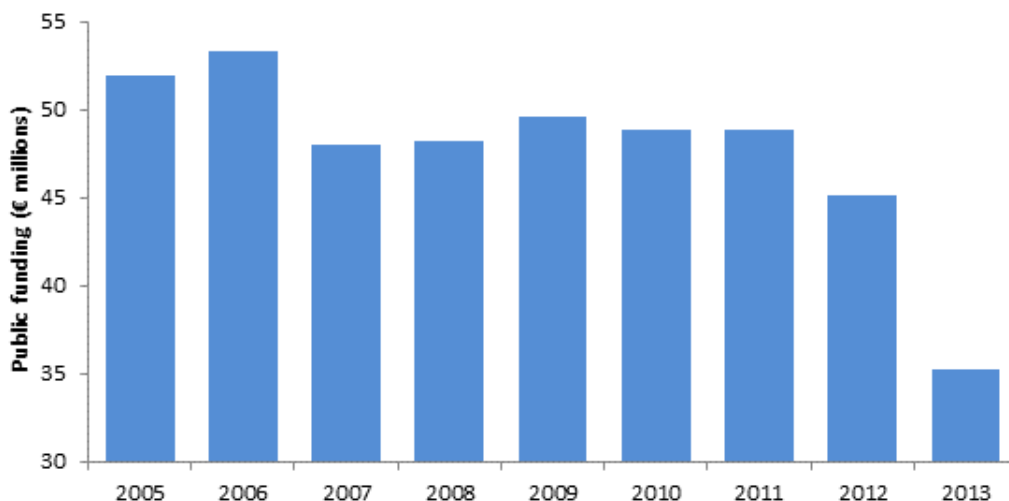
Chart 2.6: No of feature films in production and budgets, 1H 2007 to 1H of 2013



Source: Netherlands Film Fund

As noted above, the challenging economic environment is likely to have affected funding. Chart 2.7 shows how public funding for the production of domestic films has changed recently. Public funding for film peaked at €53.3m in 2006 before falling to just under €48m in 2007. From 2007 to 2011 public funding levels remained relatively static. Then public funding for film was cut by 7.6% in 2012 and a further 22.1% in 2013.

Chart 2.7: Public funding of film production, 2005 to 2013



Source: Netherlands Film Fund

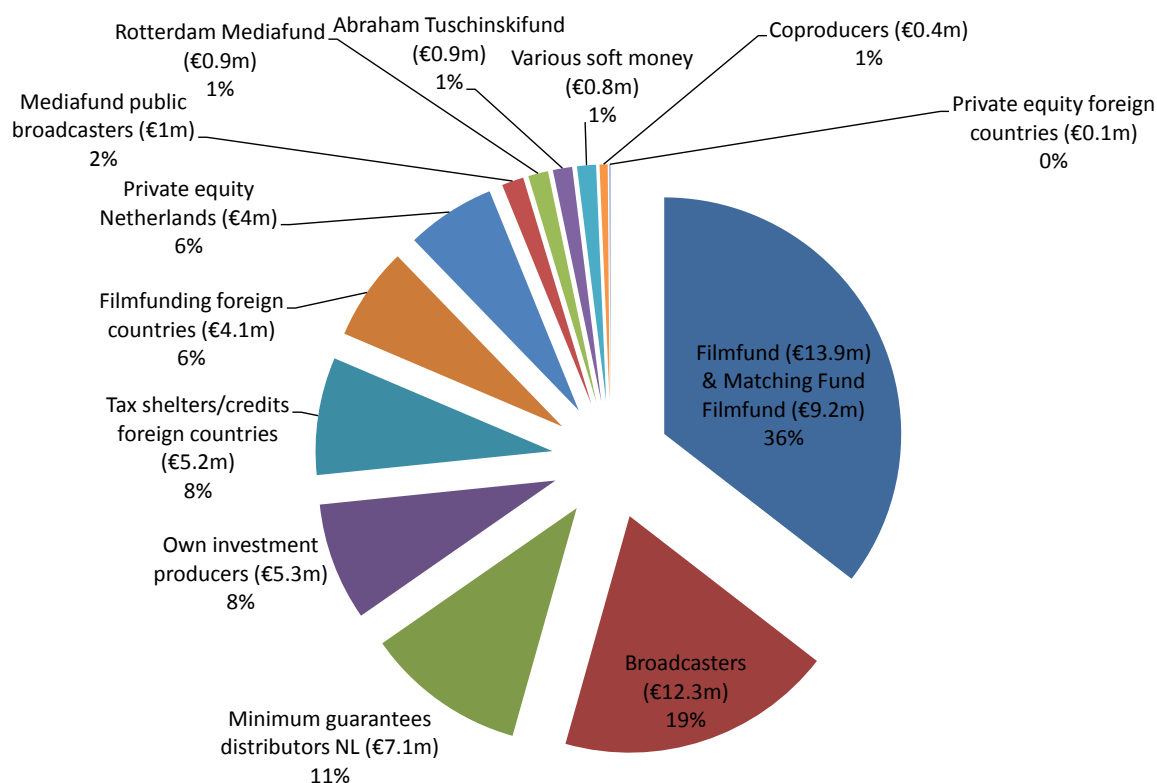
The Netherlands Film Fund part fund approximately 90% of all feature films. Table 2.2 provides a summary of funding over the last four years. A more comprehensive breakdown of funding is provided in Annex C. Total funding has risen each year, however funding per film has fallen in 2012 to below 2009 levels. Public sector funding of feature films has fallen each year from 2009 to 2012, from 57% of total funding to just 37% respectively. The Netherlands Film Fund now plans to support 25 feature films in 2013 (down from 32 in 2012) given funding pressures. Despite this, public funding still remains a significant source of support. Chart 2.8 provides a detailed breakdown of funding sources in 2012.

Table 2.2: Funding of all released feature films by the Netherlands Film Fund 2009 to 2012

	2009	2010	2011	2012
Total funding (€ millions)	42.8	55.4	59.6	65.2
% of funding				
<i>Public sector</i>	57%	47%	41%	37%
<i>Broadcasters</i>	16%	14%	16%	19%
<i>Private sector</i>	18%	23%	22%	24%
<i>Private equity in the Netherlands</i>	8%	4%	12%	6%
<i>Foreign funding (public and private)</i>	NA	0.12	0.09	0.15
Funding per film	1.86	1.91	2.59	1.92

Source: Netherlands Film Fund

Chart 2.8: Feature production funding sources (releases 2012)



Source: Netherlands Film Fund

2.4 Data suggests the sector could benefit from integrated government policies and support

The analysis above suggests that demand for film and VoD / PPV (i.e. all film platforms) have been rising in the Netherlands since the global financial crisis. Within this, demand for Dutch made films has grown. The sector responded by increasing the number of films in production and their budgets. This was reflected in the growth in 'film' sector employment from 2009 to 2011 (as highlighted by Paul Rutten and Olaf Koops).

However the data suggests that the sector has experienced mixed fortunes since 2012. The value of rentals and sales has been falling over time. Admissions to Netherlands films fell in 2012 as did their gross box office however this was mainly attributable to the 2011 success of *Viper's Nest* – with almost 2 million admissions which totalled 6.8% of all admissions in 2011 and 6.9% of the gross box office for the same year (contributing over €15 million to the €220 million box office total).

On the supply side, the number of Dutch films in production fell in 2012 and data on the first half of 2013 suggests it will fall again this year. In addition funding per film has fallen in 2012 coinciding with a notable fall in public funding for films in the same year. Available public funding for films is projected to fall by over 22% from € 45m to € 35m in 2013. Consequently Dutch films will have to rely increasingly on private and foreign sources of funding going forward.

In conclusion, the Dutch film and audio-visual sector is a key part of the wider Dutch creative industries sector and it had been growing faster than the general economy up to 2011. Although employment data for 2012 or the first half of 2013 is not available, the other data presented in this section suggests that the sector may find it more challenging to record faster than average employment growth in 2012 or 2013.

With this understanding of recent trends in the sector, the next sections provide quantification of the sector's importance to the wider Dutch economy.

3 Direct economic impact of Dutch film and audio-visual

This chapter details the direct economic impact of the Dutch film and audio-visual industry, in terms of the number of people employed and its GVA contribution to the Netherlands economy. It also quantifies the contribution of film and audio-visual companies and their employees to government revenues through income and other taxes.

Box 3.1: Key messages

- The Dutch film and audio-visual sector is difficult to measure accurately. Outdated published data and mismatched sectoral definitions meant that Oxford Economics had to derive a new approach to estimate the economic impact of the sector.
- The Dutch film and audio-visual industry employed around 32,300 people in 2011, with over a quarter of these jobs in film production (28%).
- Compared to the wider Dutch economy, the film and TV industry exhibits a high prevalence of self-employment. Indeed, nearly 1 in every 3 people engaged in the industry are self-employed.
- On a turnover of €4.3 billion, the direct contribution of the Dutch film and audio-visual industry to the Netherlands economy is estimated to have been over €1.7 billion in 2011. This represented approximately 0.3% of the total Dutch GVA in 2011.
- The direct tax contribution of the Dutch film and audio-visual industry via corporation tax, employee income tax, social security contributions and other indirect taxes was around €730 million in 2011.

3.1 Introduction

The Dutch film and audio-visual industry is a relatively disjointed industry that is not easily defined (see section 1.2). As such, it has been necessary to combine a number of different data sources in order to produce a robust estimate of the economic impact of the industry.

3.1.1 National statistics

As part of their obligation to collect and distribute statistics on the Dutch economy, the national statistics agency of the Netherlands (Statistics Netherlands – CBS) uses a prescribed set of definitions in order to classify business establishments and other statistical units by the type of economic activity in which they are engaged. This is done according to the Dutch standard classification of economic activities – the Dutch Standaard Bedrijfsindeling (SBI 2008) – which allocates activities into categories according to a hierarchical five digit system. The SBI is aligned to the industrial classification system used by the European Union, known as NACE, as well as the system used by the United Nations (UN), known as ISIC.

Broadly speaking, the activities of the film and audio-visual industry are captured within two such industry categories:

- **SBI 59: Motion picture, video and television programme production, sound recording and music publishing activities.**

This division includes the production of theatrical and non-theatrical motion pictures whether on film, videotape or disc for direct projection in theatres or for broadcasting on television; supporting activities such as film editing, cutting, dubbing etc.; distribution of motion pictures and other film productions to other industries; as well as motion picture or other film productions projection. Also included is the buying and selling of distribution rights for motion pictures or other film productions.

This division also includes sound recording activities, i.e. the production of original sound master recordings; releasing, promoting and distributing them; publishing of music as well as sound recording service activities in a studio or elsewhere.

▪ **SBI 60: Programming and broadcasting activities.**

This division includes the activities of creating content or acquiring the right to distribute content and subsequently broadcasting that content, such as radio, television and data programs of entertainment, news, talk, and the like. Also included is data broadcasting, typically integrated with radio or TV broadcasting. The broadcasting can be performed using different technologies, over-the-air, via satellite, via a cable network or via Internet.

This division also includes the production of programs that are typically narrowcast in nature (limited format, such as news, sports, education or youth-oriented programming) on a subscription or fee basis, to a third party, for subsequent broadcasting to the public. This division excludes the distribution of cable and other subscription programming.

As aforementioned in Section 1.2 of this report, there are a number limitations to the use of national statistics. As a brief reminder, upon consultation with the CBS, it became evident that the statistics agency was only able to provide economic data for the SBI classification codes 59 and 60 combined. As the size of the sector is relatively small, it was deemed that a more disaggregated breakdown would be statistically unreliable.

Secondly, the combination of SBI codes 59 and 60 do not accurately reconcile with the true activities of the film and audio-visual industry in the Netherlands as defined by this report. As such, an estimate based solely on national statistics will lead to an incorrect estimate of the size of the industry.

Indeed, the statistics agency's industrial classifications include the activities of sound recording and music publishing (SBI 59.20), as well as those of radio broadcasting (SBI 60.10), that do not form part of the industry as defined by this report. In addition to this, there are elements of the industrial classification SBI 90 that should be included within the estimates, namely the *'activities of individual writers, for all subjects including fictional writing, technical writing etc.'* and the *'activities of individual artists such as authors, actors, directors, musicians, lecturers or speakers, stage-set designers and builders etc.'*, as well as the activities of DVD, video and Blu-ray retail and rental outlets, contained within the industrial classifications SBI 47.63 (sales) and 77.22 (rental).

As such, although the data provided by the CBS formed a good starting point, it was necessary to seek additional sources of data in order to refine the figures and establish an estimate of the true size of the industry¹⁴.

3.1.2 LISA database

LISA is a database containing information on all establishments in the Netherlands where paid work is performed (i.e. it includes information on all enterprises where at least one person is employed). It is based on regional company registry databases, with the primary aim of collecting and providing data to influence policy and foster research. As such, LISA collects data on the name, business address, industrial classification, employment, chamber of commerce number and city code of establishments active in the Netherlands. LISA reports detailed employment data for the SBI code 59, including a more disaggregated breakdown (by 4 or even 5-digit industrial classification code), and SBI code 77.22. Incorporating the LISA data therefore facilitates individual estimates for film production, TV production, post-production, distribution and exhibition.

¹⁴ Note we do not include activity from the gaming sector in our employment or output estimates.

3.1.3 Eurostat

Eurostat is the statistical office of the European Union. Its task is to provide the European Union with statistics at the European level that enables comparisons between countries and regions. It performs this role by collecting and consolidating data provided to them by the member state national statistical authorities. In theory therefore, any data obtainable on Eurostat should also be available through the CBS. However, in practise, this is not always the case. As such, Eurostat contains detailed data on output and GVA for both SBI 59 and SBI 60 which can be used to build upon the economic impacts further.

3.1.4 Other data sources

A number of other sources were used to fine tune the estimates where needed. These include:

- **The European Audio-visual Observatory yearbook 2012** – which was used to assist in estimating the size of the sales and rental market for DVD, video and Blu-ray for both films and TV productions, as well as to estimate the size of the TV broadcasting market.
- **Industry specific publications** – such as ‘Film Facts and Figures of the Netherlands’ (2012), produced by the Netherlands Film Fund, the ‘Playing for a Living’ (2010) publication produced by IVA policy research, the 2012 annual report of the Association of Exhibitors and Distributors, and ‘Sectoronderzoek film en televisie’ (2005), a report commissioned by the Federation of Film.
- **SEO Economisch Onderzoek. (2012). ‘Economische kerngegevens Nederlandse film’** – SEO were commissioned by the Netherlands Film Fund, the Dutch Exhibitors Association (NVB), the Dutch Film Distributors’ Association (NVF) and Film Producers Netherlands (FPN), to undertake a quick scan of the main economic indicators of the Dutch film industry.
- **Oxford Economics industry survey March 2013** – conducted online and distributed by various industry associations, the survey followed a series of stakeholder interviews conducted by Oxford Economics, targeting both individuals and businesses actively engaged in the industry. Although the survey proved useful to give insight into the workings of individuals and companies within the film and audio-visual sector, it is not discussed at length within this report. A snapshot of the survey results has been provided in Annex B.

3.2 Employment

Direct employment in the Dutch film and audio-visual industry is estimated primarily through the application of LISA data, combined with national statistics, the SEO economic research report and the Oxford Economics industry survey. In total, it is estimated that around 32,300 people were employed in the Dutch film and audio-visual industry as defined by this report¹⁵. This is equivalent to 0.44% of total employment in the Netherlands and, in terms of employment, suggests it is similar in size to the telecommunications industry¹⁶. The SEO study provided estimates of only the film industry and therefore their estimated employment of 20,000 is some 12,300 below ours.

