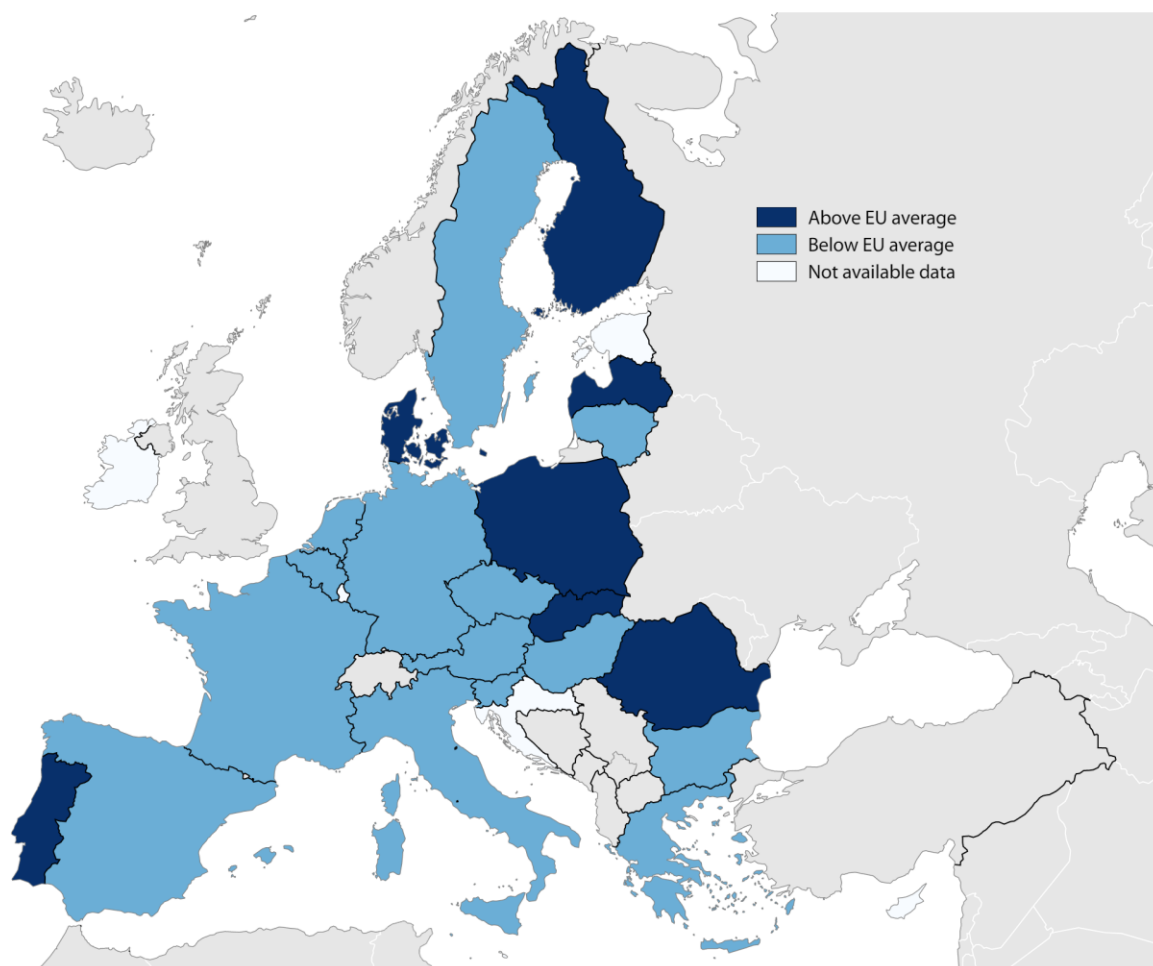


Economic performance of IPR indicators

2022 edition, December 2022 update

IPR indicators for selected EU Member States 4Q2022



Source: EUIPO

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ECONOMIC PERFORMANCE OF IPR INDICATORS

2022 EDITION, DECEMBER 2022 UPDATE

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In May 2021 the EUIPO presented the [economic impact of COVID-19 crisis in IPR-intensive industries](#) with data for the period 2003-2020, including indicators⁽¹⁾ for all intellectual property rights (IPR), trade marks (TM), designs (DES), patents (PAT) and copyright (CR). The IPR-intensive industries included in this paper were those established in the third edition of the EUIPO/EPO report 'IPR-intensive industries and economic performance in the European Union'. In October 2022, the EPO and the EUIPO presented the [fourth edition](#) of the mentioned report with a new selection of IPR-intensive industries. Additionally, in the last two years, more countries have published short-term statistics (STS) indicators, which constitute the raw data for the IPR monthly indicators. The 2022 edition of IPR indicators considers the new selection of IPR-intensive industries, new weights for calculating indicators and all available countries with data since 2019.

