



DATI ALLA MANO

I PODCAST

## LET'S TALK ABOUT PRODUCTIVITY

We have been talking about it for years: in Italy, productivity is stagnating, not only it is lower than that of the USA – an aspect that we share with other European countries – but even the comparison with our 'next-door neighbours' shows us lagging behind. But what exactly does that mean? And what are the elements that contribute to defining 'productivity', which certainly does not mean there is some kind of laziness of Italians compared to their American and European colleagues?

I am Cristiana Conti and this is Dati alla mano (Data at Hand), a podcast by Istat, the National Institute of Statistics, where I work in the Directorate for Communication, Information, and Services to Citizens and Users. This initiative is part of a broader project to promote statistical literacy.

In this episode, we will talk about the different aspects of productivity, in particular labour productivity, how it is measured, and what the differences are between economic sectors and types of companies.

For many years, our GDP – that is, Gross Domestic Product – has been growing extremely slowly, and so has also labour productivity. The consequence is that Spain, France, and Germany – for example - have significantly outpaced us in terms of overall growth. How significantly? Over 15 years, our country has fallen 10% behind Spain, 14% behind France, and 17% behind Germany. To be clear, our GDP only returned at 2007 levels at the end of 2023. What is the role played by productivity in all of this? And more fundamentally, what do we mean by productivity?

The issue is not simple, but let's try to explain it in understandable terms. In absolute terms, productivity measures the ratio between the production of goods or services and the factors that contribute to their creation. Therefore, productivity measures an economic system's ability to use its resources efficiently. And it is important to remember that the production process is the result of contributions by productive factors in the strict sense, namely labour and capital goods – such as a warehouse, a machine, for example – but also technical progress, innovations in production processes, improvements in work and management organisation, and qualitative improvements in the workforce.

Istat calculates three productivity indicators, breaking down the factors that contribute to creating a product or service. We have the so-called primary production factors, namely labour - measured by the total hours worked - and the availability of capital goods, split into tangible assets, intangible assets, and information and communication technologies, equipment that can be increased over time by new investment flows. There is also a third indicator, defined as 'total factor productivity', which measures the efficiency with which primary production factors are used and summarises a country's ability to combine capital and labour. Therefore, it is a parameter that reflects technical progress, changes in knowledge, and variations in the efficiency of production processes.

Productivity dynamics – that is, its trend over time – are a key indicator of economic growth and competitiveness, so it is important to understand them because they provide us with information on the health status of our economy. Let's think about a company: if it becomes more productive, it can better remunerate its production factors. For example, it can offer higher wages and/or invest more by increasing its equipment, or it can adopt more competitive prices.

To make a comparison with European countries, it is preferable however to consider labour productivity, i.e. the ratio between added value and hours worked, because other parameters, such as capital productivity, are not accurately comparable due to some methodological differences. So, let us turn to the data: in the period between 1995 and 2022, the average annual growth of labour productivity in Italy was lower than that of the EU as a whole: 0.4% compared to 1.6%. Our neighbours, France, Germany, and Spain, performed better than us.

We mentioned that the productivity is an element of competitiveness for companies. But how much and in what way? We asked Stefano Costa, an expert in competitiveness of various productive sectors.

**Cristiana.** Hi Stefano, welcome.

**Stefano.** Thank you, hello everyone.

**C.** Can you explain to us the relationship between productivity and competitiveness?

**S.** Productivity is one of the main factors that, in the long term, makes a company competitive, and more in general a country. But in any case, a company *must* be productive to remain in the market.

**Q.** How much do the structural aspects of our industrial system affect productivity?

**A..** They certainly have an impact: here, companies with at least 250 employees are fewer than 5,000, or 0.1% of the total. And these are precisely the ones that are normally more productive due to greater opportunities for economies of scale, access to credit, and investments in technology... Germany, for example – which, despite the difficulties it is facing, is more productive than us – not only has many more large companies, but its medium-sized ones also have a larger average size than ours.

**Q.** So, does a larger company size correspond to higher productivity?

**A.** Generally speaking, yes, but it is not a predetermined outcome.

**Q.** What do you mean?

**A.** Let me explain. There are other factors that influence company productivity and economic performance. In the Report on the competitiveness of productive sectors for example, we measured the dynamism of companies, which is a combination of the inclination to innovate and invest in technology, staff training, and business organisation. We found that small companies with very dynamic behaviours are more productive than large but unchanging companies.

**C.** Interesting, it opens up a new perspective.

**S.** Exactly, that of a path that can be taken and that can overcome - at least in part - the structural limitations. In 2022, very dynamic companies were numerically few, but they generated more than half of the added value.

**C.** And from a sectoral point of view, are there differences? That is, are there sectors of activity that are more productive than others?

**S.** Speaking very generally, industry is more productive than services, also because the service sector finds it more difficult to access the international market. But this is not a destiny either.

**C.** A company that offers innovative services, for example, can be more productive than an outdated manufacturing one, right?

**S.** Exactly, especially if the services offered are related to computer science and the entire ICT area.

**C.** Instead, which are particularly productive sectors in manufacturing?

**S.** At the moment, the pharmaceutical industry, chemicals, transport equipment, machinery.... But as I was saying, in all sectors, even in the more traditional ones, innovation is an important factor that can partly overcome dimensional and sectoral limitations.

**C.** Can we say that knowledge is a driver of productivity?

**S.** Exactly, and this brings me to another important element: management behaviours. In Italy, we have many examples of family management, and this can sometimes slow down business growth, and therefore dynamism and productivity.