¹⁵ For the industry activities defined by SBI 59, LISA data was sufficient to provide a disaggregated breakdown of employment (removing sound recording and publishing), while analysis of Eurostat statistics allowed for an estimate of SBI 60, removing radio programming activities. For activities not included within SBI 59 or 60, Oxford Economics used data obtained from the European Audio-visual Observatory Yearbook 2012 (Revenue for DVD/Blue Ray sales from which employment was estimated using key ratios implied from national statistics), LISA (DVD/Blue Ray rental), SEO (self-employed agents), and Oxford Economics desk research (festivals and funding bodies).

¹⁶ Based on Eurostat data on Employment in 2011.

Box 3.2: Existing estimates of the size of the sector

We are only aware of one other study that attempts to undertake similar research to that outlined in this report. In September 2012, SEO Economic Research undertook a study aiming to highlight the importance of the Dutch Film Industry in which they estimated that the sector provided employment to 20,000 persons on a full time equivalent basis. The study however focused on activity in the film industry in the Netherlands, whereas Oxford Economics use a wider definition in this report that incorporates both film and audio-visual activity. Consequently it is not appropriate to compare the studies.

As outlined in section 3.1.1 above, Oxford Economics isolated activity from SBI codes 59 and 60 and various other sectors that could be considered part of the film and audio-visual industry. SEO Economic Research used the same publically available data, though they focused mainly upon select parts of SBI code 59.

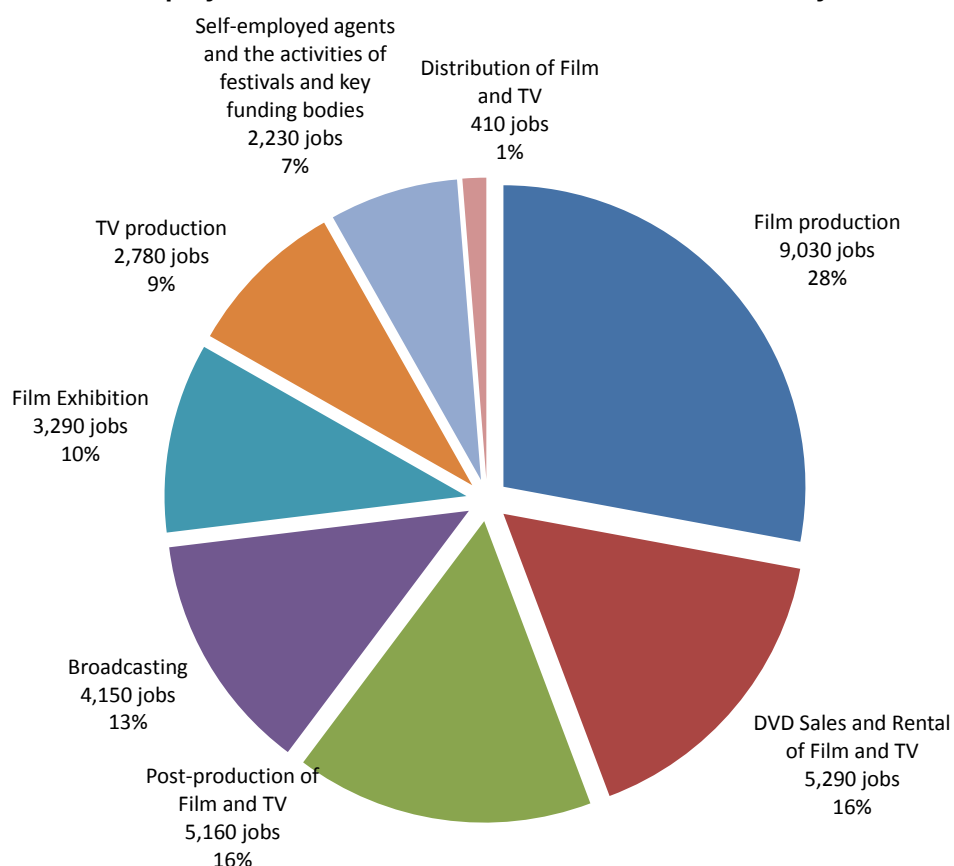
By way of summary, Oxford Economics used a broader research scope than SEO:

- In Production, activity in the television productions sub sector (SBI-code 59.11.2) is included whereas they are excluded in the SEO-study.
- In Exhibition and Other, activity in the television broadcasting (SBI-code 60.2), film sales (SBI-code 47.63), film rental (SBI-code 77.22) and arts (SBI-code 90) sub sectors are included whereas they are excluded in the SEO-study.

Chart 3.1 illustrates the breakdown of employment by sub-sector. Over one-quarter of all jobs in the industry were in film production (28% or over 9,000 jobs¹⁷), with a further 16% of jobs in the retail and rental of DVDs, videos and Blu-rays and also the post-production of film and TV. Other significant sub-sectors in terms of employment included the activities of TV broadcasters (4,200) and film exhibition (3,300).

¹⁷ LISA, 2011

Chart 3.1: Employment in the Dutch film and audio-visual industry in 2011



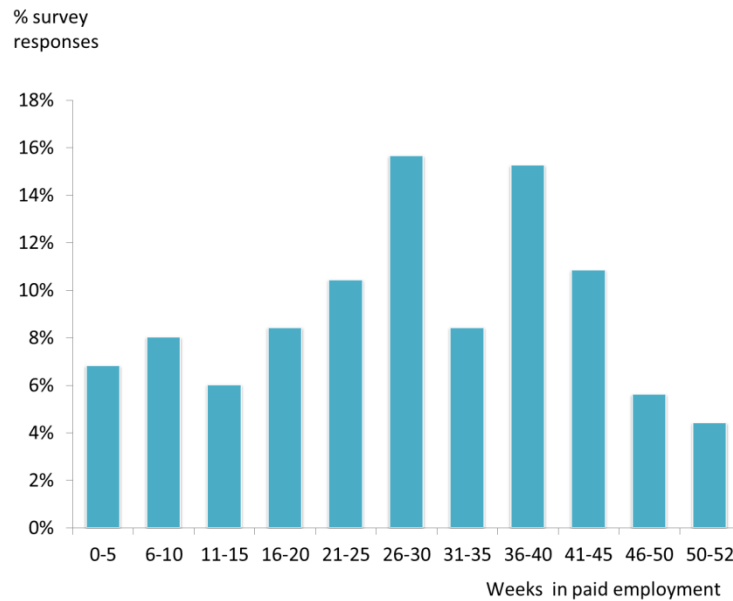
Source: CBS, Eurostat, SEO, LISA, Oxford Economics

In terms of the structure of employment in the Dutch film and audio-visual industry, it is evident that there is a high prevalence of self-employment in the industry. Indeed, according to Eurostat data, nearly 1 in every 3 people engaged in the industry are self-employed, whereas for the wider Dutch economy, this ratio of self-employment is closer to 1 in 6.

Furthermore, analysis of Oxford Economics' survey for 2012 suggests that the majority of individuals in the industry not in full-time employment were in paid jobs for either 26-30 weeks of the year (16% of total respondents) or 36-40 weeks (15%). As such, the average number of weeks that these individuals were in paid employment was less than 30 in 2012, with approximately 30% of individuals indicating that they were in work for less than 20 weeks in 2012 (chart 3.2). In addition, a survey of actors conducted in 2010 found that on average, actors spent approximately 110 days a year in paid or unpaid activities specifically as an actor, generating an estimated 58% of their annual income from acting, with a further 50 days a year in engaged in other activities (either in film and TV related activities or other employment)¹⁸.

¹⁸ 'Spelen voor de kost. Werk en inkomsten van acteurs in Nederland', IVA beleidsonderzoek en advies (2010). Commissioned by NORMA, ACT, NtB and FNV Kiem.

Chart 3.2: Average number of weeks of employment of self-employed and part-time employees

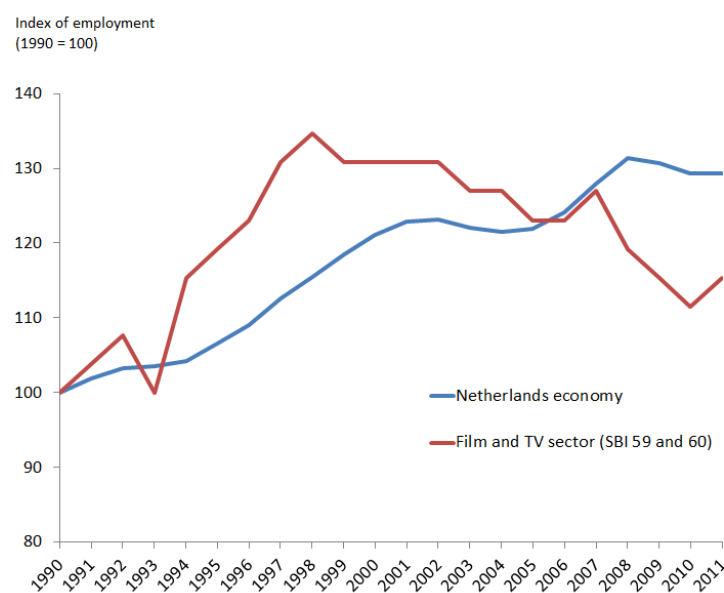


Source: Oxford Economics

It is perhaps unsurprising therefore that nearly 12% of respondents to Oxford Economics' survey indicated that they undertake paid employment in an unrelated sector in order to support their income from film and TV, such as in education, retail or food service activities. Also evident from the survey is a trend for individuals in production to partake in unpaid work in the industry, with two thirds of all respondents indicating that they worked for free for up to 10 weeks of the year in 2012.

National statistics data since 1990 illustrates the evolution of employment in the film and audio-visual industry in the Netherlands over the last two decades. This is presented in Chart 3.3 and shows that after a significant period of growth in the early to mid-1990's, employment subsequently stagnated and has in more recent times, fallen quite substantially. As such, total employment in the industry has fallen by over 14% since the peak level experienced in 1998.

Chart 3.3: Employment growth since 1990



Source: CBS, Oxford Economics

3.3 Contribution to GVA

In order to estimate the GVA contribution of the Dutch film and audio-visual industry, Oxford Economics have combined a number of data sources. Primarily, this involved using national statistics, available through either Eurostat or the CBS. Combining these with data presented in various industry publications, as well as analysis of the Oxford Economics survey, allowed for a more disaggregated breakdown of GVA for the industry to be calculated.

As such, it is estimated that the combined Dutch film and audio-visual industry contributed an estimated €1.7 billion to the economy of the Netherlands in 2011, equivalent to 0.29% of the total economy¹⁹. The total turnover of the film and TV industry was estimated to have been greater than €4.3 billion²⁰.

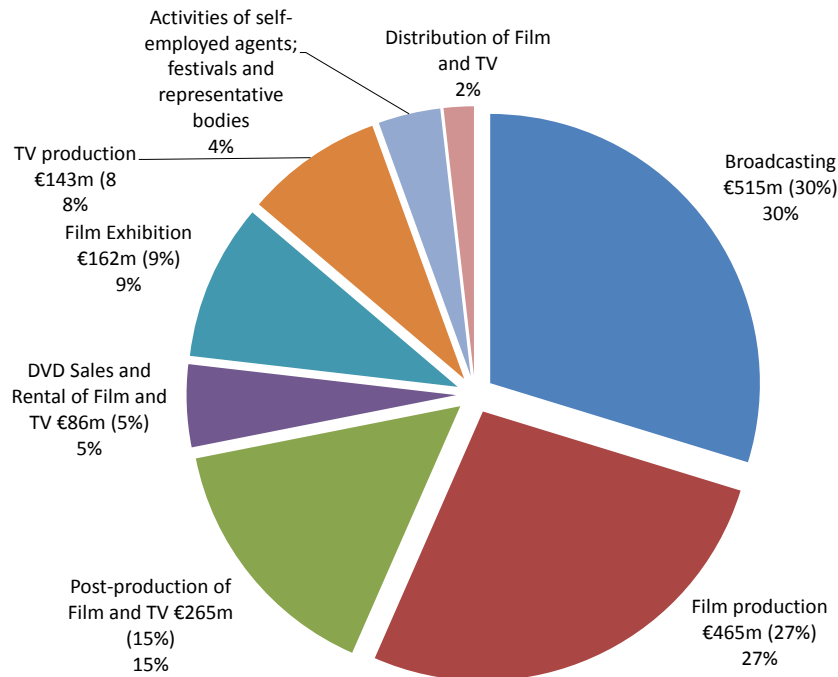
When reviewing the breakdown of the total GVA impact by sub-sector, as illustrated by chart 3.4, it is the TV broadcasting sector that accounts for the largest contribution of the Dutch film and audio-visual industry. Indeed, nearly one-third of the entire direct economic impact of the industry is generated by the activities of the TV broadcasters (equating to nearly €520 million), despite only accounting for 13% of total employment. This suggests that the TV broadcasters are highly productive – that is to say they are able to generate a large value added contribution per person employed. As such, in 2011, every person employed by the TV broadcasters generated an average of €124,000 in GVA, twice that of the economy average.

In contrast, the activities of DVD, video and Blu-ray retail and rental outlets generated just 5% of the total direct impact of the film and TV industry, despite accounting for 16% of employment. This mirrors the relatively lower levels of productivity exhibited in the wider retail sector. Unfortunately the data does not allow us to robustly break out Film production or Post-production of film and TV further.

¹⁹ In comparison, SEO Economisch Onderzoek (2012) estimated that the Dutch film and TV industry generated €845 million in GVA in 2009. This figure was based on Eurostat data for the SBI code 59.1 'Motion picture and television programme production and distribution'. As such, the current report encompasses a much wider definition of the industry and therefore the two figures are not directly comparable.

²⁰ This includes SBI 59 and 60, as well as the output of DVD, video and Blu-ray sales and rental and an estimate for self-employed agents. As such, it is not possible to strip out the activities of 'sound recording and music publishing' (SBI 59.20), or those of 'radio broadcasting' (SBI 60.10) from the estimate for total output.

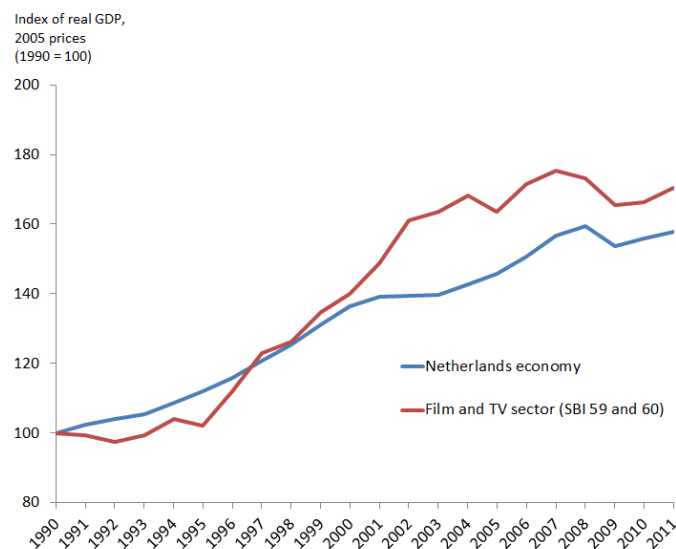
Chart 3.4: GVA contribution of the Dutch film and audio-visual industry in 2011



Source: CBS, Eurostat, SEO, LISA, Oxford Economics

Again, analysing historical data on the performance of the film and TV industry can give an indication on how it has performed over the last two decades. As such, chart 3.5 illustrates this evolution – suggesting that although film and TV has outperformed the wider Dutch economy over this period – much of this growth was achieved during the late 1990s and early 2000s. In terms of the real GVA contribution of the film and TV industry in the Netherlands, the figure in 2011 is only marginally higher than that of 2004. The contribution to GVA has however fared better than employment, which has fallen since the levels experienced in the early 2000s.