These new IPR indicators are based on deflated and volume indicators to eliminate the impact of prices, using more aggregated data in the manufacturing sector (NACE divisions). The more extensive list of countries balances out the shorter time series, allowing the analysis of economic developments since the COVID-19 pandemic.

The new IPR indicators will be updated every quarter to monitor their economic development, for the European Union (EU) and 21 Member States (MS) with a total of 63 out of 135 possible indicators.

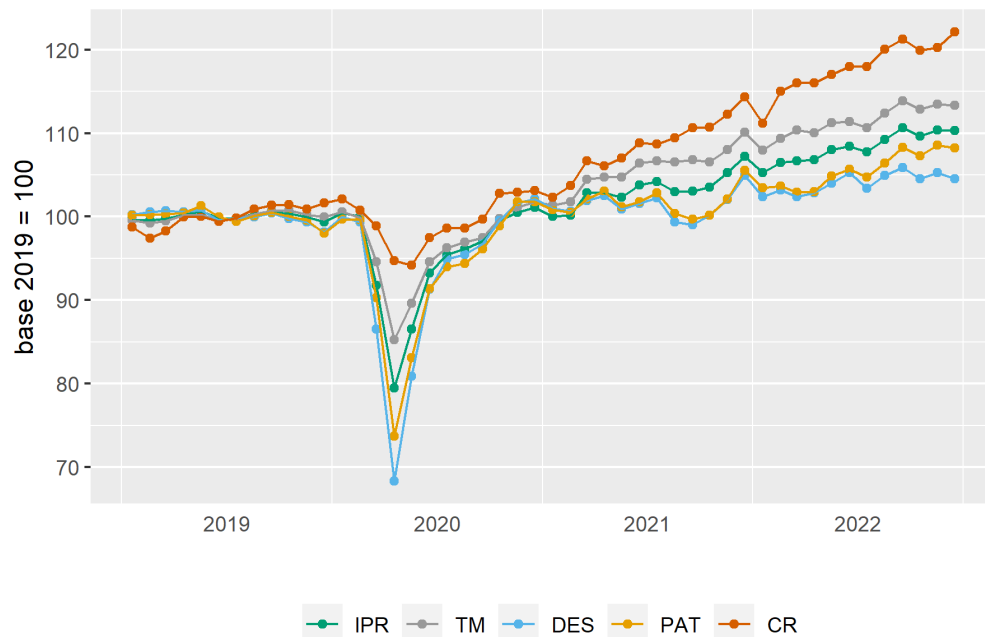
EU INDICATORS

The EU IPR indicators followed a stable trend in the last quarter of 2022. However, at the end of the year, only the copyright indicator showed a level higher than the maximum achieved in September 2022. All the EU indicators were above the pre-crisis levels registered in February

⁽¹⁾ IPR indicators are based on Eurostat's monthly Short-Term Statistics (STS) covering all sectors of the economy and on previous research of the EUIPO and the European Patent Office (EPO). They monitor the economic performance of industries that use IPRs more intensively than the rest of the economy.

2020: the copyright indicator was more than 20 points above the previous level and the design indicator was 5 points above the pre-crisis level.

