

# The Economic Impact of Software

### **ITALY**

Italy is a global reference for luxury goods, fine wine, and tourism, but the EU's fourth-largest economy is also home to a growing software industry. This supports other GDP generators such as automotive engineering, machine manufacturing, and aerospace, as well as the country's large agricultural sector. Italy is also home to plenty of SMEs that specialize in high-end, high-margin products — companies that are increasingly using software to manage accounting, inventory, and customer relations.

Large multinationals are also taking an interest: In 2016, Cisco said it would invest \$100 million in supporting Italy's digital acceleration through a two-fold approach that focuses on increasing students' digital skills and fostering innovative tech startups.<sup>6</sup>

The software industry in Italy directly contributed €22.9 billion to value-added GDP, up an impressive 12.7 percent from 2014. That puts the sector's contribution some way behind the UK, Germany, and France, but still ahead of smaller EU member states. It was also responsible for 1.2 percent of total jobs in Italy.

Total<sup>7</sup> Value-Added GDP:

€52.3 billion

Up 2.8% from 2014

**Direct Value-Added GDP:** 

€22.9 billion

Up 12.7% since 2014



### **EMPLOYMENT**

Direct:

304,335 jobs

Up 5.3% from 2014 • 1.2% of total Italy jobs

Total8:

759,264 jobs

Up 2.1% from 2014

More than 300,000 highly paid, highly skilled jobs are provided by Italian software companies.



### **WAGES**

Total annual wages paid in Italy by the software industry:

€10.9 billion

**Up 8% from 2014** 

With impressive growth in direct wages paid by the software industry over the last two years, the sector is more attractive than ever in Italy.

- 6 "Cisco Commits \$100 Million to Drive the Digital Acceleration of Italy," Cisco, January 19, 2016, available at https://newsroom.cisco.com/press-release-content?articleId=1738033&type=webcontent.
- <sup>7,8</sup> Direct, indirect, and induced.

#### **METHDOLOGY**

To estimate the total contributions of the software industry to the EU economy, the EIU analyzed the direct contributions and estimated indirect and induced impacts using various economic multipliers:

- (1) Direct contributions: the levels of output, employment, or wages of the industry in question;
- (2) *Indirect impacts:* the inter-industry economic activity resulting from the direct contributions (e.g., purchases of inputs);
- (3) Induced impacts: the additional economic activity supported by spending on goods and services by households whose income was affected by the direct contributions and indirect impacts.

Data sources include the EIU itself, Eurostat, the European Central Bank, OECD, and the World Input-Output Database.

www.software.org/EUSoftwareImpact

The Economist

INTELLIGENCE UNIT



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### **EUROPEAN UNION<sup>1</sup>**

Software changes lives. The way we work, play, and move is being transformed by new software — not just on your computer, but by apps, big data, and access to the cloud. From optimizing plane routes to improving life for people with Parkinson's disease, innovation is happening at every level. To understand the impact of this, Software.org: the BSA Foundation commissioned the experts at The Economist Intelligence Unit (EIU) to examine the software industry's economic role. They studied the European Union (EU) and seven member states: France, Germany, Italy, the Netherlands, Poland, Sweden, and the United Kingdom. The research shows which countries are seeing the biggest benefits from software's growth — and how others can share in that success.

The stakes are high: All in, software was responsible for €1 trillion of total EU value-added GDP in 2016.<sup>2</sup> That's an increase of 9.9 percent from 2014, compared to overall GDP growth of 6.0 percent over the same period. And software supports other sectors, too — think of it as double-clicking on growth.

Total<sup>3</sup> Value-Added GDP:

€1 trillion

Up from €910 billion in 2014, a 9.9% increase

**Direct Value-Added GDP:** 

€304 billion

Up from €249 billion in 2014, a **22.4% increase** 



### **EMPLOYMENT**

Direct:

3.6 million jobs

Up from 3.1 million in 2014, a 16.5% increase

Total⁴:

## 12.7 million jobs

It's not just about coders. The software industry provides jobs in every field, from disaster recovery services to data processing and accounting. As Europe closes the digital skills gap,<sup>5</sup> companies are hiring for jobs that simply didn't exist a decade ago — roles like strategic cloud data engineer, big data product specialist, and futurist. Across the EU, work supported by the software industry through direct, indirect, and induced contributions represents 12.7 million jobs.

- $^{\rm 1}$   $\,$  All data is from 2016 and was provided by The EIU unless stated otherwise.
- Includes indirect and induced effects. Indirect effects stem from purchases of inputs by the software industry, whereas induced effects stem from the spending of income by employees affected by those direct and indirect effects.



### **WAGES**

**Average Annual Salary** for Software Industry:

€45,307

**Total Annual Salaries** Paid by Software Industry:

€162.1 billion

The total direct wages paid by the software industry for all 28 EU member states grew to €162.1 billion from €139.2 billion in 2014, an increase of 16.4 percent. Wage growth in smaller countries is particularly impressive: total salaries paid by the sector in Sweden grew 31.4 percent over the two years to 2016, and by 30.4 percent over the same period in Poland.

- <sup>3, 4</sup> Direct, indirect, and induced.
- "The Digital Skills Gap in Europe," EU Commission Factsheet, October 19, 2017, available at https://ec.europa.eu/digital-single-market/en/news/digital-skills-gap-europe.

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