Chart 3.5: GVA growth since 1990



Source: CBS, Oxford Economics

Box 3.3: The CV Measure Between 1999 and 2007, the Netherlands introduced a package of incentives for the creation of an economically viable film industry in the Netherlands. One of the measures was the CV measure or 'CV maatregel'. The measure was a tax shelter put in place to encourage private investment in Dutch film, in order to enhance the market orientation of the film industry, to increase the production volume, strengthen the infrastructure and broaden the focus on the international market.

The CV measure enabled private individuals to invest in films by acquiring shares as limited partner in a Dutch limited partnership ('CV'). As limited partner, private individuals became entrepreneurs, benefitting from general tax incentives for entrepreneurs, such as off setting their share in the production costs of films against their personal income. They also benefitted from film specific tax incentives, such as the film investment allowance, creating an extra offset against their personal income. Shares in CV's were offered via banks and financial middle men to private individuals.

One could say that with the CV Measure the Netherlands was one of the pioneers in Europe when it comes to economic measures for film. In the period 2000 - 2007 the tax shelter stimulated film production in the Netherlands. Initially there was no cap on the tax losses incurred by the CV measure to the state. For 2002 and the years thereafter a cap on tax losses was introduced varying from time to time around approximately € 20 million.

The CV Measure contributed to the enhancement of the market orientation of the film industry, the increase of the production volume and the quality of films, the strengthening of the infrastructure, specialized labour and to a broader focus on the international market; the initial goal – the creation of film industry that can survive without any state support - was not yet met. At first the CV-vehicle was not equipped with spending requirements in the Netherlands. Later this was introduced to a part of the investment but not as a multiplier effect as we know it from European economic measures presently in use. Furthermore the CV involved considerable administrative costs. At the time the choice was not made to reform the CV Vehicle into a cost effective and sustainable measure. The tax shelter came to a halt in 2007.

The beginning of the incentive heralded a period of fast growth in GVA, with growth of 20.3% between 2000 and 2004. The reduction in employment starting in 2003 coincided with the introduction of tax incentives in Belgium and other neighbouring countries and the continuing uncertainty about the CV measure itself. It is possible that job losses within the sector could have been more severe if the CV measure had not been in place.

The average productivity of employees in the film and TV industry, determined by the amount of GVA generated per employed person, is equal to €53,600. This is approximately 14% lower than the economy-wide average of €62,000²¹. This low level of productivity could be indicative of a number of factors – such as the higher level of self-employment prevalent in the industry compared to the wider Dutch economy, or an indication that the prevailing wage rate is lower than the wider economy and that operating margins for businesses are tighter.

The level of labour productivity has however steadily increased over the last 20 years. Indeed, since 2000, productivity in the industry has increased by nearly 40% in real terms, as the GVA contribution of the industry has been sustained despite the fall in employment.

²¹ Eurostat 2011, based on the total economy GVA (at basic prices) divided by total employment.

3.4 Tax Revenue

In calculating tax revenue, Oxford Economics are looking to estimate the total amount of revenue that accrues to the government through a number of different channels – to include corporation tax on company profits, employee income taxes, social security contributions (both employee and employer) and other indirect taxes paid by individuals (such as VAT and council taxes on domestic property they may own or rent). The methodology behind the calculation of each stream of income is detailed below:

- In order to calculate the amount of corporation tax collected from the Dutch film and audio-visual industry, it was necessary to estimate the amount of profit generated by the industry. Recalling that the GVA of an industry can be calculated as the sum of pre-tax profits and employee compensation (see section 1.4), industry profits were estimated by applying the ratio of gross operating surplus (i.e. pre-tax profits) to GVA for the film and TV industry (SBI 59 and 60), implied by the 2011 domestic-use input-output table. To this was applied the effective corporation tax rate, calculated by dividing the total value of corporation tax receipts in the Dutch economy by the total value of corporate profits²².
- Once pre-tax profits were estimated, it follows that the remainder of GVA accrues to employees in the form of wages and salaries. Dividing this value by the total level of employment in the industry gives an estimate of the average wage of an employee in the film and TV industry, to which was applied the appropriate income tax rate, sourced from the Netherlands tax authority website²³.
- Social security contributions and the amount of indirect tax revenues collected through the activities of the Dutch film and audio-visual industry were approximated by calculating the ratio of total indirect taxes and total social security income to GVA in the wider Dutch economy²⁴, and applying each ratio to the GVA contribution of the film and TV industry.

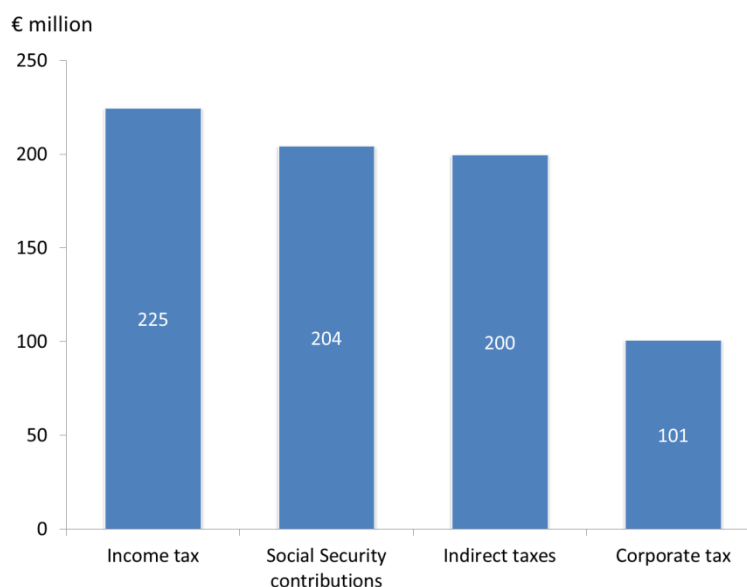
Chart 3.6 illustrates the breakdown of the direct tax revenue of the Dutch film and audio-visual industry in 2011. In total, it is estimated that the industry generated approximately €730 million in revenues for the Netherlands economy, to help support essential public services. This is equivalent to 0.27% of total revenue collect by the Dutch government in 2011, a similar ratio to the GVA contribution of the industry.

²² Taken from the Oxford Economics Global Macroeconomic Model.

²³ www.belastingdienst.nl

²⁴ Taken from the Oxford Economics Global Macroeconomic Model.

Chart 3.6: Direct tax revenue generated by the film and TV industry in 2011



Source: Dutch Tax Authority, CBS, Oxford Economics

3.5 Capital Investment

Businesses primarily invest in new capital goods to increase their productive capacity. By facilitating more efficient production techniques, investment in new equipment or buildings will reduce long-term costs, increase competitiveness and ultimately raise profits. As such, an increase in the level of capital investment is a supply-side measure that will increase the potential output for a given amount of labour.

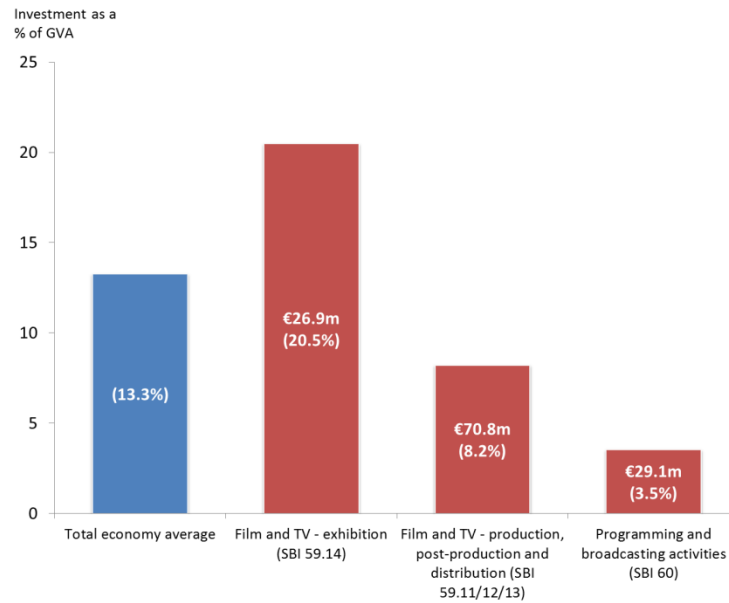
A significant amount of investment in the film and TV industry will be made in, for example, the development of studio locations and sets, the purchase of film equipment and computer systems, and in the building and refurbishment of cinema facilities.

Chart 3.8 illustrates the investment ratio (gross investment as a proportion of GVA) for the film and TV industry, compared to the wider Dutch economy. Data has been sourced from Eurostat, which provides statistics on the value of gross investment in tangible goods by industry²⁵. The latest available data is for 2010. It is evident from chart 3.7 that while the firms in the exhibition of film and TV continue to invest heavily in new capital, the rest of the industry exhibits a much lower level of investment in comparison to the wider economy. Indeed, the Dutch film and audio-visual industry spent around €130 million on capital investments in 2010, equating to around 7.5% of the total contribution to GVA of the industry²⁶. This is nearly 5 percentage points lower than the economy wide average level of investment.

²⁵ Gross investment in tangible goods is defined as investment during the reference period in all tangible goods. Included are new and existing tangible capital goods, whether bought from third parties or produced for own use (i.e. Capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land. Investments in intangible and financial assets are excluded.

²⁶ The Dutch film and TV industry for the purposes of analysing capital investment expenditure is defined as all activities constituting SBI codes 59 and 60, excluding the Sound recording and music publishing activities (SBI 59.20).

Chart 3.7: Investment ratio of Dutch film and audio-visual in 2010

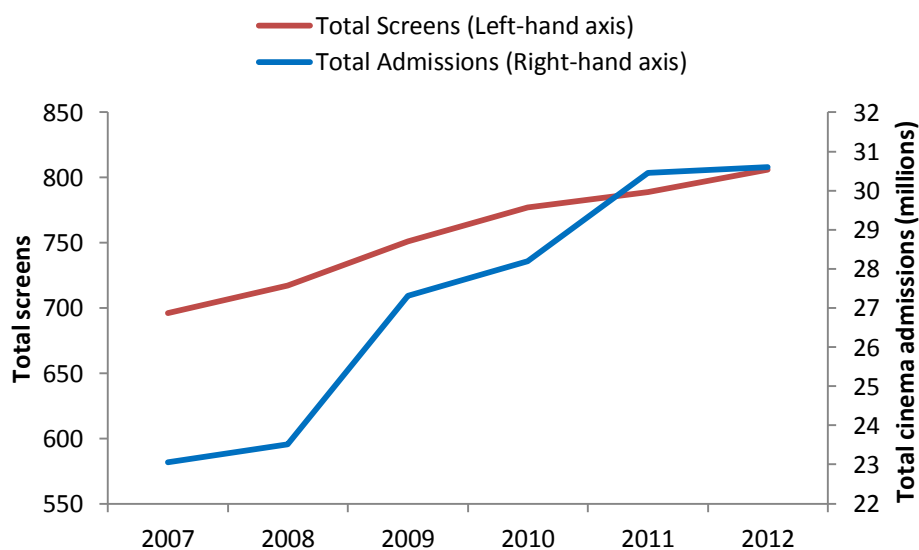


Source: Eurostat

The film exhibition sector has however undertaken significant expansion over the last 5 years (2008-2013) in order to keep pace with the increase in cinema admissions of over 30% since 2008. With 9 new cinemas and 93 new screens having been installed since 2008, capacity in terms of the number of available seats has increased by over 14% during this period. This level of growth has brought to total number of cinemas to 252, holding a total of 806 screens in 2012.

On top of this, the Netherlands was one of the first countries worldwide to fully digitise its cinemas in September 2012, following the completion of 'Cinema Digitaal' – a unique public-private digitisation program initiated by the Dutch Cinema Exhibitors' Association, the Dutch Film Distributors' Association and the EYE Film Institute Netherlands. In total, the project cost €39 million, of which the largest contribution came from film distribution companies active in the Netherlands, and was completed in just 14 months.

Chart 3.8: Total cinema admissions and screens 2007-2012



Source: Dutch Exhibitors and Distributors Association NVB/NVF

4 Multiplier analysis

This chapter builds on the results presented in chapter 3 by outlining the wider impacts of the Dutch film and audio-visual industry through the indirect and induced channels of impact.

Box 4.1: Key messages

- The Dutch film and audio-visual industry helps to support an additional 33,400 jobs through the indirect and induced channels of impact, bringing the total employment of the industry to 65,700.
- For every job supported by the film and TV industry, a further 1.03 jobs are created in the wider economy.
- In total, the Dutch film and audio-visual industry contributed an estimated €3.6 billion to the economy of the Netherlands, through the direct, indirect and induced channels of impact. This is equivalent to over 0.6% of the whole economy.
- In particular, the film and TV industry maintains strong links with the wider cultural sector in the Netherlands. Indeed, supply-chain expenditure by the industry helps to support over €350 million of GVA in the arts and culture sector alone.
- Including the multiplier impacts, the total tax revenue generated by the film and TV industry in 2011 was estimated to be nearly €1.6 billion, helping to fund important public services in the Netherlands.
- By exploring the multiplier impacts of the Dutch film and audio-visual sector, the impact of public funding can be viewed in a wider context to encapsulate the employment and economic contribution in the whole economy.

4.1 Introduction

In addition to its direct economic contribution, the Dutch film and audio-visual industry supports activity and employment in the wider economy through the indirect and induced channels of impact. Through the purchase or leasing of goods and services produced in the Netherlands, the film and TV industry supports businesses in its domestic supply chain, for example, in the manufacture of equipment sold/rented to production companies, the manufacture of goods sold at cinemas, the spending of film crews on hotels and accommodation, business expenditure on TV, radio and other advertising, and a wide variety of activity in the business services sector.

Furthermore, individuals employed through both the direct and indirect channels of impact spend their wages on goods and services in the wider economy. This generates additional activity and employment in the industries that support these purchases, such as retail and leisure outlets, real estate and food and accommodation. As such, it is important to include both the indirect and induced channels of impacts when evaluating the total economic contribution of the Dutch film and audio-visual industry.

The indirect and induced impacts of the Dutch film and audio-visual industry are modelled through the application of domestic-use input-output tables. Domestic-use input-output tables are released by the CBS to provide a complete picture of the flow of products across different sectors in the Dutch economy, illustrating the relationships between different producers and consumers of goods and services²⁷. The latest available input-output tables released by the CBS are for the calendar year 2011.

²⁷ For more detail on input-output methodology, please refer to the Appendix.

Another important consideration when evaluating the total impact of an industry is to ensure all elements of double counting are removed so as to not over-estimate the impact of the industry. Double counting occurs when a single transaction is counted more than once. In the case of the Dutch film and audio-visual industry, this may occur when, for example, a film production firm employs the services of a post-production firm. In this instance, the activity of both the production and post-production firms will be captured in the direct impact of the industry. However, the post-production firm also forms part of the supply chain of the production firm and, as such, the activity would be counted a second time as part of the indirect effect.

Another example would be when employees engaged in the film and TV industry choose to visit a cinema in their leisure time. This transaction would be included in the direct impact of the industry through the effect it has on the film exhibition sub-sector. As such, it should be removed from the induced channel of impact to ensure it is not counted a second time.