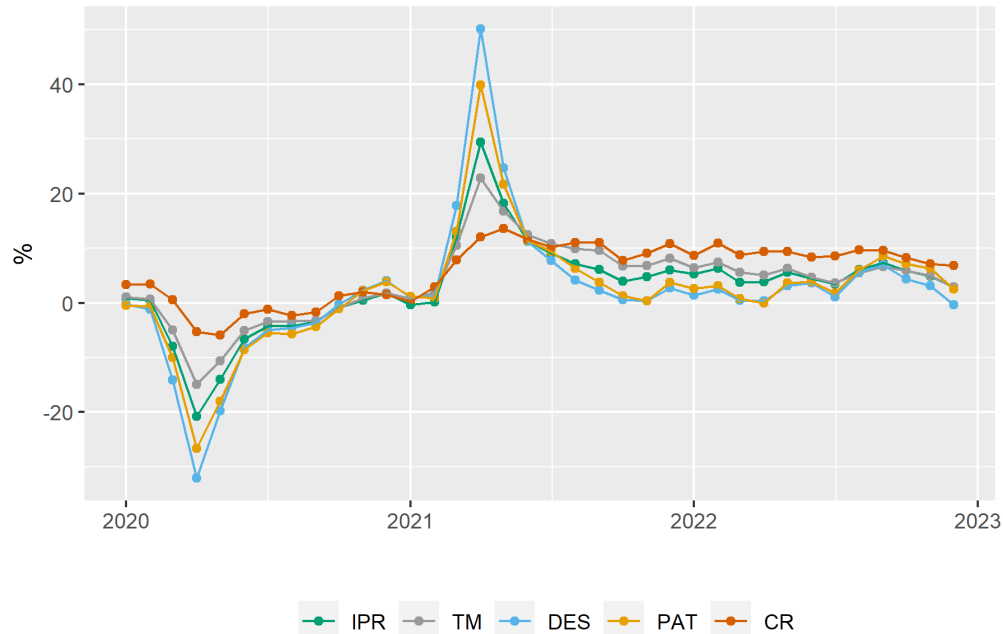
Figure 1: IPR indicators in the EU, average 2019=100.
January 2019 – December 2022



As shown in Figure 2, the copyright indicator is the only one that showed significant steady annual rates of growth at the end of the year. The other four indicators show a decreasing trend through the 3 months of the quarter. December 2022 showed an annual growth rate of 7 % in copyright while the remaining IPR indicators were 3 % above, except for the design indicator that registered a small negative rate.

In all the indicators, the service sector registered higher annual rates than manufacturing and trade except in the copyright indicator where manufacturing showed negative rates that did not affect the aggregated indicator much due to the very low weight of this sector in copyright-intensive industries.

Figure 2: Annual rates of change (%) of IPR indicators in the EU,
January 2020 – December 2022



The NACE division 79 ‘Travel agency, tour operator and other reservation service and related activities’ is intensive in trade marks and only partially in copyright and continued to register impressive growth rates. After 2 years with extremely low values during the COVID-19 pandemic, in December 2022, the volume indicator for this industry was 15 points below its pre-crisis level after suffering an unprecedented collapse due to confinement and limitation of mobility measures. However, NACE division 60 ‘Programming and broadcasting activities’ is the only industry in the service sector intensive in trade marks and copyright that registered negative rates in 2022. Two industries in the service sector with remarkable 2-digit growth rates in the fourth quarter of 2022 are NACE divisions 50 and 62 (‘Water transport’ and ‘Computer programming, consultancy and related activities’, respectively).

On the other hand, the worse figures for design-intensive industries at the end of the year are explained by industries in the wholesale and retail sectors.

IPR INDICATORS AT MEMBER STATE LEVEL

The performance of IPR-intensive industries in the EU Member States shows different trends, which is explained by the different structures of their IPR-intensive industries. Not all IPR indicators are estimated for all EU MS due to data limitations. Estonia, Croatia, Ireland, Cyprus, Luxembourg and Malta are the only MS for which no indicator is estimated; 8 MS allow the estimation of the five IPR indicators (Bulgaria, Czech Republic, Germany, France, Latvia, Hungary, Poland and Romania), although for Poland only since 2021. IPR and trade mark indicators are available for the same 8 MS; copyright indicators are estimated for 12 MS; indicators for design-intensive industries are available for 13 MS and patent indicators for 17 MS.

Table 1 shows the annual average growth rates for all the IPR indicators and the GDP in the fourth quarter of 2022 (comparing the fourth quarter of 2022 with the same quarter of 2021). The map on the cover page indicates in pale blue those countries with an average growth rate in their IPR indicators that is below the EU rate in the fourth quarter of 2022, and in dark blue those countries with higher average growth rates than the EU.

Greece is the only country that registered GDP growth rates clearly superior to the IPR indicators' growth rates in the last quarter of 2022. Bulgaria showed annual GDP growth rates very similar to the IPR indicators and Romania registered the highest growth rates in the IPR-intensive industries and the second highest rate for the GDP. At the other end of the scale, Sweden's and Lithuania's GDP decreased in comparison with the fourth quarter of 2021 but their IPR indicators still registered positive growth rates.

