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The Glass Half Full of Italian Innovation



Italy is struggling to transform its scientific excellence into innovation and enterprise. Despite being among the top ten countries in the world for research output, the gap with the United States and Europe in terms of venture capital, business start-ups, and talent attraction is still striking. Fragmentation, localism, and lack of scale all limit the growth of competitive innovation ecosystems. Tech Europe Foundation (TEF) was created as a response to this, to support deep tech research, foster an entrepreneurial culture, and encourage new business creation, with the aim of solidifying the link between knowledge, the market, and sustainable development.

STARTUPS//INNOVATION//ENTREPRENEURSHIP//RESEARCH//VENTURE CAPITAL



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One of the key recommendations highlighted in the Report on the Future of European Competitiveness (Draghi, 2024) stresses the need to “bridge the innovation gap,” particularly with respect to the United States. The report notes that “in Europe, innovative digital firms are unable to scale or attract financing, resulting in a significant gap in later-stage investment between the EU and the United States.” Among the various obstacles hindering innovation, the document also points out that Europe lacks a sufficient number of academic institutions capable of achieving top levels of excellence, and that the transition from innovation to commercialization remains weak.

While many of the challenges highlighted in the report with reference to Europe as a whole are also evident – sometimes even more acutely – in Italy, particularly concerning scientific research excellence and the ability to turn knowledge into entrepreneurial activity, it is possible to state, albeit in relative terms, that although the country produces a large volume of research, often of high quality, it nonetheless falls short in converting such knowledge into innovation and new business creation. Several indicators illustrate this gap. Italy consistently ranks among the world's top ten countries for scientific output, with more than 2.6 million publications (Scimago Journal & Country Rank, 2025). In 2024, 106 Italian scientists – out of more than 6,600 identified across 59 countries – were recognized as among the most influential in their fields, with publications

in the top percentile worldwide by citation count (Clarivate Analytics). Yet the value created by Italian researchers does not always remain in the country: of the €721 million awarded in the summer of 2025 by the European Research Council, 12 scholars based at Italian universities – out of 37 recipients – chose to carry out their funded research abroad (Giavazzi, 2025).

THE ITALIAN PARADOX OF INNOVATION

In light of the efforts and results produced by Italian universities, public and private research centers, and their researchers, the difficulty in converting this potential into new entrepreneurship becomes even more striking. The business birth rate in Italy stands at 7.9%, compared with a European average of 10.5% (Eurostat, 2022). This weak performance is both a cause and a consequence of an equally insufficient flow of venture capital: between 2020 and 2024, venture capital investments in Italy amounted to roughly 14% of those made in France and Germany, and only 6% of those in the United Kingdom (P101 SGR, 2024).

The challenge of creating and scaling innovative firms is also reflected in employment outcomes, particularly for highly qualified talent, fueling well-known brain drain dynamics. Although Italy lags behind the European average in the share of university graduates (31.6% vs. 44.1%), with an even wider gap compared to France (53.4%) and Spain (52.6%) (Eurostat, 2025), more than 20,000 graduates aged 25 to 34 left the country in 2023 – an increase compared with 2022 (Istat, 2025).

The issue at stake here, however, is not merely the often-cited lament of a country that invests – albeit insufficiently – in developing human capital, only to see it deployed elsewhere. Rather, it raises questions about why:

- in a context of growing international talent mobility, one of the major industrial economies is unable to attract enough foreign researchers and scientists to compensate for the deficit in skilled human capital;
- despite the urgent need to increase productivity and stimulate innovation, Italy is unable to translate its scientific potential into entrepreneurial initiatives capable of generating and retaining innovative businesses in the country.

This paradox also appears in the country's most promising local ecosystems. In terms of new business creation, one in four innovative startups (27.5%) is based in Lombardy (3,182 out of 11,565 in Italy), and 72.5% of these are located in Milan (Osservatorio Cribis, 2025). Milan leads the nation in venture capital investment and number of startups; however, despite accounting for more than 50% of Italy's invested capital and new deals (P101 SGR, 2024), at the European level the city not only trails London, Berlin, Paris, Amsterdam, and Barcelona, but also Munich, Stockholm, Dublin, and Tallinn, ranking 15th in its capacity to attract new startups (Europe Startup Heat Map, 2023).

TOWARD A STRATEGY FOR ENTREPRENEURSHIP DEVELOPMENT

There are many causes underlying the situation outlined here. To name a few: the difficulty of creating ecosystems that facilitate growth in research investments and promote technology transfer processes, which would serve to channel the results of scientific research into uses that can appreciate its value; the frequent inability to enter markets beyond the domestic sphere; and the lack of adequate venture capital to finance the development and growth phases of new business initiatives.

Italy is notoriously afflicted by fragmentation and localism, which motivate choices in many contexts. Such character traits have historical, economic, and social origins that are difficult to change. This reality manifests in many situations, sometimes with positive implications, but increasingly often in pathological terms. A similar innovation landscape, with its limited resources, has no space for planning large-scale initiatives capable of generating an impact on a scale that goes beyond the “hypoxia” of local boundaries. This is also plainly apparent in relation to the issues mentioned in these brief notes. We need only to look to the numerous incubators, accelerators, and innovation hubs which, in many cases, generate local benefits for the various universities or institutions that created and championed them. But few manage to reach the minimum size or critical mass needed to achieve noteworthy objectives. There is a clear need to overcome these hurdles and start designing initiatives that further scientific research and, more importantly, drive up the conversion rate between research results and the creation of new businesses.