By illustrating the relationship between different producers and consumers of goods and services in the economy, input-output tables also illustrate the volume of goods and/or services that each industry purchases from companies engaged in the same industry (e.g. agricultural companies buying goods from other agricultural companies, such as cattle feed, representing an output for one company but an input to production to the other). It is thus possible to make adjustments in the model to account for these purchases and, as such, remove the element of double counting in the indirect calculations. In a similar fashion, the input-output table indicates the average proportion of household disposable income that is spent in the domestic film and TV industry, allowing for appropriate adjustments to be made to the induced calculations.

4.2 Methodology

The starting point in calculating the indirect impact of Dutch film and audio-visual is to estimate the value of total intermediate consumption of the industry – that is the value of goods and services that constitute the total quantity of supply chain purchases made. Remembering that the GVA is simply the value of an industry's output (goods or services) less the value of inputs used in the production of those outputs (excluding wages and salaries), this was done by subtracting GVA from total output, as presented in section 3.3.

The value of intermediate consumption is then allocated to individual industries according to the breakdown of industry purchases in the latest domestic-use input-output table, allowing for a certain amount of 'leakage' through imports from abroad. After removing the value of purchases in the film and TV industry (to remove double counting), the next step in estimating the indirect impact was to examine the effect of this expenditure on the total sales of each industry in the supply chain. This is done for each industry by calculating multipliers that are used to show the impact of the intermediate consumption of the film and TV industry on all other industries in the Netherlands²⁸. As such, the impact on both first-tier and second-tier suppliers further down the domestic supply chain can be modelled.

The induced impact is modelled in a similar fashion. Using an estimate for total employee compensation calculated as part of the direct tax estimates, Oxford Economics can model the typical spending profile of employees of the film and TV industry and its suppliers, by allocating consumer expenditure to different industries according to the same distribution to household expenditure identified in the input-output table (again, removing expenditure in the film and TV industry and allowing for leakages in the form of imports).

In each case, the impact on employment can be estimated by using the prevailing GVA-to-employment ratios in each industry in the supply chain, obtained from Eurostat.

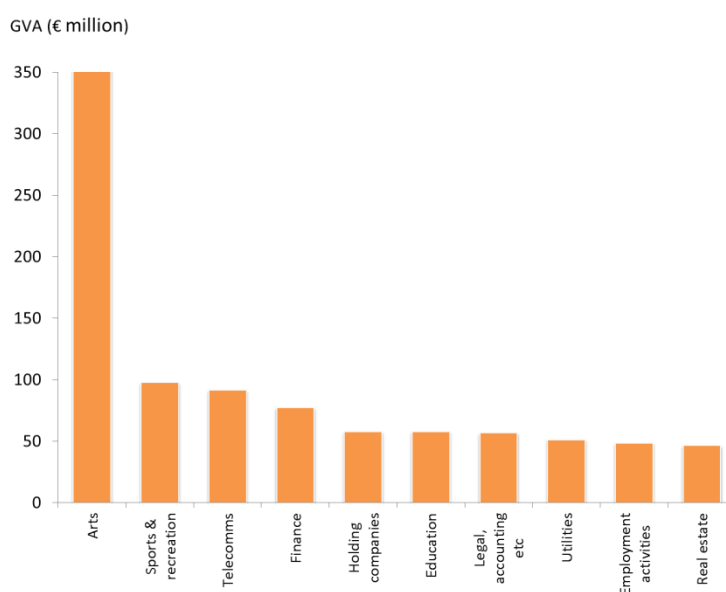
²⁸ See the Appendix for a further examination on input-output tables and the calculation of multipliers

4.3 The indirect and induced economic impacts

Oxford Economics estimate that in 2011, the Dutch film and audio-visual industry supported an estimated 24,900 jobs in its supply chain. Some of the sectors particularly benefiting from this impact include the Arts, Culture and Lotteries sector²⁹, Sports and Recreation and the activities of firms engaged in Employment Placement, the Provision of Temporary Employment and Payroll services. These employees helped to support over €1.3 billion in indirect GVA and generated tax revenues approaching €580 million.

Chart 4.1 presents the breakdown of the indirect GVA impact by the largest industries, illustrating the close links between the film and TV industry and other creative industries in the Netherlands. Indeed, the indirect impact on the Arts sector, at over €350 million, is over 3 times higher than the next largest sector. Consequently any decline in the Dutch film and audio-visual sector will be felt most acutely by other creative industries.

Chart 4.1: Indirect impact of the Dutch film and audio-visual industry in 2011



Source: CBS, Oxford Economics

Furthermore, Oxford Economics estimate that an additional 8,400 jobs are supported through the induced impact of those people employed through both the direct and indirect impacts spending their wages on Dutch produced goods and services. These jobs were predominately supported in the Real Estate, Finance and Insurance, Telecommunications and Utilities sectors. In total, it is estimated that nearly €570 million in GVA was supported through the induced impact, generating €235 million of additional revenue for the government through corporation, employee income, social security and other indirect taxes.

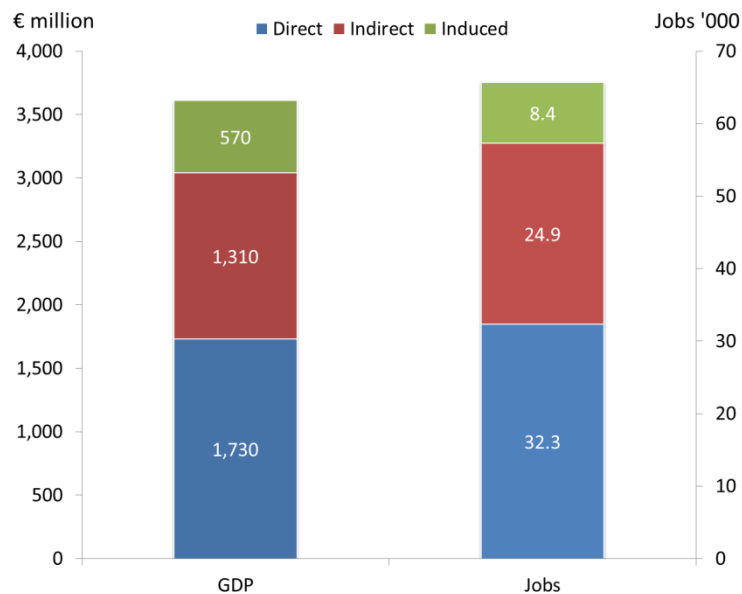
4.4 Total economic impact

In 2011, the Dutch film and audio-visual industry, through the direct, indirect and induced channels of impact, generated an estimated €3.6 billion in GVA, equivalent to around 0.60% of the entire Dutch economy. In

²⁹ Including a wide range of activities catering for various cultural, entertainment and recreational interests of the general public, including live performances, operation of museums, libraries, archives, botanical and zoological gardens, historical sites etc., and the operation of gambling facilities such as lotteries.

doing so, over 65,700 jobs were supported by the activities of the industry, approaching as much as 0.89% of total employment in the Netherlands. Chart 4.2 illustrates the total economic impact of the film and audio-visual industry in the Netherlands, split by the direct, indirect and induced impacts.

Chart 4.2: Total economic impact of film and audio-visual in 2011



Source: Oxford Economics

The Dutch film and audio-visual industry has an employment multiplier of 2.03³⁰. This means that, for every person employed directly by the industry, a further 1.03 jobs are supported in the wider economy through the indirect and induced channels of impact. In the same respect, the associated GVA multiplier is 2.08. **The presentation of multiplier impacts in the Film and audio-visual sector are especially pertinent when considering the potential impact of future cuts in public funding. As illustrated in section 2, public funding is set for a dramatic reduction in 2013 from previous levels. These cuts will not only impact the activities of firms directly engaged in the sector, but will be accentuated through the wider economy through the indirect and induced channels.**

According to CBS, there are more than 8,000 Dutch companies involved with production, distribution and exhibition of film in the Netherlands. Three quarters of these companies are engaged in film production (note: this does not include television films though most Dutch film production companies also produce television films). In addition there are 2,200 companies who offer other facility activities, such as subtitling, dubbing, editing, camera people, consultants, audio, video and lighting technicians and rental of sound and light equipment. The number of distributing companies currently stands at 30 and cinemas at 110.

The total economic impact of the film and audio-visual industry is also presented in table 4.1, including the total tax revenue generated for the government. As such, it is estimated that in 2011, the activities of the film and audio-visual industry contributed nearly €1.6 billion in tax revenue through the direct, indirect and induced channels of impact.

³⁰ The employment multiplier is calculated by dividing the total employment supported by the Dutch film and TV industry (65,700) by the direct employment (32,300)

Table 4.1: Total economic impact of the Dutch film and audio-visual industry in 2011

		Direct	Indirect	Induced	Total	% economy
Gross Value Added	€ million	1,730	1,310	570	3,610	0.60%
Employment		32,340	24,940	8,420	65,700	0.89%
Tax revenue	€ million	730	580	240	1,550	0.56%

Source: Eurostat, CBS, LISA, SEO, Oxford Economics

5 International competitor analysis

This section provides a brief discussion of the health of competitor's film industries. We compare and contrast growth rates, size and state support where available. Case studies for selected economies are provided at the end of the section.

Box 5.1: Key messages

- The EU has enjoyed employment growth in sectors 59 and 60 despite general contractions in the wider labour market. The sectors in five countries that we have looked at have grown by double digit growth since 2008 (Italian jobs grew by nearly 50%);
- The presence of the global financial crisis and its unique economic legacy makes it difficult to determine how much of the growth was due to public support schemes;
- The level of state support per capita varies dramatically across countries in the EU;
- There is a positive relationship between the level of state support per capita and employment growth in a selection of European countries;
- There is also a positive relationship between state support and employment in sectors 59 and 60 as a share of the wider economy;
- Existing studies on the impact of film incentives reinforce our findings that there can be a positive correlation between incentive and growth in the sector.
- Capital, talent and employment transfer abroad due to lack of level playing field

5.1 Current trends

Eurostat provides employment data for sectors 59 (motion picture, video and television programme production, sound recording and music publishing activities) and 60 (programming and broadcasting activities) starting from 2008. A more detailed discussion is provided in Section 3. Unfortunately, data is not available pre-2008 nor is it available for all countries post 2007. Table 5.1 sets out the scale of employment growth over the period 2008 to 2011. The average rate of employment growth over the period 2008 to 2011 was 8.3% for the EU 28³¹ and 10.8% for the EU15. Within this there have been significantly different levels of performance. Italy recorded growth of over 45% while Austria contracted by over 19%. The Netherlands was in the bottom half of the league table after contracting by 3.2% to 2011.

³¹ The 28 EU member states comprising of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom.

Table 5.1: Employment growth in the EU, 2008 to 2012

Growth in employment (2008 to 2011)	Sectors 59 and 60	Total economy employment
Italy	45.3%	-1.9%
Ireland	36.9%	-12.2%
Belgium	12.3%	1.3%
France	12.0%	-0.7%
EU 15	10.8%	-2.0%
Norway	10.7%	0.1%
Sweden	10.1%	0.1%
EU 28	8.3%	-2.1%
Finland	3.7%	-2.8%
Germany	1.6%	2.8%
Denmark	0.0%	-5.8%
United Kingdom	-0.6%	-1.6%
Poland	-0.8%	2.1%
Czech Republic	-1.3%	-2.1%
Netherlands	-3.2%	-2.8%
Hungary	-3.9%	-1.8%
Switzerland	-7.4%	2.9%
Spain	-12.5%	-10.7%
Greece	-17.4%	-10.2%
Austria	-19.2%	1.2%

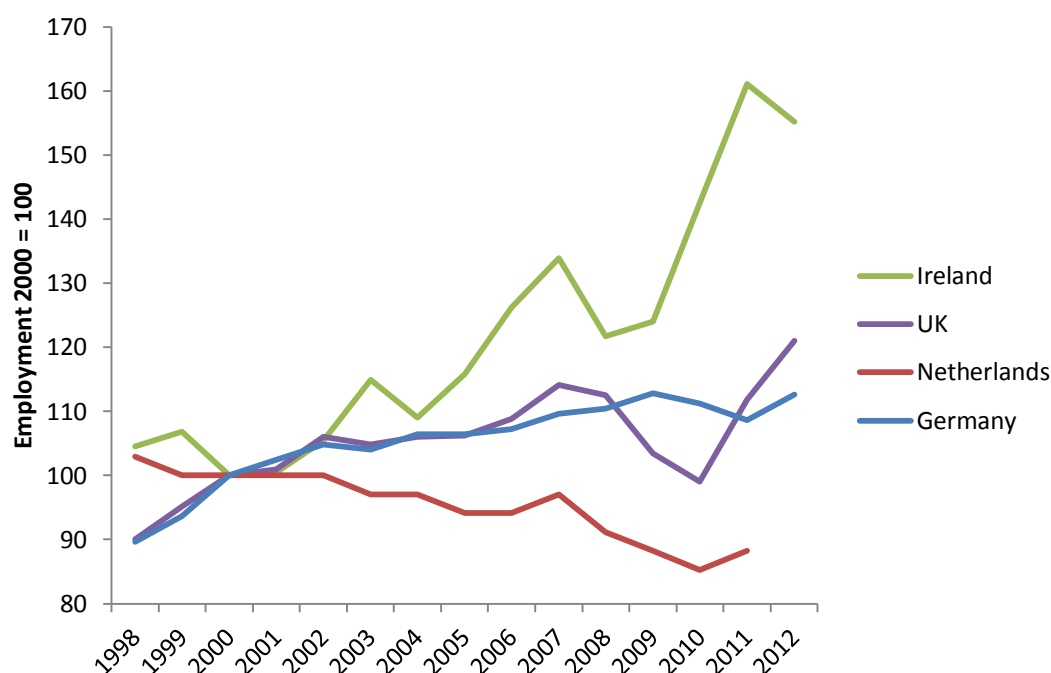
Source: Eurostat, ONS, CEO, DESTATIS and Oxford Economics

Note: shaded cells highlight negative growth

The presence of the global financial crisis and the unique economic legacy makes it difficult to determine how much of the growth was due to public support schemes. Interestingly the four fastest growing nations Italy, Ireland, Belgium and France all have both cultural support schemes as well as economic schemes such as tax shelters, tax rebates and cash rebates, cultural support schemes as well as incentives to attract inward investment and public support for their domestic film and audio-visual sector. For three of these economies, total economy employment fell over the period. The success of the film industry therefore stands out more than if the general economy had have been growing.

The chart below plots employment in the film and audio-visual sector in selected economies. Only Germany avoided a post 2007 contraction. All of the countries in the chart have public support for films. Ireland has experienced strong growth since 2000. The economy has had an incentive to invest in films since 1987, however it strengthen support in 2008 (see case study later). Since then employment in the Irish sector grew by 36.9% from 2008 to 2011 (though we cannot isolate the effects of the policy change).

Chart 5.1: Employment trends in selected countries (2000=100)



Source: Eurostat, ONS, CEO, DESTATIS and Oxford Economics

Germany and the UK introduced incentives in 2007 and there are no obvious improvements in the performance of their film and audio-visual sectors (when measured through employment in sectors 59 and 60). Though as noted above this could be due to the unique economic environment post 2007.