Table 1: Average annual rate of GDP and IPR indicators in the fourth quarter of 2022

Country	GDP	IPR	TM	DES	PAT	CR
EU	1.7	4.5	4.6	2.4	5.3	7.4
AT	3.0				4.6	
BE	1.4			2.2	4.8	
BG	2.3	2.0	0.8	3.4	2.2	9.0
CZ	0.2	3.4	-0.6	6.4	6.9	0.5
DE	0.9	1.0	0.4	0.9	0.9	7.4
DK	1.5				15.6	
EL	5.2			1.9	-4.1	
ES	2.7				4.4	
FI	0.3					7.9
FR	0.5	4.4	4.1	2.1	2.5	9.7
HU	0.8	3.1	-1.0	14.5	8.7	-1.9
IT	1.4			1.1	1.5	
LT	-0.4			0.3	3.2	
LV	0.5	5.8	7.3	4.5	12.3	27.5
NL	3.3			2.6	4.8	
PL	0.4	4.9	3.6	5.2	7.9	12.8
PT	3.2				6.0	
RO	4.9	10.4	12.0	7.0	4.5	26.7
SE	-0.1					1.2
SI	1.3					5.5
SK	1.2					11.8

In December 2022, German indicators relative to design- and patent-intensive industries and the Belgium indicator for design-intensive industries were the only indicators that were still below pre-crisis levels, as shown in Table 2. The patent indicators were just slightly above the pre-crisis levels in Spain and France. Meanwhile, there was a great increase of the copyright-intensive industries in Romania that was 80 points above pre-crisis level. This was