

THE ECONOMIC CONTRIBUTION OF THE COPYRIGHT-BASED SECTOR IN THE NETHERLANDS

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ABSTRACT. It is hard if not impossible to quantify all the economic effects of press and publishing, arts, design, software and all other copyright-based sectors. Copyright sectors first of all produce value added and generate income; they create employment and contribute to the balance of payments. But the products and services have much wider implications and positive external effects on the economy than can be measured by adding up value added produced and employment generated. It is often tried to capture those more far reaching effects in general terms such as the 'knowledge economy' filled with 'creative workers' (see, for instance Florida, 2002). There is certainly truth in the general perception that creativity, which is the stuff, materialized in the goods and services produced by the copyright-based industry, can change the economy and have an influence on the well being of everybody. But it is impossible to capture this perception in hard numbers. Quite well doable however is to capture the measurable parts of the economic contribution in numbers. What I present in below is a measurement of value added and employment of the copyright-based industry in the Netherlands over the past decades. I will also briefly present numbers on the contribution of the copyright-based sector on imports and exports.

1. INTRODUCTION

In the Netherlands the measurement of the economic contribution of the copyright-based sector has been done on five different occasions. The first Dutch study was for the year 1982. These measurements were repeated on a more or less similar basis for the years 1985, 1989 and 1994. The last one, on which I report in this article, is for the year 1998. These measurement studies have always been produced by SEO Amsterdam Economics, an economic research bureau linked to the University of Amsterdam. These studies were each time financed by the Stichting Auteursrechtbelangen, a non profit organization for the copyright sector representing among others the Dutch collecting organizations. The framework for the measurements was established in 1986 when the first publication on the year 1982 was prepared and for reasons of comparability has not changed much since then. As a consequence the Dutch measurements do not strictly follow the World Intellectual Property Organization's Guide, which was published in 2003.¹ The Dutch measurements are nevertheless comparable with what is defined as the Core Copyright Industries in de WIPO Guide.

¹See World Intellectual Property Organization (2003).

In the SEO Amsterdam Economics publication² three aspects of the economic contribution of copyright in the Dutch economy are analysed: a measurement of value added, employment and its effect on the balance of payments.

In the Dutch study the copyright-based industry is defined as consisting of the following sectors:

1. Press and literature
2. Photography
3. Visual arts and museums
4. Music, theatrical productions and operas
5. Motion picture and video
6. Radio and Television
7. Software and databases
8. Multimedia and Internet
9. Research
10. Design, advertising services and architecture
11. Copyright Collective Management Societies

2. VALUE ADDED

First the measurement of value added. The definition for value added follows the international rules for measurement of national and domestic product and income in the National Accounts. The WIPO Guide also adapted these rules. Gross value added is defined for all the 11 sectors mentioned in the list above and compared in absolute and relative terms with Gross Domestic Product for the Dutch Economy. The results can be seen in Table 1.

Table 1: Gross Value Added of Copyright-Based Industries and GDP for the Dutch Economy in 1994 and 1998 (absolute values in millions of Euros)				
	Absolute		Relative	
	1994	1998	1994	1998
Copyright	13,092	17,356	5.2%	5.5%
Dutch Economy	250,255	314,235	100%	100%

In 1998 the value added of the copyright-based sector was 17 billion Euros. As a percentage of the Gross Domestic Product (GDP) this amounts to 5.5 %. As a percentage this is higher than in 1995, when value added was 5.2 % of GDP. In these terms the relative contribution has increased over the years. In 1989 the percentage of the copyright-based industries stood at 4.3 %.

3. COMPARISONS

It is also interesting to compare the size of the copyright-based sector with other sectors in the Dutch economy. The largest sector in the Dutch economy in 1998 measured in value added as a percentage of GDP is commercial services. This sector stood at 13.4 %. The copyright sector with its 5.5% of GDP falls neatly between the building and construction sector with 5.6 % and the banking and insurance sector with 4.9 %.

²See Budil et al. (2000).

The increase in the relative size of the copyright-based industry over the years 1994-1998 implies that it grows faster than the Dutch economy as a whole. The Dutch economy as a whole experienced a growth rate (corrected for price inflation) of on average 3.2 % per year. The copyright sector's growth rate for the same period (also corrected for price inflation) was on average 5.6 % per year, which is substantially faster than the rest of the economy.

Within the copyright-based sector the sectors visual arts; software and databases; and multimedia and Internet had more than average growth rates compared with the rest of the copyright industries in the period 1994-1998. They had growth rates of 12%, 13% and 28% respectively. The software and databases sector and the multimedia and internet sector had already shown double digit growth figures in the period 1989-1994. In the sectors research and music theatrical productions and operas the growth rate was less than the rest. It is to be expected that the software and database sector and the multimedia and internet sector will keep on growing faster than the others.