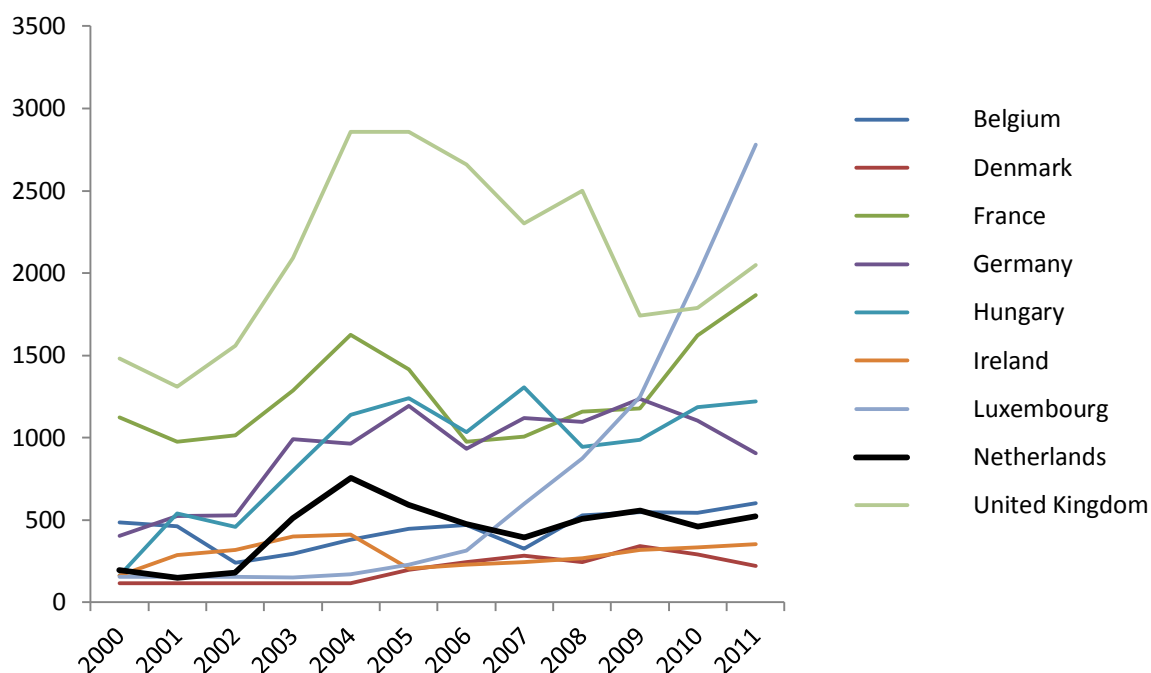
Chart 5.2 plots the value of audio-visual exports³² by EU economy. It is clear Luxembourg has enjoyed exceptional growth in recent years. Luxembourg has had incentives since 1989, but it reformed these in 2007. Indeed it has exceptionally high levels of public support as discussed below. This may explain some of the rapid growth in exports.

Despite export growth of 404% between 2001 and 2004 in the Netherlands (when the legacy of the Netherlands financial incentive (the CV measure) was still taking effect), exports have subsequently made little progress, declining by 31% from this 2004 peak.

³² Exports from a given Member State are *goods* which leave the statistical territory of the Member State bound for a non-member country, having gone through the customs export procedure (final export, export following inward processing, etc.); or the customs outward-processing procedure (usually goods destined to be processed, transformed or repaired for subsequent re-import). established in another Member State.

Chart 5.2: Total exports of the audio-visual and related services sector, Netherlands and selected competitors, US Dollars (millions / current prices), 2000-2011

Exports: Audio-visual and related services
US Dollars (millions / current prices)

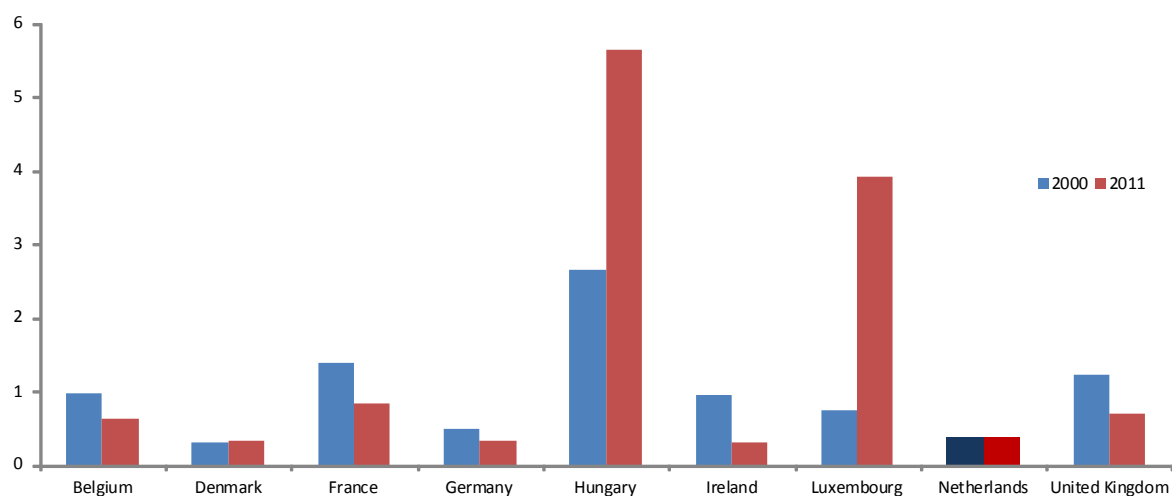


Source: UNCTAD, UNCTADstat and Oxford Economics

The Netherlands has tended to lag behind its competitors – even displaying negative growth in 5 out of the last 12 years. As a proportion of total trade in services, the Netherlands have a comparatively small proportion of audio-visual service exports (chart 5.3), which can in part be attributed to the distinctive language of Dutch domestic productions.

Chart 5.3: Audio-visual exports as a percentage of total service exports (%), 2000 and 2011

Exports: Percentage of total trade in services, 2000 and 2011
(%)



Source: UNCTAD, UNCTADstat and Oxford Economics

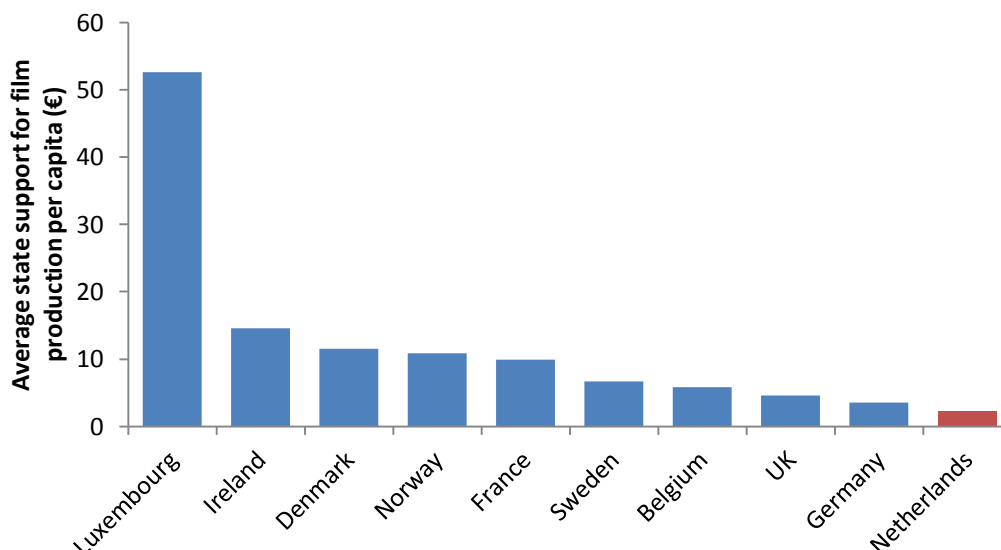
In 2011, Hungary, Luxembourg, France, the United Kingdom and Belgium exported a higher proportion of film-related services. However, despite audio-visual exports as a percentage of total exports only growing by 1.4% between 2000 and 2011 in the Netherlands, it is still a positive sign that growth has been experienced – considering that 5 of the key competitors to the Dutch film and audio-visual industry experienced a significant fall in the share of audio-visual exports over the 11 year period.

5.2 State support and economic incentives

The Netherlands Film Fund publishes data on the average State support for film production per capita. Chart 5.4 shows that support differs widely. Luxembourg provides some €52.65 per capita compared to €6.65 per capita in Sweden and only €2.26 in 2012 and € 1.43 in 2013 in the Netherlands. There are over 200 known economic incentive schemes in Europe that aim to increase activity and employment in the sector. They typically take one of the following forms:

- A tax rebate that is linked to spending in the local economy (e.g. France, Italy, UK, Hungary and Ireland);
- A cash rebate that is linked to spending in the local economy (e.g. Germany, Belgium, Italy, France, UK and Norway); and
- A tax shelter for investments in national film productions, which is linked directly or indirectly to spending in the local economy (Belgium and Luxembourg).

Chart 5.4: Average state support for film production per capita (€)

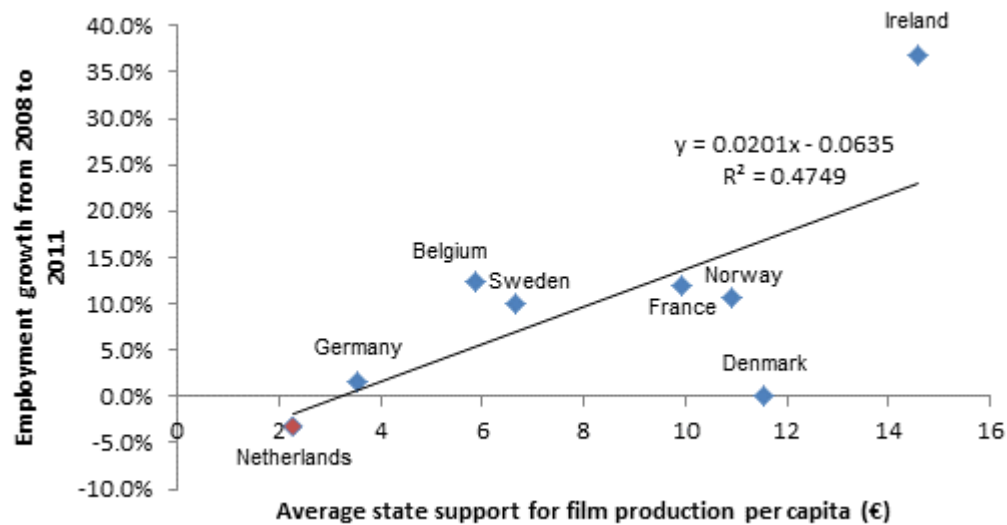


Source: Netherlands Film Fund

It is difficult to relate growth back to specific incentives, however there is evidence that higher support coincides with faster employment growth. This is not only attributable to internal employment growth, but an incentive has the ability to attract capital, people and talent from across borders. This in turn has a negative impact upon areas which do not offer such incentives, as talent and skills are lost across borders to those who offer more attractive financial and employment opportunities. Chart 5.5 plots state support for film production against employment growth in the film and audio-visual sector. There is a clear positive correlation between the two variables. Interestingly the relationship is much stronger when Denmark is

omitted from the analysis. The R squared rises from 0.47 to 0.79 (i.e. nearly an increase in average state support will be associated with an 80% increase in employment growth).

Chart 5.5: Employment growth from 2008 to 2011 versus state support for film production



Source: Netherlands Film Fund, Eurostat and Oxford Economics

Worryingly, state support will fall from €2.26 to €1.43 in 2013. If the sector follows the relationship above, we would not expect to see notable growth in the sector this in 2013.

5.3 Existing evidence: benefits of incentives

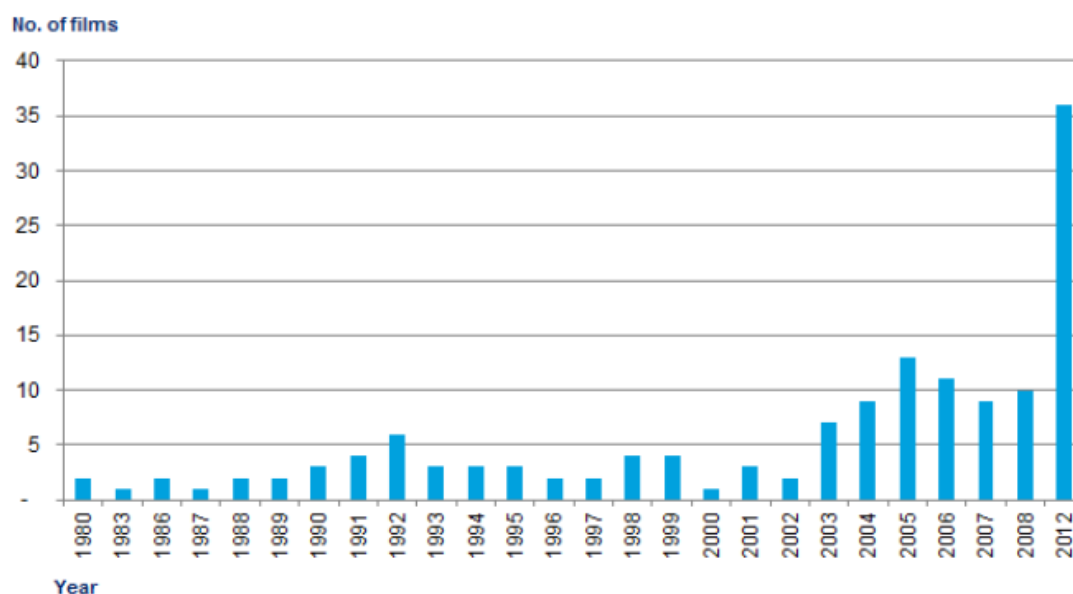
In discussing the Irish Film Board Bill 2011, the Minister for Arts, Heritage and the Gaeltacht (Deputy Jimmy Deenihan) noted *“The film and television industry is labour-intensive and by its very nature, any investment in production creates employment. On average, 70% of each production budget is expended on labour costs. In the past six years, 2006 to 2011, the Irish Film Board expenditure is as follows: total budgets of the productions stood at €501 million; Irish Film Board investment stood at €58 million and Irish spend on the productions stood at €252 million. Therefore, every euro invested by the board in production produces almost a tenfold return on that investment.”*

In his keynote speech to the Dutch Film Summit in April 2013, Simon Perry (ex-chief Executive of the Irish Film Board 2006 to 2010) noted:

- That support to the film sector in Ireland resulted in a tenfold increase in the 20 years to 2013;
- He also provided evidence that in the first five years of Germany’s DFFF scheme each €1 of funding generated expenditure in Germany of €6.08;
- Both Ireland and Germany had implemented a cost neutral scheme to encourage investment; and
- In Belgium the tax shelter had a leveraging factor of 1.5 and calculated a 250% increase in number of films produced between 2003-2010.

In its 2013 report “South African Film Industry Economic Baseline Study” the National film and Video Foundation found that for every R1 spent in the industry, another R1.89 was generated with the South African economy. In others the sector delivered a multiplier of 2.89. The chart below (taken from the report) shows the number of films being produced in South Africa. The report notes that the DTI’s film incentive in 2004 has been a catalyst for film production.

Chart 5.6: Number of South African Films produced per annum



Source: National film and video foundation South Africa

5.4 Case studies

As aforementioned, there are over 200 known economic incentive schemes in Europe that aim to increase activity and employment in the sector. The boxes below provide the reader with additional information on a selection of these European incentives currently available to the film and audio-visual sector, as well as South Africa, which has been included in our analysis above.

Box 5.2: Case Study: The Belgian film and audio-visual Industry and the ‘tax shelter’ incentive

Table 5.2: Snapshot of the economy in Belgium in comparison to the Netherlands

	Belgium (2012)	Netherlands (2012)
Population (millions)	10.9	16.7
GDP per capita (total, US\$ nominal)	43,621.9	45,958.8
Total Employment (thousands)	4,553.3	7,390.8
SBI 59+60 as percent of total employment*	0.3%	0.4%*

* Uses 2011 data

Source: Oxford Economics, Eurostat

The Belgian film and television industry has transitioned from a sector which had previously suffered from a structural lack of funding.