mainly due to the extraordinary performance of divisions NACE 62 'Computer programming, consultancy and related activities' and NACE 74 'Other professional, scientific and technical activities', which

doubled their volume indicators value before the COVID-19 pandemic and continued registering annual rates above 30 %. For the indicators of all IPR and trade mark-intensive industries, Hungary, Romania and Latvia were well above their level in February 2020, thanks to the great performance of service sector industries.

The indicator for all IPR and trade mark-intensive industries is estimated for the same 8 MS: Bulgaria, Czech Republic, Germany, France, Latvia, Hungary, Poland and Romania. Both indicators show similar shapes of their annual rates since 2020 with the IPR indicator reaching deeper trough in 2020 and a higher peak in 2021.

Figure 3: Annual rates of change (%) of IPR indicators in some EU Member States, January 2020 - December 2022

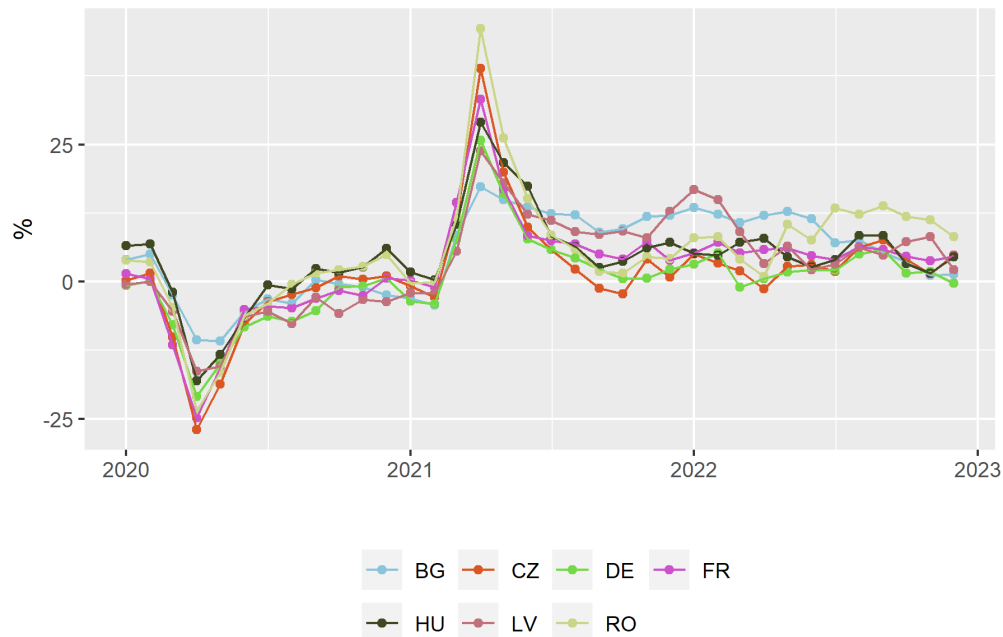
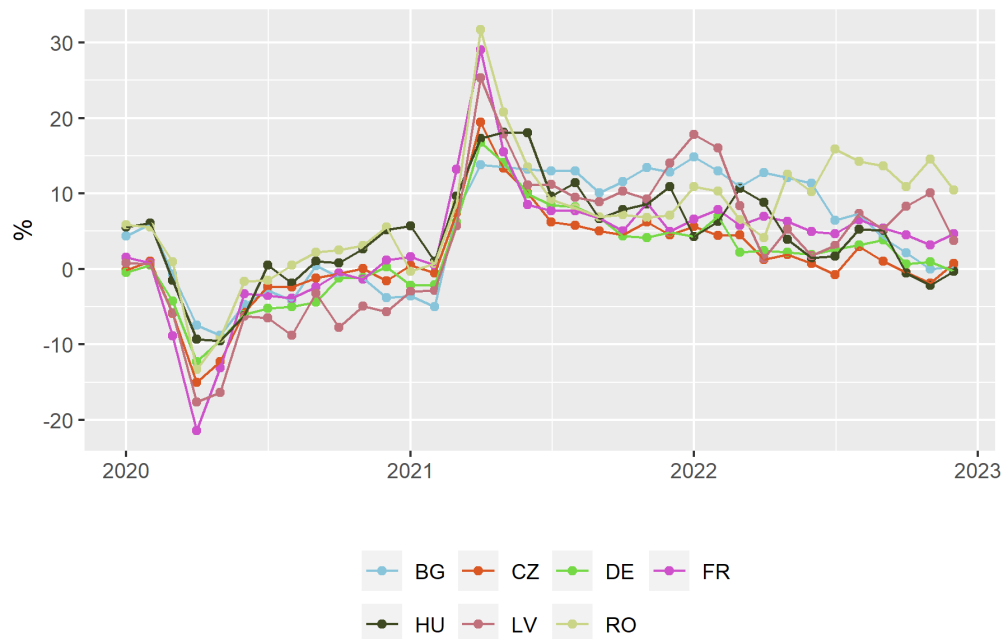