4. EMPLOYMENT

A second indicator for the economic contributions of copyright is the employment it generates. The numbers for employment in the copyright-based industries can be found in Table 2. In this table I make a distinction between number of people working (employed persons), the body count say, and the full-time equivalent. Not all persons working are working full time. The full time equivalents correct for that. For instance two persons working half time would add up to one full time equivalent. The amount of hours worked to be considered full time is agreed upon in collective labour agreements for each of the sectors.

	Absolute		Relative	
	1994	1998	1994	1998
Copyright				
Persons employed	363,589	419,775	5.4%	5.4%
Full time equivalents	296,332	338,481	5.6%	5.5%
Dutch economy				
Persons employed	6,692,000	7,724,000	100%	100%
Full time equivalents	5,305,000	6,128,000	100%	100%

In 1998 more than 419,000 persons worked in the copyright-based industry. This translates to roughly 338 thousand full time equivalents. As a percentage of total employment in the Netherlands this amounts to 5.4% and 5.5% respectively. The employment in the copyright-based industry measured in persons increased between 1994 and 1998 with more than 56,000 persons. In full time equivalents it increased by 42,000 over the same period. Compared with 1994 the percentage of persons employed remained constant. Between 1994 and 1998 employment measured in persons increased substantially in the Netherlands. This was mainly due to a substantially increased female participation rate. The copyright-based sector kept up with the labour market wide employment growth. Measured in full time equivalents the percentage decreased somewhat between 1994 and 1998. This is mainly due to an increase in the number of persons working part time.

5. LONG RUN DEVELOPMENTS

As the first measurements of the copyright sector in the Netherlands dates from 1982 it is also possible to present growth rates covering almost two decennia. These growth rates can be found in Table 3. In this table I present growth rates based on the measurement results for 1982, 1985, 1989, 1994 and 1998. The average yearly growth rates are corrected for price inflation.

	1982-1985	1985-1989	1989-1994	1994-1998
Copyright	7.3%	5.4%	6.4%	5.6%
Dutch economy	2.5%	2.8%	2.4%	3.2%

The table clearly shows that the copyright-based sector has been growing faster than the Dutch economy as a whole. Between 1982 and 1998 the Dutch economy grows on average with 2.7 % per year, whereas the average yearly growth rate for the copyright sector was with 6.2 % almost twice as large. The growth rate for the copyright-based sector was higher in each period.

It is also possible to calculate employment growth rates in a way comparable to the value added growth rates, with an exception of the year 1982. SEO Amsterdam Economics did not measure employment in that first year of measurements. Table 4 has the results.

	1985-1989	1989-1994	1994-1998
Copyright	4.5%	4.5%	3.3%
Dutch economy	2.8%	0.9%	3.9%

The growth rate for employment (in full time equivalents) for the copyright-based industry surpasses the growth rates for the Dutch economy in the period between 1985 and 1998. In the last period however, 1994-1998 the reverse holds true. In that period employment growth in the copyright-based sector lagged total employment growth. As I explained earlier, Dutch employment growth was historically and from an international point of view very high in the second half of the nineties. On the one hand value added in the copyright-based sector grows faster than the national average (see Table 3). On the other hand employment growth was less than in the rest of the economy (see Table 4). Combining these two results implies that productivity per full time equivalent in the copyright-based sector grows faster than average.

6. IMPORTS AND EXPORTS

The Dutch economy is a very open economy, meaning that substantial parts (roughly 55%) of the national product is exported and imported. The Netherlands usually carries a positive balance on the Balance of Payments. The copyright-based industries contribute to the imports and exports of the Dutch economy. As a percentage of total imports and exports this is around 3%. At first glance this looks like a small percentage compared to the 5.5% contribution to GDP (see table 1).

But if one takes into consideration that a lot of the production and services of the copyright-based sector is for home consumption (think about theatrical performances, radio and television, museums and libraries) the 3% is probably still a fairly high number. In any case the Netherlands is a large importer and exporter of press and literature and in the sector software and databases. There are also large flows of copyright payments going to abroad and coming into the Netherlands. All by all the balance on imports and exports of copyright-based goods and services and copyright payment flows is positive.

7. CONCLUSIONS

As was shown the copyright-based industry is a substantial industry, comparable to the building sector and the banking and insurance sector in the Netherlands. It is also a fast growing sector. Growing faster both in terms of value added and in terms of employment than the rest of the economy since the beginning of the eighties. In this way the copyright based industry can be seen as a pivotal sector to achieve the aim formulated in Lisbon by the European Union that Europe's economy should become one of the most dynamic and fastest growing economies in the world.

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