In seeding and growing such an ecosystem, we can also draw inspiration from many flourishing examples and investigate the reasons for failures and mistakes made elsewhere. As far as innovative hubs, what many successful cases have in common is the ability to catalyze an ecosystem geared towards innovation and entrepreneurship, involving a variety of actors who can develop it over time. If we look no farther than Europe, we can observe the entrepreneurial formulas of StationF in Paris, TUM-Unternehmer in Munich, Techstars Accelerator in Berlin, DTU Skylab in Copenhagen, and other centers in Lausanne, Barcelona, and Cambridge. However heterogeneous their business models and approaches may be, certain ingredients emerge that are worth mentioning:

- Scale, an expression of an ambitious and substantial impact, measurable in the number of startups incubated or accelerated, in the funds raised by the latter, in the amount of resources available, whether public (focused on high-potential entities) or private, in the form of philanthropic generosity, accompanied by substantial venture capital.
- The presence of universities recognized for excellence in scientific research and international openness, capable of providing human capital selected for quality and quantity according to rigorous criteria.
- The availability of spaces and infrastructures that are not only functional but also appealing, often located in vibrant cities that can attract young people who

hope to settle in a place that has a reputation for vitality, internationalization, hospitality, and openness.

- Proximity to markets, whether represented by large companies attracted by the opportunity to exploit the advantages offered by open innovation processes, or conveyed by the network of alumni, mentors, founders, professionals, and investors. By providing skills and resources, these players form the community that drives an innovative ecosystem, expanding its range of action and enhancing its reputation.

TIME TO ACT: TECH EUROPE FOUNDATION IS BORN

On this crucial issue, we need to ask ourselves: In Italy, is the glass half empty or half full? Some will see unsatisfactory performance, an unfinished context, and a hopelessly limited vision, and call the glass half empty. But we see an opportunity to be seized to bridge the innovation gap; we believe that the potential to do so exists. In short, the glass is half full.

It is in this positive spirit that Tech Europe Foundation (TEF) was created, a non-profit foundation promoted by Bocconi University, the Milan Polytechnic Foundation, Fondazione ION, Fondo Strategico Italiano (FSI), and the Chamber of Commerce of Milan, Monza, Brianza, and Lodi. The goal is to subsidize fundamental research and encourage the creation and growth of startups, propagating a culture of entrepreneurship. TEF aspires to become, in a relatively short time and in keeping with the ambition of its project, a hub of innovation recognized at the European level, integrated with the main centers of excellence. The Foundation is based on four pillars that underpin its development strategy:

1. *Research:* TEF has approved a series of strategic investments earmarked for assisting approximately 300 researchers through PhD and post-doctoral scholarships primarily in the deep tech sectors, including robotics, aerospace, semiconductors and quantum technologies, artificial intelligence, new energies and materials, and life sciences.
2. *Culture:* The recently-launched TEF Ignition initiative is a cultural and educational program designed to introduce young people to the world of entrepreneurship, involving around 200 teams of university students each year and offering them grants of €2,000, training sessions, and high-level mentorship with national and international founders. The aim is to stimulate interest in entrepreneurship and promote the formation of interdisciplinary teams, encouraging interaction and collaboration between students from different universities and fields.
3. *Business creation:* For incubation and acceleration programs dedicated to supporting startups, TEF will draw on the experience of PoliHub (the incubator of the Milan Polytechnic) and B4I (the accelerator of Bocconi University), which will soon merge into the new entity, enriching it with their many years of experience in scouting and accompanying startups on their

journey to market. In this context, TEF has launched the CDL-Milan program with the Creative Destruction Lab in Toronto to back 20 deep-tech startups in advanced manufacturing. TEF also plans to activate tools dedicated to assisting in the next phase of startup growth in the future, facilitating their entry into the market.

4. *Internationality*: To put Milan and Italy on the map of European and global innovation ecosystems, TEF has signed a series of alliances, including RISE Europe, UnternehmerTUM in Munich, Creative Destruction Lab in Canada, and ISSNAF in the United States.

Interest has been running high at the meetings held in recent months with these international organizations and the numerous stakeholders involved. The scope of the project and the originality of the vision is also widely valued. As has been repeatedly emphasized, despite the uncertainty of a rapidly changing global context, now is the time to act. Supporting and promoting Italian scientific research and relaunching innovation and entrepreneurship means investing in growth engines and in the country’s ability to attract young talent, a resource that in Italy is becoming increasingly rare and, for this very reason, ever more precious.



REFERENCES

Clarivate Analytics (2024). <i>Highly Cited Researchers Report</i> .	Demography Statistics: Enterprise Birth Rates in Europe.	Istat (2025). <i>Rapporto annuale sulla situazione del Paese 2025</i> .
Draghi, M. (2024). <i>Rapporto sul futuro della competitività europea</i> . Commissione Europea.	Eurostat (2025). <i>Education Statistics: Tertiary Education Attainment in the EU</i> .	Osservatorio Cribis (2025). <i>Startup Innovative in Italia</i> .
Europe Startup Heat Map (2023). <i>European Startup Ecosystem Report</i> .	Giavazzi, F. (2025). “Dodici ricercatori italiani portano in Europa i fondi ERC.” <i>Il Corriere della Sera</i> .	PROI SGR (2024). <i>State of Italian VC Report 2024</i> .
Eurostat (2022). <i>Business</i>		Scimago Journal & Country Rank. (2025). <i>Country Rankings: Scientific Output Data</i> .