Figure 4: Annual rates of change (%) of trade mark indicators in some EU Member States, January 2020 - December 2022



In the last quarter of 2022, Romania still registered annual growth rates above 10 % in the IPR and trade mark indicators, now in a decreasing trend. All the IPR indicators estimated for the MS registered positive annual rates with France and Hungary showing a slow recovery of their monthly rates in December. The trade mark indicators for the Czech Republic and Hungary registered negative annual rates in the last quarter of the year and Germany showed an almost zero annual rate but was still positive.

The good performance of the service sector industries improved the performance of manufacturing industries close to zero growth and trade industries that registered negative rates in all countries, except in France.

The division NACE 29 'Manufacture of motor vehicles, trailers and semi-trailers', which is IPR-intensive but not trade mark-intensive, performed very well and explains the higher rates in the IPR indicator compared with the trade mark indicator, except in Latvia and Romania.

The indicator for design-intensive industries is available for 13 countries and the patent indicator for 17 countries, representing 90% of the GDP generated by patent-intensive industries in 2017-

2019. Both indicators registered the deepest trough and highest peak of all IPR indicators with greater differences among countries in the patent-intensive industries.

Figure 5: Annual rates of change (%) of design indicators in some EU Member States, January 2020 - December 2022

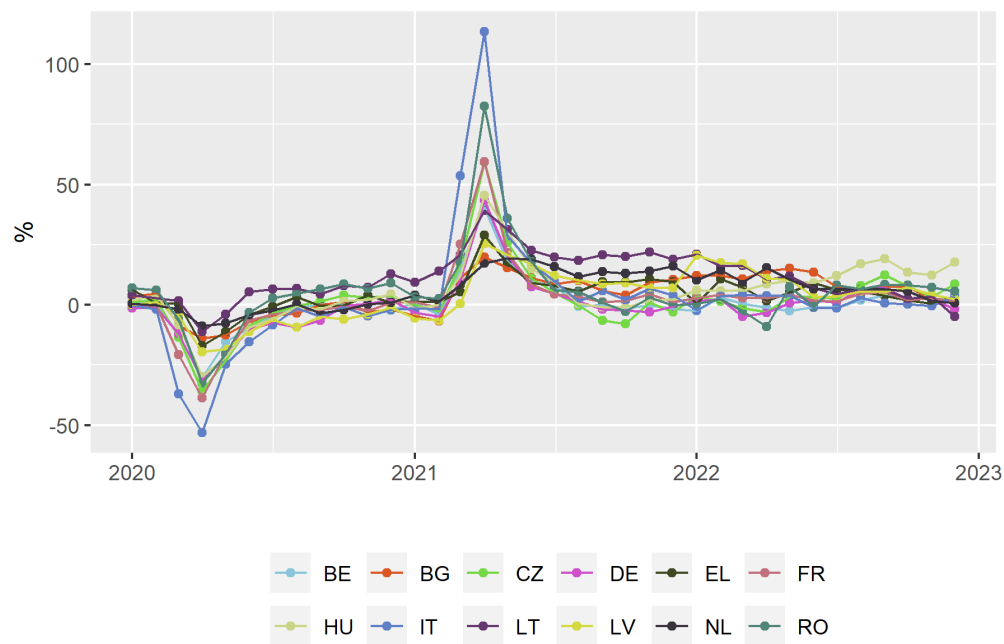
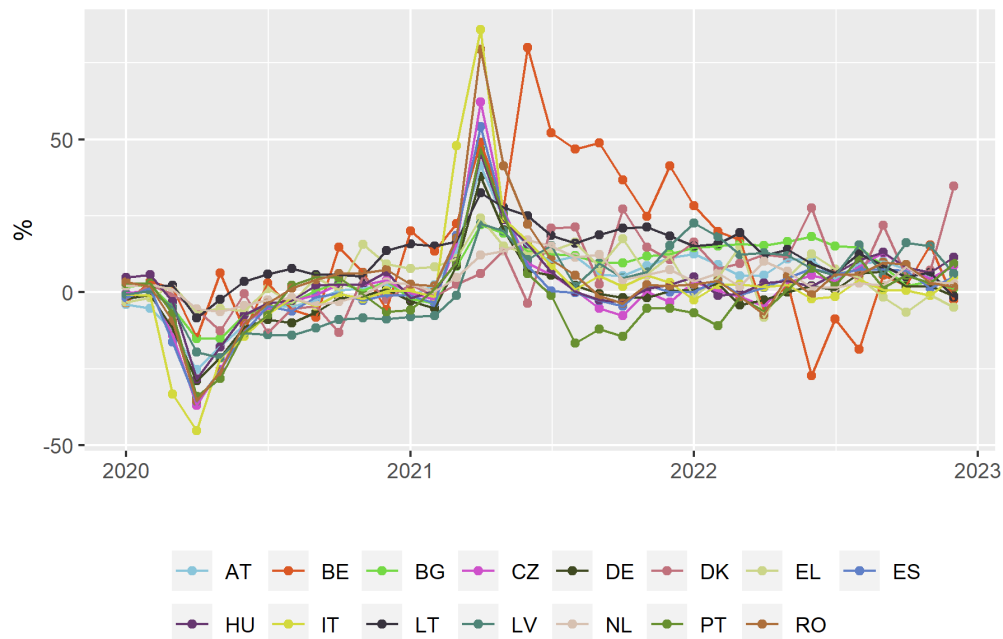


Figure 6: Annual rates of change (%) of patent indicators in some EU Member States, January 2020 - December 2022