Tax shelter

A tax incentive has been in place in Belgium from 2002. The Belgian Tax Shelter promotes the production of audio-visual works and films by providing incentives to companies investing in this sector. In the Belgian example, a tax exemption is provided to a maximum of €750,000, amounting to 150% of the invested sum (€500,000 maximum). This can be supplemented in the form of a repayable loan or through direct investment. (Source: <http://www.belgiumfilm.be/>).

Although there are a number of conditions applicable to the incentive, the Belgian government have used these to further fuel growth in the sector – including to specify that the production company must spend at least 90% of the total sums invested (equity and loan) in Belgium for the production of the audio-visual work within a timeframe of 18 months (24 months for animation films). Therefore, supply chain and consumer spending within Belgium is fuelled.

Volume of production

With an annual production of about 34 features, 171 short films and some 75 documentaries, independent film production in Belgium is growing at a rapid rate in light of structural budget planning and incentive. (Source: <http://www.belgiumfilm.be/>).

Finance opportunities leading to success

In Belgium, there are a variety of sources of finance for audio-visual projects. As is the case with all European producers, Belgian producers have access to the main European sources of financing, such as The Council of Europe's Eurimages and The European Commission's MEDIA programme. What sets Belgium apart is that it also has access to the aforementioned tax benefits of the tax shelter. There are also several film commissions to help with locations, logistics and authorisations to film, such as the Flemish Audio-visual Fund (VAF), Screen Flanders, Cinema Wallonia and the Brussels Film Office while in the area of technology, Belgium has developed a high profile in technology solutions.

Sources: Netherlands Film Fund and Belgium Film Industry (<http://www.belgiumfilm.be/>)

Box 5.3: Case Study: The UK Creative Sector Tax Relief System

The importance of tax relief for the UK film industry

Table 5.3: Snapshot of the economy in UK in comparison to the Netherlands

	UK (2012)	Netherlands (2012)
Population (millions)	62.9	16.7
GDP per capita (total, US\$ nominal)	39,159.1	45,958.8
Total Employment (thousands)	32,118.5	7,390.8
SBI 59+60 as percent of total employment*	0.6%	0.4%*

* Uses 2011 data

Source: Oxford Economics, Eurostat

In 2007, the UK government introduced a film tax relief system. Since its introduction, the film tax relief system supported over £5 billion of investment into British films – which in turn sparked a 70% increase in the film production workforce.

As a result of the success of the 2007 tax relief system, the UK introduced targeted tax reliefs for the animation, high-end television and video games industries to further fuel the success of the creative sector as a whole. These reliefs came into place in early April 2013.

About the UK film tax relief

The UK film tax relief aims to promote sustainable production of British films. Consequently British films that are intended to be shown commercially in cinemas and that have spent at least 25% of production costs in the UK, qualify for the incentive. It works as a cash rebate system – offering cash after production of a film rather than as an upfront incentive. The relief system stipulates that the associated production company of a film with a total core expenditure of £20 million or less can claim payable cash rebate of up to 25% of UK

qualifying film production expenditure while for films with a core expenditure of more than £20 million, the film production company can claim a payable cash rebate of up to 20% of UK qualifying film production expenditure.

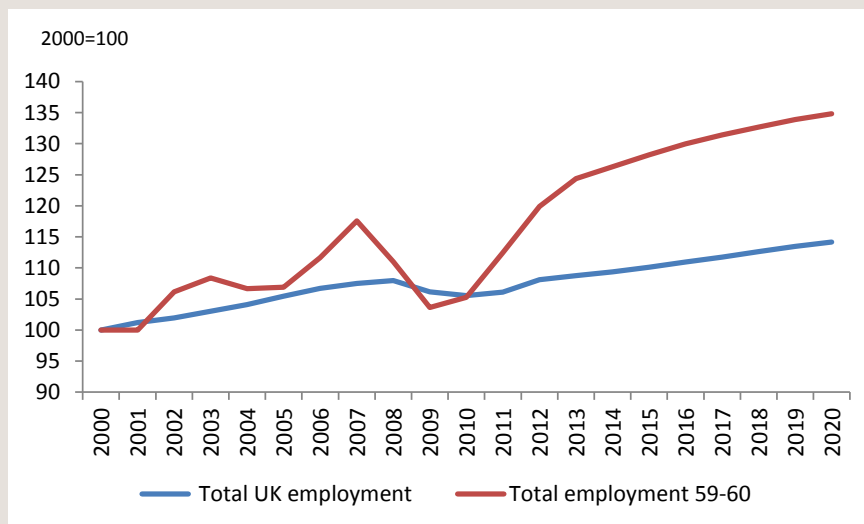
The 2013 additions

Operating within the Government's wider growth and tax agendas, and building on the successful film tax relief (FTR) model, the policy aims of these new reliefs are:

- To promote the sustainable production of culturally relevant productions in the UK through a tax relief that provides support directly to producers;
- To incentivise investment into UK productions that would otherwise take place outside the UK or that would not be economical without relief; and
- To create the necessary critical mass of infrastructure and skills to enable and support production in the UK both today and in the longer term.

Results

Chart 5.7: Employment index SBI 59-60 and total UK employment, 2000-2020, 2000=100



Source: Oxford Economics

Oxford Economics' forecasts suggest that between 2007 (when the incentive was introduced) and 2015, total employment within the film and audio-visual sector will increase by 9.0%. Over the same period, total employment in the UK is predicted to increase by 6.2%, demonstrating that film and audio-visual based employment is expected to grow at a faster rate than the economy as a whole. Between 200 and 2020, total film and audio-visual employment in the UK is expected to grow by 34.8%.

Source: HM Revenue and Customs, Oxford Economics

Box 5.4: Case Study: The German cash rebate and funding incentive

Table 5.4: Snapshot of the economy in Germany in comparison to the Netherlands

	Germany (2012)	Netherlands (2012)
Population (millions)	81.7	16.7
GDP per capita (total, US\$ nominal)	41,584.8	45,958.8
Total Employment (thousands)	41,607.5	7,390.8
SBI 59+60 as percent of total employment*	0.3%	0.4%*

* Uses 2011 data

Source: Oxford Economics, Eurostat

Although US films take a substantial proportion of the domestic box office, German films still maintain over 20% of the share. Part of the reason for its success is the financial offerings, particularly as a shooting location for international productions – such as from the German Federal Film Fund, some 17 regional film commissions and national filming incentives to support production.

About the German tax incentive

The German tax incentive is unique – as the tax law of Germany allows investors to take an instant tax deduction on non-German productions and even if the film has not yet gone into production. The German federal government and regional film funds support filmmakers by a one-of-a-kind film production rebate system of up to 20%. Although this rebate system depends upon local expenditure and film budgets, the overall impact of the rebate incentive and funding scheme has helped to promote growth in the sector.

The importance of the German Federal Film Fund

Coinciding with the tax incentive, the main production incentive is the German Federal Film Fund (DFFF). This is a grant given by the German Federal Commissioner for Culture and the Media. Since its establishment in 2007, the German Federal Film Fund has supported over 520 film productions with grants totaling approximately €296 million.

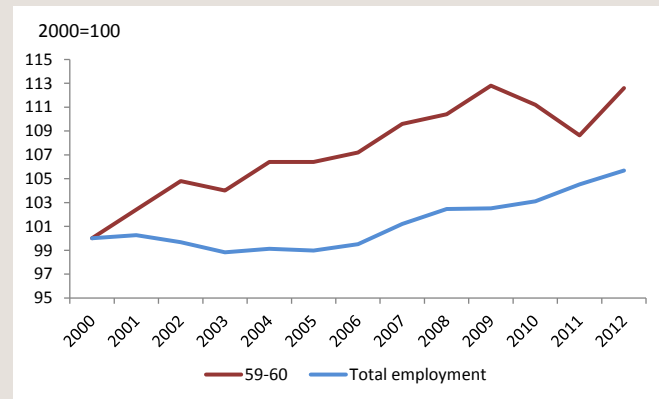
As stated by the Minister of State for Culture and the Media

“Every year, German and international production companies invest six times the amount of the subsidies by means of the earmarked DFFF funds in Germany alone. This has led to investments in the context of cinema production amounting to more than €1.5 billion... At the same time, DFFF can take considerable credit for the growing networking between German and international producers - a result of the large number of co-productions.”

Growth of the German film and television market

The Federal German government has extended the DFFF until the end of 2015 and has increased the funding this year by 10 million Euros to a total of 70 million Euros. Funding within the sector has had a positive impact upon employment, with total employment within sectors 59 and 60 outpacing growth of total employment in the overall economy (Chart 5.8).

Chart 5.8: Employment SBI 59-60 and total employment in Germany, 2000=100



Source: Statistisches Bundesamt

Funding in 2012 covered a total of 80 feature films, 32 documentary films and 3 animated films - 40 of which were international co-productions.

Source: The German Federal Film Fund (DFFF)

Box 5.5: Case Study: A Guide to the Irish Film Tax Relief Scheme

Table 5.5: Snapshot of the economy in Ireland in comparison to the Netherlands

	Ireland (2012)	Netherlands (2012)
Population (millions)	4.6	16.7
GDP per capita (total, US\$ nominal)	45,884.3	45,958.8
Total Employment (thousands)	1,837.8	7,390.8
SBI 59+60 as percent of total employment*	0.5%	0.4%*

* Uses 2011 data

Source: Oxford Economics, Eurostat

History and evolution of the incentive

A tax incentive for the film industry has been present in Ireland from 1987 (Irish tax incentive for film and television Section 35); which became Section 481 of the Taxes Consolidated Act, in 1999. The incentive was introduced to promote the Irish film industry by encouraging investment in Irish made films.

Historically, investors could invest up to 66% of the production cost for films up to €5,078,950 and 55% of production in excess of €6,348,690 with a maximum investment of €15 million. The Finance Act 2006 raised the amount that could be invested in any one film to 80% of the cost of production, capped at €35 million.

In 2008, the Irish government introduced new measures to strengthen this tax incentive further. The amount which can be invested depends on “qualifying expenditure” i.e. total spend by the production on Irish goods, services and facilities including the cost of EU cast and crew working in the State. The new improvements mean the ceiling on qualifying expenditure for any one film is increased from €35 million to €50 million.

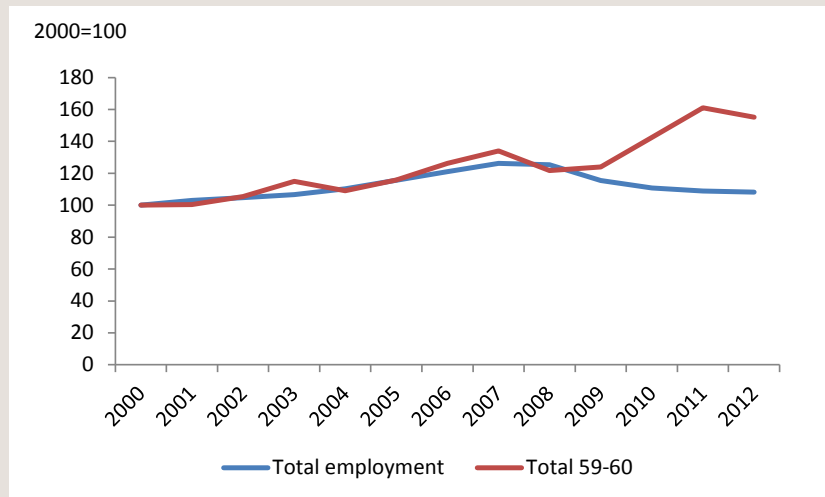
Success of the incentive

In late 2012, Irish Finance Minister Michael Noonan released an Economic Impact Assessment Report – a review of the Irish tax system and its benefits for film and television. The report shows that the exchequer

contributed €46.5m in tax foregone and €13.1m in direct exchequer funding through the Irish Film Board in 2011. Expenditure levels at this time were the second highest recorded in the seven year period 2005-2011. Approximately 1,600 full time equivalent jobs were provided in productions benefiting from the tax relief.

The review also found that the Irish model has one of the highest net benefits to producers. Compared with a 20% net benefit for UK-based productions under £20m, comparable producers reaped a 28% net benefit in Ireland.

Chart 5.9: Employment index SBI 59-60 and total employment in Ireland, 2000=100



Source: Quarterly National Household Survey (QNHS), Central Statistics Office, Ireland and Oxford Economics

As can be seen in chart 5.10 above, employment within the film and audio-visual industry in Ireland has been steadily increasing. From 2000 to 2012, employment within the sector has increased by 55.2%, outpacing overall employment growth in the wider economy which grew by just 8.3% in the same period.

Source: The Irish Film & Television Network and the Irish Film Board

Box 5.6: Case Study: Public support in Denmark

Table 5.6: Snapshot of the economy in Denmark in comparison to the Netherlands

	Denmark (2012)	Netherlands (2012)
Population (millions)	5.6	16.7
GDP per capita (total, US\$ nominal)	56,367.8	45,958.8
Total Employment (thousands)	2,623.1	7,390.8
SBI 59+60 as percent of total employment*	0.5%	0.4%*

* Uses 2011 data

Source: Eurostat, Oxford Economics

Support for 'young' filmmakers became an important attribute of the Danish model...

By focusing efforts on young people, the Danish industry has been able to grow the film and television industry from the ground up. This model which has been in place from as early as 1970 and was reflected in legislation from 1980 which stipulated that one quarter of the annual budget on film funding, approximately €70 million, should be invested in activities and productions that target children and young people.

Quantifying the impact

Every year, Denmark's 162 cinemas sell approximately 13 million tickets - an average attendance of 60 per showing. The number of Danish productions in the box-office top 20 varies from between five to eight depending on the year. On average, the state finances 25 full-length features and 30 documentaries; the average budget per film is 2.5 million Euros, with close to 33% of the budget covered by the state.

Henrik Bo Nielsen, chief executive of the Danish Film Institute stated:

"We have to recognise the need for a national cinema policy that is grant-aided. It is simply not possible to make good quality films and to expect to survive on the proceeds of their commercial exploitation. Fortunately, nearly all of the countries in Europe believe that financial support is necessary. The idea, which has been widely accepted in Europe, is that everyone should have the opportunity to tell their story. And the box-office figures show that Danish citizens do take advantage of the nationally produced films they finance with their taxes."

As a result of the supportive nature of the Danish government, willing to heavily invest in film through tax contributions, admissions to Danish films were impressive in 2012, increasing by 15.9% since 2011 (equating to an extra 3.9 million tickets being sold). The Domestic market share of 29% lies well above the European average of 13% while Danish films also perform well internationally, taking home 73 international awards.

Source: Presseurop and Danish Film Institute

Box 5.7: Case Study: Incentives in South Africa

Context

The South African Government offers a package of incentives to promote its film production and post-production industry. The incentives consist of:

- The Foreign Film and Television Production and Post-Production incentive - to attract foreign-based film productions to shoot on location in South Africa and conduct post-production activities; and,
- The South African Film and Television Production and Co-Production incentive - which aims to assist local film producers in the production of local content.

Objectives of the two incentive schemes

- To encourage and attract large-budget films and television productions and post-production work that will contribute towards employment creation, enhancement of international profile, and increase the country's creative and technical skills base.
- To support the local film industry and to contribute towards employment opportunities in South Africa.

