IPR-intensive industries: contribution to economic performance and employment in the European Union

A joint study between the Office for Harmonization in the Internal Market and the European Patent Office

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Introduction: The value of intellectual property in Europe

This presentation is based on the main findings of the first ever EU-wide study on the value of intellectual property rights to the economy of the EU.

How do trade marks, designs, patents, copyrights and geographical indications contribute to employment, GDP, remuneration and trade?
## Intellectual property rights – an overview

<table>
<thead>
<tr>
<th>Intellectual property</th>
<th>Patent</th>
<th>Design</th>
<th>Trade mark</th>
<th>Copyright</th>
<th>Geographical indication</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUBJECT MATTER</strong></td>
<td>发明, <strong>novelty</strong>, industrial applicability</td>
<td>原创<strong>ornamental</strong> and <strong>non-functional</strong> features of an article or product</td>
<td><strong>Distinctive</strong> signs that distinguish one company's goods or services from another</td>
<td>原创<strong>artistic</strong>, literary, musical, photo, cinema works; maps and technical drawings; computer programmes</td>
<td>Product whose <strong>quality and reputation</strong> is linked to its geographical origin</td>
</tr>
<tr>
<td><strong>DURATION</strong></td>
<td>Typically 20 years from filing</td>
<td>The usual maximum term is 25 years</td>
<td>Commonly 10 years from filing, but can be renewed indefinitely for successive periods</td>
<td>From 50 years to a lifetime plus 70 years</td>
<td>Indefinite, no need for renewal</td>
</tr>
</tbody>
</table>
IPR-intensive industries are those which use a high number of intellectual property rights per employee.

More than half of European industries (321 out of 615) are considered IPR-intensive.
Methodology

In order to determine which industries are IPR-intensive, the register databases of OHIM and EPO were matched with the commercial database ORBIS.

Using this data, the number of trade marks, designs and patents per employee was calculated for each industry, and the industries which were above average according to this measure were considered to be IPR-intensive.

For copyright, a standard methodology developed by WIPO was applied, and for Geographical Indications, data from DG AGRI was used.

For more information on the methodology of the study, please visit www.oami.europa.eu.
Most IPR-intensive industries are intensive in more than one type of IPR.
Contribution of IPR-intensive industries to employment

26% of all EU jobs were directly generated by IPR-intensive industries during the period 2008-2010.

An additional 9% were generated indirectly, by industries that supply goods and services to the IPR-intensive industries, for a total of 35% of all EU jobs.
Contribution of IPR-intensive industries to employment

56.5 million EU jobs out of 218 million were directly generated by IPR-intensive industries.

20 million additional jobs were generated by these industries indirectly.

76.5 million jobs
Contribution of IPR-intensive industries to GDP

39% of total economic activity (GDP) in the European Union was generated by IPR-intensive industries from 2008-2010.

This totals over € 4.7 trillion annually.
Contribution of IPR-intensive industries to remuneration

IPR-intensive industries pay significantly more than other industries, with a wage premium of over 40%.
Even industries producing energy are IPR-intensive.

For that reason, 88% of EU imports consist of products from IPR-intensive industries.
Contribution of IPR-intensive industries to trade (exports)

However, an even higher share of EU exports - 90% - is accounted for by IPR-intensive industries.
Copyright: ©
WIPO vs USPTO methodologies

**USPTO** adaptation of **WIPO** methodology:
very strict, only content provision,
33 industries considered copyright-intensive

“**Pure**” **WIPO** methodology: broader definition,
49 industries considered core copyright-intensive

“**Full**” **WIPO** methodology: including also
non-core copyright-intensive industries
Contribution of IPR-intensive industries to employment by Member State

IPR-intensive industries directly contribute **25.9%** of employment in the EU.