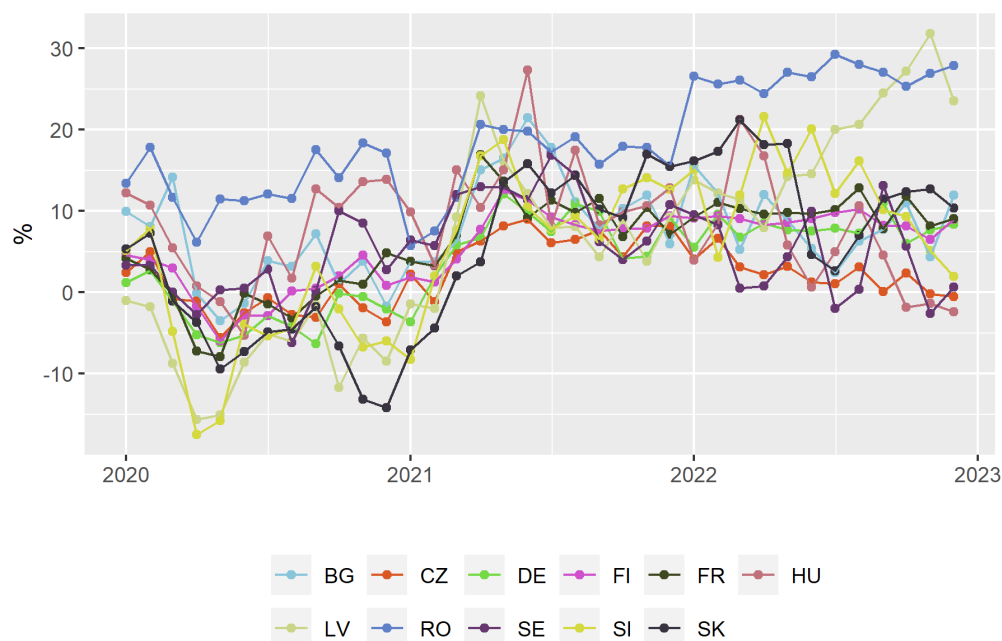
All the design indicators registered positive annual rates in the last quarter of 2022. The patent indicator from Greece is the only one registering a negative rate. This is explained by a fall in the volume indicator of the division NACE 35 'Electricity, gas, steam and air conditioning supply', which is the industry with the greatest weight among the Greek patent-intensive industries.

The Latvian design-intensive industries increased by 12 % balancing out a decrease in the trade sector industries and increases in the manufacturing and service sectors industries.

The highest average annual rates of the patent indicators was registered in Denmark. This is explained by an impressive rise of the division NACE 21 'Manufacture of basic pharmaceutical products and pharmaceutical preparations'.

The copyright indicator is available for 11 countries (Poland since 2021) and registered the highest annual rates in many of the Member States.

Figure 7: Annual rates of change (%) of copyright indicators in some EU Member States, January 2020 - December 2022



The highest annual rates of the copyright indicators in the fourth quarter of 2022 are registered in Latvia and Romania, followed by Poland and Slovakia. The Hungarian copyright-intensive industries registered a decrease in their annual rate. This is explained by the decrease of the division NACE 60 'Programming and broadcasting activities', which registered record low values of the volume indicator in 2021.

IPR INDICATORS 2022 EDITION: DIFFERENCE TO PRE-CRISIS LEVELS, DECEMBER 2022

The table below shows the difference between the IPR indicators values in December 2022 and February 2020, with red numbers showing indicators that are still below pre-crisis levels and green numbers indicating where the indicator has reached or surpassed its pre-crisis level.

Table 2: Difference in IPR values between pre-crisis level (February 2020) and the fourth quarter of 2022.

Country	IPR	TM	DES	PAT	CR
EU	10.1	12.9	4.9	8.8	22.5
AT				15.8	
BE			-1.6	45.5	
BG	7.4	5.9	3.9	11.5	24.3
CZ	5.3	4.4	6.7	6.7	4.6
DE	0.7	4.2	-2.9	-2.9	16.9
DK				49.9	
EL			8.8	9.0	
ES				2.6	
FI					22.5
FR	10.5	13.2	3.1	1.9	26.0
HU	17.4	16.6	23.6	16.5	28.0
IT			3.6	5.4	
LT			35.6	44.2	
LV	13.7	14.9	6.2	11.7	33.3
NL			18.8	13.2	
PL*	NA	NA	NA	NA	NA
PT				4.6	
RO	17.3	23.9	9.2	8.2	86.0
SE					18.0
SI					9.6
SK					23.9

* IPR indicators for Poland are only estimated from 2021 due to data availability issues and the difference with pre-crisis level cannot be calculated.

ACRONYMS AND ABBREVIATIONS

Acronym	Term
AT	Austria
BE	Belgium
BG	Bulgaria
CR	Copyright
CZ	Czech Republic
DE	Germany
DES	Designs
DK	Denmark
EL	Greece
EPO	European Patent Office
ES	Spain
EU	European Union
EUIPO	European Union Intellectual Property Office
FI	Finland
FR	France
GDP	Gross Domestic Product
HU	Hungary
IE	Ireland
IPR	Intellectual property rights
IT	Italy
LT	Lithuania
LV	Latvia
MS	Member States
NACE	Statistical Classification of Economic Activities in the European Community
NL	Netherlands
PAT	Patents
PL	Poland
PT	Portugal
RO	Romania

Acronym	Term
SE	Sweden
SI	Slovenia
SK	Slovakia
STS	Short-term statistics
TM	Trade marks