Notable benefits

- Shooting on location in South Africa, the incentive will be calculated as 20% of the Qualifying South African Production Expenditure (QSAPE). No cap applies.
- Shooting on location in South Africa and conducting post-production with a QSAPPE of R1.5 million in South Africa, the incentive will be calculated at 22.5% of QSAPE and QSAPPE (an additional 2.5%, cumulative 22.5%).
- Shooting on location in South Africa and conducting post-production with a QSAPPE of R3 million and above in South Africa, the incentive will be calculated as 25% of QSAPE and QSAPPE (an additional 5%, cumulative 25%).

- Foreign post-production with QSAPPE of R1.5 million, the incentive is calculated at 22.5% of QSAPPE.
- Foreign post-production with QSAPPE of R3 million and above the incentive is calculated at 25% of QSAPPE.
- The rebate is calculated as 35% of the first R6 million of QSAPE and 25% of the QSAPE on amounts above R6 million.

What has this meant for the South African film and television industry?

The government of South Africa has identified the film industry as a sector with potential for growth, and is regarded as a catalyst for both direct and indirect employment of people from different sectors of the economy. As such, the South African film and television industry contributes around R3.5 billion per year to the country's economy, according to a 2013 study conducted by the National Film and Video Foundation, an agency of the Department of Arts and Culture.

In 1995, when the country first became a viable location venue for movie and television production, the industry employed around 4,000 people. This has grown to around 25,000 people (a growth rate of over 525% over the course of 18 years).

International co-production opportunities have also increased for South African producers and filmmakers. As a result of the favourable financial conditions, South Africa has signed co-production treaties with eight countries: Canada, Italy, Germany, the UK, France, Australia, New Zealand and Ireland.

Source: The Department of Trade and Industry, Republic of South Africa and Southafrica.info

6 Conclusions and recommendations

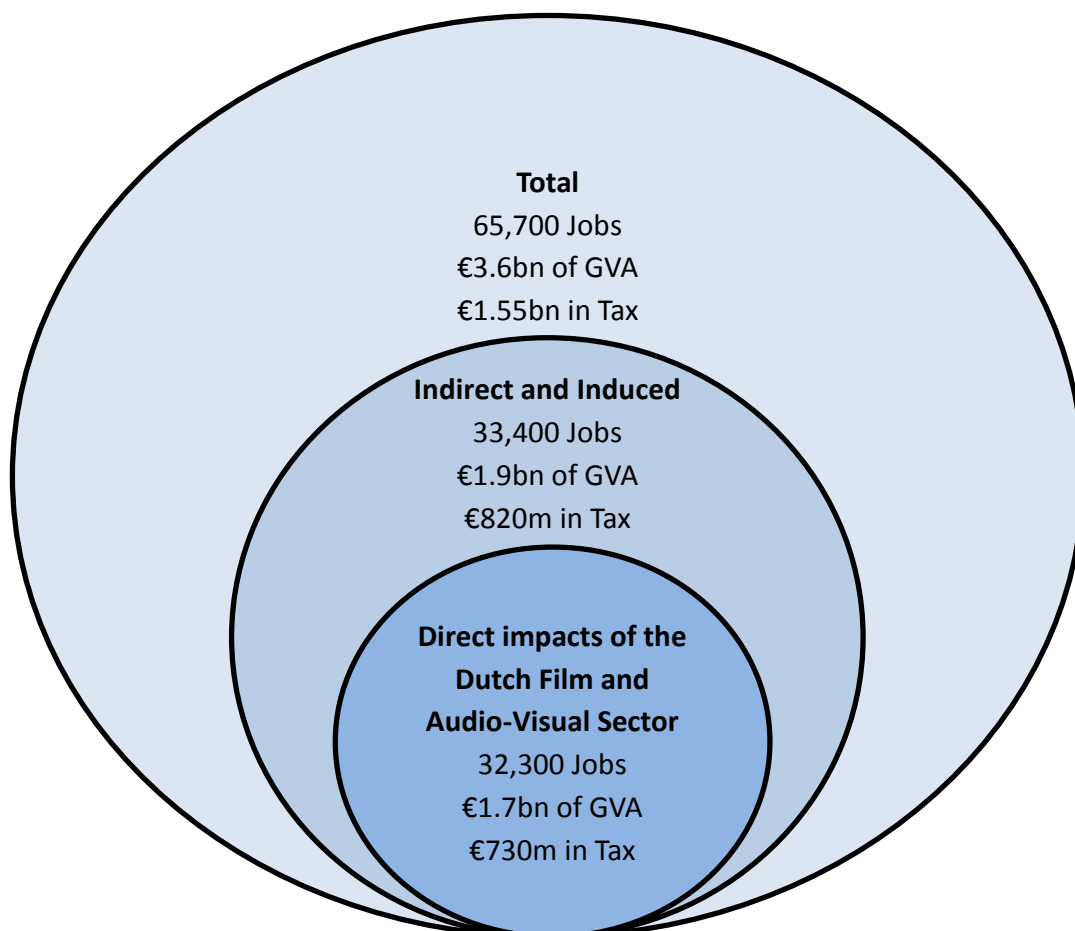
6.1 Significant contribution to the Dutch economy

The analysis has shown that creative industries have grown notably faster than the general economy. Within this wider group of sectors, the Dutch film industry has recorded mixed performance. Employment in the sector has fallen since its peak in 2002 (as defined by SIB classification codes 59 and 60). The Global financial crisis has sped the decline in jobs since 2007, with audio-visual sector employment declining by 9.1% in this time. However growth in film demand and the growth of Dutch films' share of the market perhaps lead to the increase in employment in 2011.

Nevertheless, the sector still provides some 32,300 direct jobs for the national economy. In doing so it directly contributes €1.7bn of GVA to the Dutch economy and provides some €730m in taxes. We estimate that it also supports a further 33,400 jobs in its supply chain and the wider economy through induced effects. These indirect and induced jobs are estimated to generate €1.9bn in GVA and €820m in taxes.

Overall the sector creates or supports 65,700 jobs, €3.6bn of GVA and just less than €1.6bn in taxes. The Dutch film and audio-visual industry has an employment multiplier of 2.03³³. This means that, for every person employed directly by the industry, a further 1.03 jobs are supported in the wider economy. In the same respect, the associated GVA multiplier is 2.08.

Chart 6.1: Economic contribution of the Dutch film industry



³³ The employment multiplier is calculated by dividing the total employment supported by the Dutch film and AV industry (65,700) by the direct employment (32,300)

6.2 Public funding cuts a challenge

Public funding accounts for a significant share of total film funding, although this has fallen from €49.6 million (85%) in 2009 to €45.1 million (68%) in 2012. The Netherlands Film Fund state that public funding will fall by 29% to € 35.1 m in 2013. This will add further downward pressure to a sector that has been in decline for the last 15 years.

This gradual decline is not a common trend in the rest of the EU. Indeed all measures of the European average show positive growth in employment (in sectors 59 and 60) since 2008. The EU 15 has grown by double digit rates of growth (11.5%) despite total economy employment contracting by -2.5% over the same period.

Our analysis in the previous section points to a strong positive relationship between the level of state support and the health of the film and audio-visual sector. Generally speaking the higher the amount of support per capita the faster the sector has tended to grow in job terms. State support per capita in Sweden for example is €6.65 and their sector has grown by over 10% over the period 2008 to 2011. Support in France is higher at €9.92 per capita and its sector grew by 12% over the same period. In contrast, the Netherlands offers state of support of €2.26 per capita in 2012 and € 1.43 in 2013 and has experienced a 3.2% contraction over the period.

In addition, at €52.65 per capita, Luxembourg's state support for films is significantly higher than the Netherlands (and all other European competitors in the analysis) and growth in the value of its audio-visual exports stands out against the mixed performance of other European economies.

Existing evidence (although limited) provides further support that public incentives to invest in film can generate economic growth whilst being tax neutral or indeed tax positive. Existing analysis suggests the public support has leveraged significant private sector funding and therefore activity for the sector in Ireland, Germany and Belgium.

6.3 Recommendations

Given the evidence we would recommend that Dutch Government consider the implementation of financial incentive, besides cultural support to film production, to invest in audio-visual activity. There are many different examples in the EU and further afield. It is outside of the scope of this report to consider the likely impact of various incentives. However, we would recommend that the government aspire to return to this earlier peak level of employment in 1998, which would require growth of 16.7% from its 2011 total.

Oxford Economics recognise the detrimental impact that piracy has had on the Dutch film and television industry – which affects all stages of production, distribution and exhibition. As such, Oxford Economics recommend that the Netherlands re-examine the current infringement theft laws, regulation and policy. Although we believe that new levees and charges are being added to the sale of audio-visual and technological goods, as downloading copied content is not currently considered to be illegal, further action should be taken to combat the monetary losses associated with the trade of pirated goods.

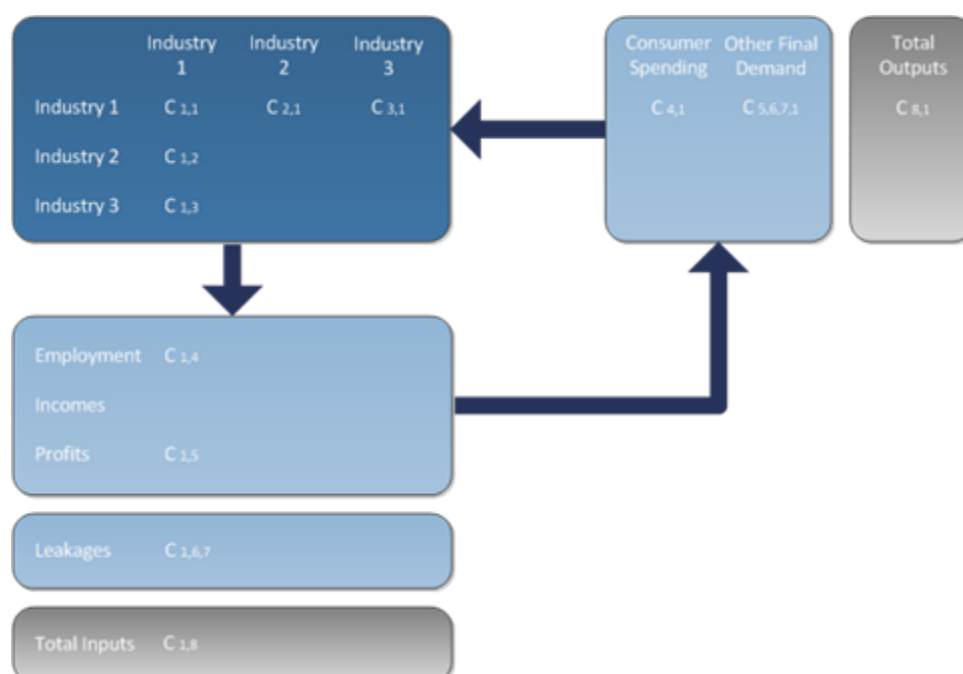
Given the reliance on public sector funding we would also recommend that Government and the Netherlands Film Fund work together to provide a long term vision for the sector. This should set out an overarching mission statement (e.g. to grow jobs and output) and have a number of targets such as a return to peak employment by a given year. Within this work consideration should also be given to committing to an annual funding stream over the next 5 years. This may give the sector more reduce uncertainty in the sector and provide enough confidence for existing companies to invest.

Annex A: Input-output tables

Input-output tables are designed to give a snapshot of an economy at a particular time, showing the major spending flows from “final demand” (i.e. consumer spending, government spending and exports to the rest of the world); intermediate spending patterns (i.e. what each sector buys from every other sector – the supply chain); how much of that spending stays within the economy; and the distribution of income between employment income and other income (mainly profits).

The idea behind the input-output table is that the economy can be divided into a number of producing industries, and that the output of each industry is either used as an input into another industry, or in final consumption. For example, grain produced by the farm sector becomes an input into flour milling; flour produced by the milling sector becomes an input into the baking sector, and so on. In essence an input-output model is a table which shows who buys what from whom in the economy. The latest available domestic use input-output table for the Netherlands, published by the CBS, was for calendar year 2011. Figure C.1 illustrates a simple input-output table split into three industries.

Figure C.1: A simple input-output model



Reading across horizontally illustrates the distribution of each industry's output; split between intermediate demand from other industries (used as an input to production) and final demand (consumer spending, exports and other government consumption). Therefore Industry 2 in figure C.1 purchases an amount, $C_{2,1}$ from Industry 1 as an input to their production process. Thus, reading down vertically indicates what each industry purchases from other industries in the national economy by way of inputs which, when combined with imports from abroad (leakages), employment costs, operating surplus and any additional taxes or subsidies to production, give total inputs, which will equal total outputs. In the simple model illustrated in Figure C.1, $C_{8,1}$ will equal $C_{1,8}$.

A primary application of domestic use input-output tables is to create multipliers that are used to illustrate how an increase in demand in one sector affects the whole economy:

- **Type I multiplier** – which estimates the impact on the whole economy of £1 spent in a given industry, through its supply chain.
- **Type II multiplier** – includes the Type I multiplier, but also includes the effect of spending by households as a results of the additional employment generated by the additional £1 spend.

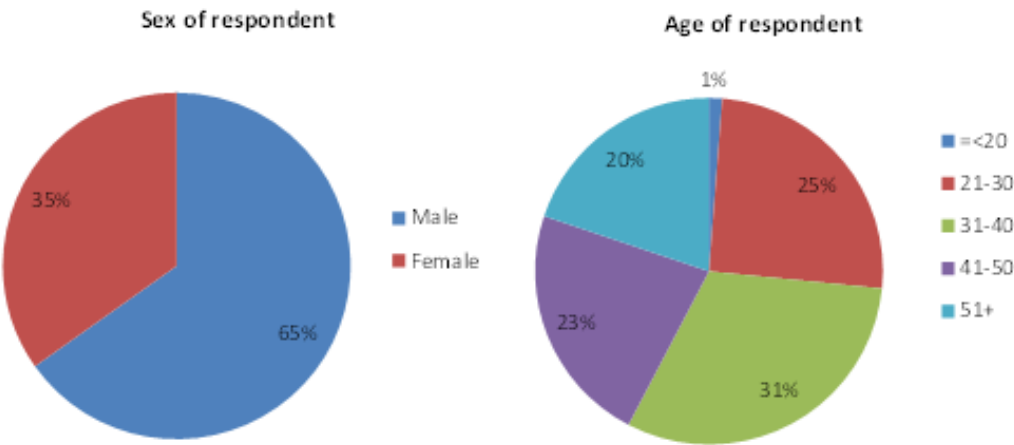
The indirect and induced contribution of the Dutch film and audio-visual industry can subsequently be estimated in the following way:

- The '**indirect effect**' on the whole economy of a £x spend in industry y = $(£x * \text{Type I multiplier for industry y}) - £x$
- The '**induced effect**' on the whole economy of a £x spent in industry y = $(£x * \text{Type II multiplier for industry y}) - (£x + \text{indirect effect})$

