ITALY

Italy is a strong performer in the deployment of Advanced Manufacturing Technologies (AMT) within EU-25, accounting for the different stages of technology maturity and closeness to market application. Relative to other KETs, AMT-related products are important for Italy’s overall exporting activity. Based on NUTS 3 classification, Milano is the region generating most patents related to KETs. The share of country’s employment related to the diffusion of Advanced Manufacturing Technologies innovations is about 0.18%. One of the main strengths is the extensive networks of SMEs and many industrial clusters throughout the country. However, there is a relatively low gross domestic spending on R&D and relatively poor performance in ICT startups. Examples of best practice cross-border partnerships related to KETs include BIOSKOH and R2POWER300.

*Among 25 EU countries (not including Cyprus, Luxembourg and Malta)

A.1 Patents

The indicator measures the share of KET-related patents relative to the total patent applications in Italy for a given year. The figure depicts that the share of AMT-based patents in Italy was significantly higher compared to other KETs in 2007 and 2015. The share of AM- and AMT-based patents in Italy was higher than the EU-average in 2007 and 2015. In 2015, Photonics-based patents constituted 1.60% of total patent applications in Italy.

A.2 Production

The indicator measures the share of KET-related production to total production in Italy for a given year. The share of KET-related production to total production in Italy is similar to the EU average, with the exception of Photonics. The graph indicates that about 0.48% of Italian production was related to Photonics in 2015, compared to the EU average of 0.75% Photonics-related production.

A.3 Scientific publications

The indicator measures the share of KET-related scientific publications to the total scientific publications of Italy for a given year. The share of IB-related scientific publications to total publications is higher than the share of other KET domains and similar to the respective EU average in both years. The graph indicates that about 0.03% of Italian scientific publications have been related to Nanotechnology in 2015.

A.4 Trade

The indicator measures the share of KET-related exports relative to the total manufacturing exports of Italy for a given year. The share of AM, IB, MNE and Photonics-based exports to total manufacturing exports is lower than the respective EU average in both years. The graph indicates that about 0.78% of Italian manufacturing exports have been products based on Advanced Manufacturing Technologies in 2015.

Source: KETs Observatory; please visit the KETs Observatory website for the complete set of indicators
Strong performer in the field of entrepreneurial culture as more than half of the population would run a business of their own, if they had the financial means.

Provides R&D tax relief through an incremental R&D tax credit.

Italian hourly labour costs are below the Eurozone average.

Extensive networks of SMEs and many industrial clusters throughout the country.

Number of patents assigned to regions (based on NUTS3 classification) according to inventor’s location, Year: 2013

1. Milano 3978
2. Bergamo 1170
3. Torino 690

Due to close interrelationship of KETs, the employment figures of individual KETs are partially overlapping and thus should not be added up. c: confidential

Areas for improvement

- Relatively low gross domestic spending on R&D.
- Poor performance in Small Business Act areas like state aid & public procurement and environment.
- Displays room for improvement in the field of e-leadership and supply and demand of digital skills.
- Relatively poor performance in ICT Start-ups.

The BIOSKOH project (2016-ongoing), led by private Italian entity BIOCHEMTEX SPA and involving 11 partners from 7 countries will pave the way for a Second Generation European Circular Bio economy by showcasing how a number Innovation Stepping Stones can realise a breakthrough in techno-economic viability of lignocellulosic biorefineries. It will do so through a two-stage investment process and development path to realise the largest (110 kton) second generation (2G) biorefinery in Europe. BIOSKOH has a total budget of 30M€ which in part is funded by Bio-based Industries Joint Undertaking.

The composite indices rank the countries involved in the analysis on their performance regarding the different dimensions of technology maturity and market applications of KETs in 2015. Italy’s performance in technology generation is comparable across the six KETs. However, KET-related knowledge generation stands at the lower end of the technology composite indicator relative to other countries. The country is more competitive in the production and wider application of KET-based products, compared to the generation of new technologies in these KETs domains. Italy’s performance in KET-related exports is comparable among the six KET domains. KET-based exports remain in the lower end of the trade composite index compared to other countries. Relative to other KETs, Italy scores highest in the production and absorption of Nanotechnology-related components.

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