Note: As Croatia was not a part of the EU at the time of the study, it is not highlighted on the following maps.
Contribution of IPR-intensive industries to GDP by Member State

IPR-intensive industries contribute **38.6%** of GDP in the EU.
Contribution of IPR-intensive industries to employment by Member State – trade mark

In the EU as a whole, trade mark-intensive industries contribute 20.8% of employment.
In the EU as a whole, trade mark-intensive industries contribute 33.9% of GDP.
Contribution of IPR-intensive industries to employment by Member State – design

Design-intensive industries contribute 12.2% of employment in the EU.
Design-intensive industries contribute 12.8% of GDP in the EU.
Contribution of IPR-intensive industries to employment by Member State – patent

Patent-intensive industries contribute 10.3% of employment in the EU.

10.3% EU average

above EU average
below EU average
Contribution of IPR-intensive industries to GDP by Member State – patent

Patent-intensive industries contribute 13.9% of GDP in the EU.
Contribution of IPR-intensive industries to employment by Member State – copyright

Copyright-intensive industries contribute 3.2% of employment in the EU.
Contribution of IPR-intensive industries to GDP by Member State – copyright

Copyright-intensive industries contribute 4.2% of GDP in the EU.
Contribution of IPR-intensive industries to employment by Member State – geographical indication

GI-intensive industries contribute 0.2% of employment in the EU.

They are an important source of jobs in several countries.
Contribution of IPR-intensive industries to GDP by Member State – geographical indication

GI-intensive industries contribute 0.1% of GDP in the EU.
IPR Origin – Trade mark

Which EU Member States create the most trade marks?

Number of trade marks per 1000 employees

- **Luxembourg**: 16.60
- **Sweden**: 3.01
- **Finland**: 2.71
- **Germany**: 3.44
- **Austria**: 3.87

**Number of Trade Marks**

- **Germany**: 135,000
- **UK**: 70,000
- **Spain**: 45,000
- **Italy**: 35,000
- **France**: 25,000
- **Portugal**: 15,000
- **Belgium**: 10,000
- **Switzerland**: 5,000
- **Australia**: 5,000
- **United States**: 2,500

*Applications filed during period 2004-2006 with rights granted at any time until February 2013.

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IPR Origin – Design

Which EU Member States create the most designs?
IPR Origin – Patent

Which EU Member States create the most patents?

Number of patents per 1000 employees

1.14 Germany
1.67 Luxembourg
0.88 Sweden
0.67 Finland
0.52 Austria
0.52 Denmark
0.65 Netherlands
0.22 Ireland
0.17 UK

0.02 Estonia
0.02 Latvia
0.00 Lithuania
0.01 Poland
0.03 Czech Republic
0.00 Slovakia
0.03 Hungary
0.00 Romania
0.00 Bulgaria
0.05 Slovenia
0.10 Cyprus

Number of patents*

Germany
France
Italy
Netherlands
UK
Sweden
Austria
Belgium
Finland
Denmark
Spain
Ireland
Luxembourg
Czech Republic
Hungary
Poland
Portugal
Malta
Slovenia
Greece
Cyprus
Latvia
Estonia
Bulgaria
Lithuania
Slovakia

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IPR-intensive industries: contribution to economic performance and employment in the European Union
IPR contribution to job creation

Jobs created in rest of EU by companies based in the Member State

- Germany: 28.2%
- France: 15.0%
- Netherlands: 11.7%
- UK: 11.0%
- Austria: 5.0%
- Italy: 4.2%
- Portugal: 0.2%
- Spain: 2.1%
- Greece: 0.2%
- Finland: 2.5%
- Ireland: 1.9%
- Sweden: 5.5%
- Denmark: 2.9%
- Poland: 0.3%
- Estonia: 0.1%
- Latvia: 0.0%
- Lithuania: 0.1%
- Slovakia: 0.1%
- Hungary: 0.3%
- Romania: 0.0%
- Bulgaria: 0.0%
- Slovenia: 0.1%
- Cyprus: 1.4%

*Indicative figures derived from INNOVATE database as at June 2017.*

IPR contribution to job creation

Job creation can be considered another positive IPR contribution to the European Union.

Jobs created in EU Member States by foreign companies (IPR-intensive industries)

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Comparing the results for the EU with those of a USA study reveals that the contributions of IPR-intensive industries are similar.

*undertaken by the US Patent and Trademark Office