Annex B: Business survey result summary

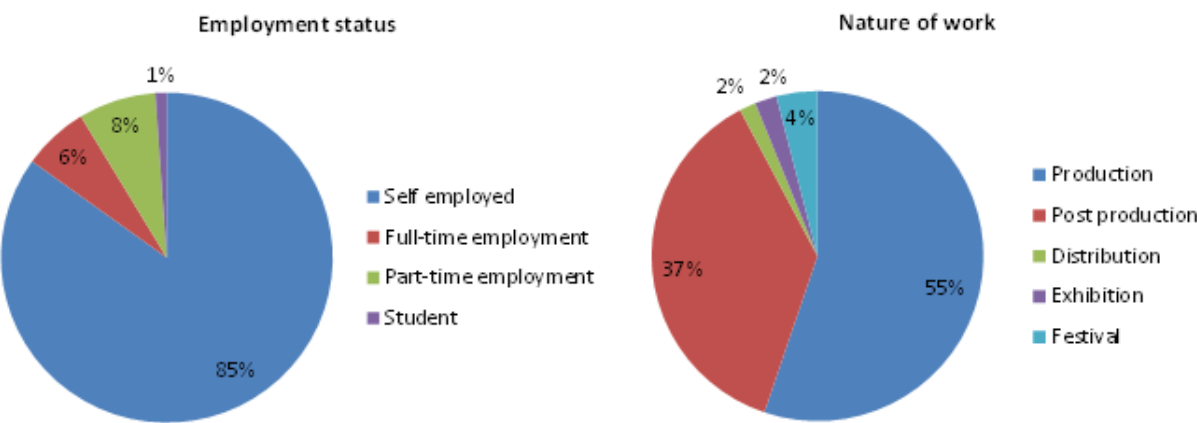
Individual survey

Chart: Personal attributes of individual survey respondents



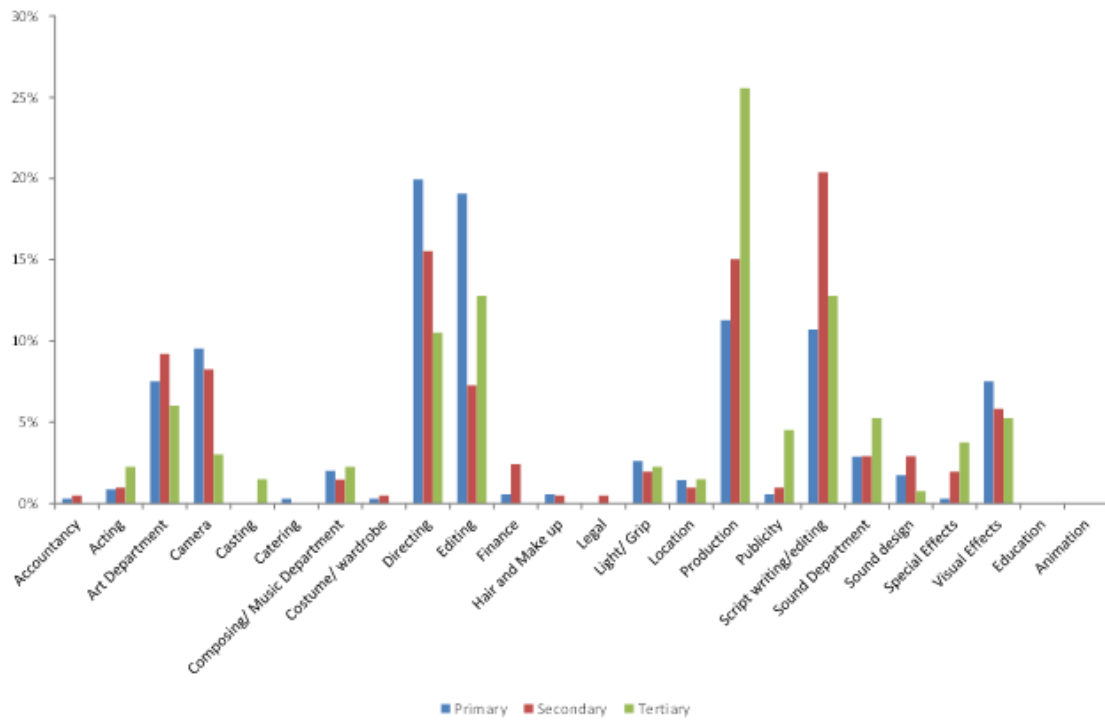
Source: Oxford Economics

Chart: Employment and nature of work of individual survey respondents



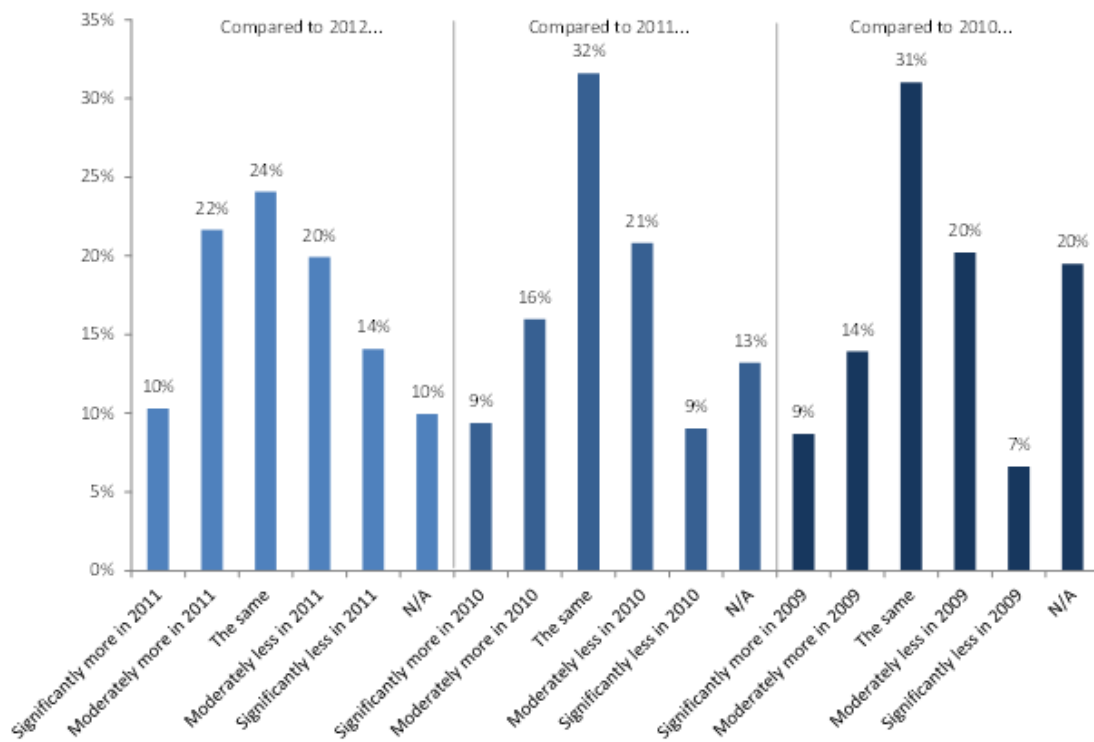
Source: Oxford Economics

Chart: Reported occupation of individual survey respondents¹⁷



Source: Oxford Economics

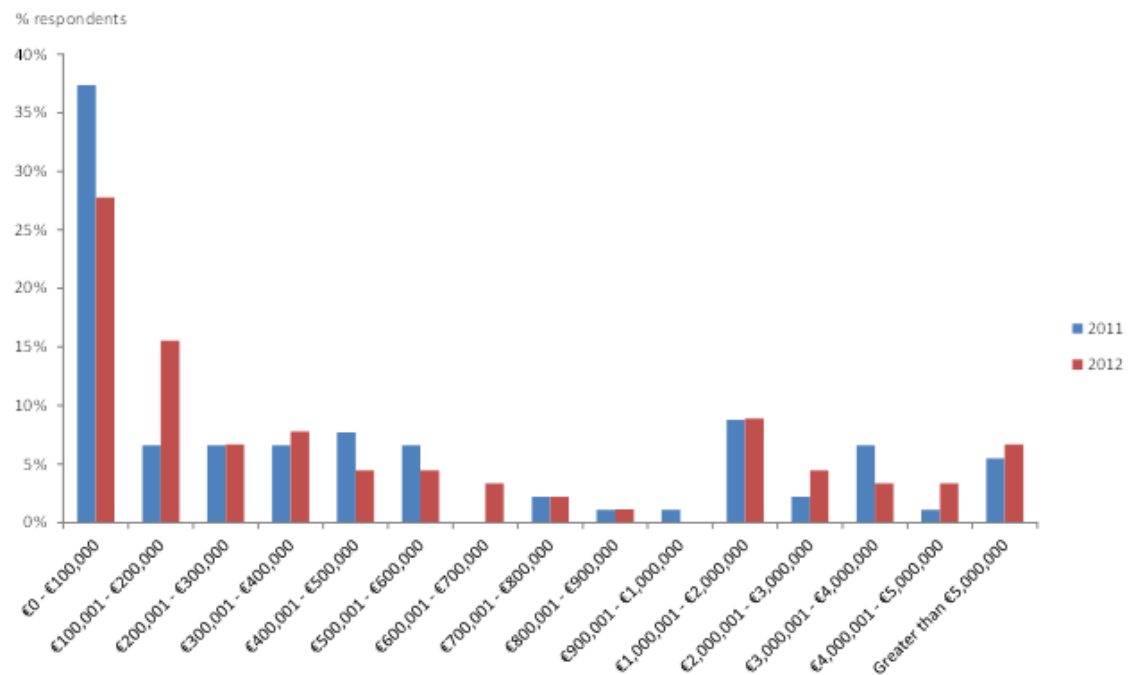
Chart: Year-on-year employment opportunity change by individual survey respondent, 2009 - 2012



Source: Oxford Economics

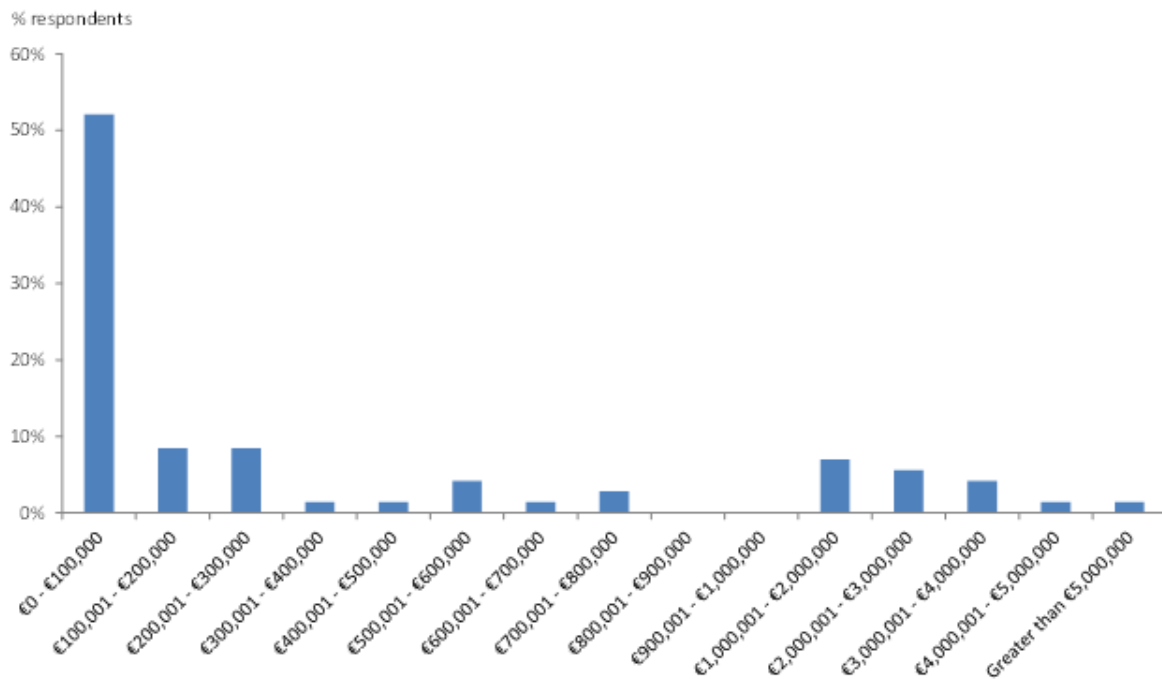
Company and organisation survey

Chart: Reported turnover of companies and organisations, 2011 and 2012



Source: Oxford Economics

Chart: Reported finance received by companies and organisations, % of respondents, 2012



Source: Oxford Economics

Annex C: Financing feature films

<i>Financers</i>	2009			2010			2011			2012		
	Total: 23 films (€)	%	per film (€)	Total: 29 films (€)	%	per film (€)	Total: 23 films (€)	%	per film (€)	Total: 34 films (€)	%	per film (€)
<i>Filmfund</i>	9,490,509	22%	412,631	10,713,751	19%	369,440	10,596,674	18%	460,725	13,933,876	21%	409,820
<i>Matching Fund Filmfund</i>	13,354,063	31%	580,611	14,461,353	26%	498,667	13,406,681	23%	582,899	9,197,190	14%	270,506
Coproducers	741,700	2%	32,248	692,467	1%	23,878	55,000	0%	2,391	362,109	1%	10,650
Own investment producers	1,309,468	3%	56,933	4,959,321	9%	171,011	5,807,432	10%	252,497	5,251,479	8%	154,455
Various soft money	800,000	2%	34,783	535,500	1%	18,466	689,511	1%	29,979	840,080	1%	24,708
Filmfunding foreign countries				1,715,000	3%	59,138	2,140,952	4%	93,085	4,148,450	6%	122,013
Other investment foreign countries				750,293	1%	25,872	185,000	0%	8,043		0%	
Private equity foreign countries				4,069,218	7%	140,318	1,140,000	2%	49,565	80,000	0%	2,353
Tax shelters/credits foreign countries							1,949,242	3%	84,750	5,237,944	8%	154,057
Minimum guarantees distributors NL	4,550,431	11%	197,845	6,297,685	11%	217,162	5,721,709	10%	248,770	7,139,818	11%	209,995
Broadcasters	7,023,732	16%	305,380	7,660,945	14%	264,171	9,527,307	16%	414,231	12,302,360	19%	361,834
Mediafund public broadcasters	1,600,000	4%	69,565	680,000	1%	23,448	600,000	1%	26,087	975,000	1%	28,676
Rotterdam Mediafund	357,875	1%	15,560	450,000	1%	15,517	220,000	0%	9,565	887,000	1%	26,088
Abraham Tuschinskifund				4,433	0%	153	417,654	1%	18,159	857,555	1%	25,222
Private equity Netherlands	3,547,000	8%	154,217	2,410,300	4%	83,114	7,103,950	12%	308,867	3,964,083	6%	116,591
Total	42,774,778	100%	1,859,773	55,400,266	100%	1,910,354	59,561,112	100%	2,589,614	65,176,944	100%	1,916,969

Financing of released films. Source: Netherlands Film Fund.

ATF contributions for production (not releases): 2009: € 1,600,000, 2010: € 1,397,875, 2011: €1,495,925, 2012: €1,727,100.

Dutch Public funding	2005	2006	2007	2008	2009	2010	2011	2012	2013
Netherlands Film fund (development, production and distribution)	14,579,584.00	18,439,019	33,117,351	33,314,838	35,368,340	34,630,770	36,233,458	33,597,474	24.480.000
CV measure	23,500,000	20,000,000							
Dutch Public broadcasters /OCW Telescoop	3,686,177	3,686,177	3.686.177	3.686.177	3.686.177	3.756.177	3.756.177	3.756.177	3.585.177
CoBO Fund (average)	5,409,069	5,409,069	5.409.069	5.409.069	5.409.069	5.409.069	5.409.069	5.409.069	5.301.069
Mediafonds	2,251,220	2,661,225	2.661.225	2.661.225	2.661.225	2.661.225	2.381.000	2.376.225	1.810.225
Rotterdam Media Fund	2,492,000	3,101,000	3.101.000	3.101.000	2.450.000	2.400.000	1.075.000		
Total	51.918.050	53.296.490	47.974.822	48.172.309	49.574.811	48.857.241	48.854.704	45.138.945	35.176.471

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