**C.** Do you mean that family businesses perform less well?

**S.** Wait, I'm not referring to ownership, I'm referring to management. Often in Italian companies, owner-entrepreneurs tend to centralise business management functions on themselves or family members. Especially from a growth perspective, moving towards a more managerial approach can be more convenient.

**C.** And this also impacts productivity.

**S.** Yes, and business management also relates to investment in knowledge. To give you an idea of the Italian situation, consider that the permanent census of companies tells us that even in the largest size class - companies with at least 250 employees - business management was practised by just over 20% of the total in 2022.

**C.** Going back to investments - especially those in technology - and their importance for productivity, I was thinking about the fact that the pandemic first and the conflict in Ukraine then did not encourage investment, or am I wrong?

**S.** Actually, we have had various reactions from our companies. In some cases, there has been an acceleration or a strengthening of digitalisation processes; in other cases, the postponement of innovative investments. As you can see, there are always different paths and not predetermined routes.

**C.** Very clear, thank you Stefano, and see you next time.

**S.** Thank you.

There is another aspect that intrigues me: in an ageing Italy, the entrepreneurial class is also ageing, and workers are ageing. How much do demographic trends weigh on productivity? To answer this, I invited another economist: Andrea De Panizza.

**Cristiana.** Hello Andrea, thank you for being with us.

**Andrea:** Thank you.

**C.** Does the demographic decline affecting Italy have an impact on the productivity of our companies?

**A.** A difficult question because it depends on several factors. In principle, a demographically ageing country will have to allocate many resources to healthcare and social security and will have fewer resources for industrial policies. Furthermore, a shrinking employment base limits the possibility of economic expansion, unless it is recovered with other 'ingredients' that stimulate productivity growth.

**C.** Such as?

**A.** Such as innovation. And here, demographics come into play again because younger entrepreneurs are, on average, more dynamic, better educated, and more inclined to hire educated staff... So, if we want to find a correlation, we can see it between generational turnover and digital and capacity for technological innovation– and this applies especially to small companies.

**C.** And we have seen that innovation is a crucial factor for productivity.

**A.** Indeed, and regarding the relationship between generational transition and innovation, I can also give you an example: half of the companies that had faced or planned the generational transition between 2016 and 2018 had implemented innovative projects, compared to just over a third among other companies.

**C.** With Stefano, we were saying that an industrial company has a greater possibility of access to the international market and this affects productivity, because being in the international market also generates a flow of knowledge and technologies.

**A.** However, one must first achieve internationalisation.

**C.** What do you mean?

**A.** That if a company is capable of export, it means it has maintained a certain level of productivity in a competitive market, and the sector of activity also plays a role here. In Italy, between 2008 and 2019, we lost over 640,000 jobs in manufacturing, and this happened because in low-technology manufacturing we suffered from the competition of more competitive countries – I am talking about price competition – and in high-technology manufacturing, we were poorly specialised. In particular we lost workers in textiles, for example, and in the processing of non-metallic minerals – that is, ceramics, glass... in short, materials used to build or furnish our homes...

**C.** In practice, are you saying that our manufacturing proved to be uncompetitive and therefore less productive?

**S.** This is true for a part of our manufacturing, but I will tell you more: if we look at the National Accounts data for the pre-pandemic period – between 2010 and 2019 – and consider the entire Italian economic system and the four largest European economies – France, Spain, Italy, and Germany – we notice that here in Italy high-knowledge tertiary activities have less weight or decrease over time, but these are precisely the ones that are generally more productive.

**C.** Is this why we are lagging behind our neighbours?

**A.** It is one of the reasons. In fact, we have fewer people employed in knowledge-intensive sectors. But above all, Italy lags behind its main European partners in investments in new technologies and digitalisation processes.

**C.** Tell me, how much does education matter for the inclination to invest in technology and knowledge?

**A.** It matters a great deal; regardless of the company size and sector of activity, a more educated workforce has a positive impact on productivity, on the dynamics of added value, wages, and on the implementation of innovative activities.

**C.** Having an educated workforce depends on the hiring policies of entrepreneurs, right?

**A.** Also on the educational qualifications of the entrepreneurs themselves. For example, in small companies with up to 49 employees, we have seen that the educational qualifications of entrepreneurs is closely correlated with that of the company's employees.

C. In the end, does investment in tangible assets, such as highly advanced machinery, or in intangible assets such as research and development, matter more? I am also thinking about continuous training that enhances employees' skills...

A. Combined material and immaterial innovations are generally the most relevant because they influence each other. As for training, investment is often made where there is already a good educational qualifications, it is generally graduates those who undertake more training than other employees.

C. All very interesting, thank you Andrea for being with us.

C. Thank you all and see you next time.

## CONCLUSIONS

In short, the factors that affect productivity are more than one, and regarding our country, we can identify important structural factors, but we have also seen that innovation, technologies, and investments in knowledge can help to overcome them. A thing is clear: there are no fixed destinies. I am Cristiana Conti and this was Dati alla mano (Data at Hand), a podcast from the National Institute of Statistics.

This episode was produced with the support of Storielibere.fm.

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Are there any topics you would like to explore further? Write to me at [datiallamano@istat.it](mailto:datiallamano@istat.it).

Sara Maulo, Manuela Bartolotta, Carmine Fimiani, Antonio Regano, Stefano Costa, Claudio Vicarelli and Andrea De Panizza worked on this episode.